The impact of community consultation to set resource condition targets for dryland salinity

Rebecca Heath
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The impact of community consultation to set resource condition targets for dryland salinity

Rebecca Heath, Susie Murphy White and Jamie Bowyer

April 2010
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Acknowledgements

This evaluation was carried out by staff of the Department of Agriculture and Food, Western Australia and funded by the Western Australian and Commonwealth governments under the National Action Plan for Salinity and Water Quality as part of the DS.01d project commissioned by the South West Catchments Council.

The authors acknowledge the valuable input provided throughout the evaluation by the Department of Agriculture and Food Salinity Target Setting project team—Heather Percy, Paul Raper and Leon van Wyk. Their guidance and feedback helped shape the final product.

The evaluation would not have been possible without the openness and cooperation of the many landholders, Natural Resource Management officers and the departmental project team, who willingly answered questions and provided valuable insights.
Summary

A consultative approach was chosen to set resource condition targets for dryland salinity in the south-west of Western Australia. It was anticipated that landholder participation in developing the targets might engender a sense of ownership and hence enhanced motivation to achieve the targets.

Ten workshops were held, presenting groups of landholders with the latest information on salinity risk. Participants described their preferred options for salinity management and simple models were used to predict the impact of these options. Using this process, landholders set what were considered realistic and achievable catchment-scale targets for dryland salinity.

The project was evaluated to determine the impact of the consultative process on the landholders, Natural Resource Management officers and Department of Agriculture and Food staff involved. Semi-structured interviews were conducted face-to-face with 20 landholders, and separate discussion groups were held with Natural Resource Management officers and department staff. Information from members of the project’s Community and Stakeholder Reference Group was also sought, but the response rate was low and this data was omitted from the analysis.

Results show that the project had a direct impact on the capacity (i.e. knowledge, attitudes, aspirations, etc.) of the majority of landholders interviewed. There was evidence that participation resulted in the implementation of salinity management, and it was the process used to set the targets, rather than the targets themselves, that appeared to be the catalyst for action. More than half the interviewees saw value in having targets and were actively working toward these. The greatest influence on these results was the interviewees experience with salinity management prior to the workshops. Important workshop elements included catchment maps and various interactions (one-on-one, group debate/discussion, access to scientific expertise, sharing experiences with other landholders). In particular, discussing a vision for the future of the catchment built enthusiasm and motivation at a group level.

For Natural Resource Management officers, the benefits of the workshop process centred on the reinvigoration of their catchment group. They believed the workshops successfully got the farmers discussing natural resource issues together. The key area of learning for the officers related to the landholders, rather than to the information presented or targets set.

For the project team, participation in the workshops led to three key areas of learning:

- in workshop design and delivery
- increased understanding of landholder interests, wants and needs
- greater understanding in relation to technical salinity information.

The project had a number of unexpected outcomes, including implementation of groundwater monitoring bores, funding for groups, initiation of a ‘productive saltland project’ and drainage monitoring system, and information to guide the Salinity Investment Framework 3.

Learnings: Various lessons were learned that can be applied to enhance future project success. In general, the consultative process had many benefits, though in many cases, the targets that were set did not appear to be the driver for action. Interactions between workshop participants and discussions with department staff were of particular value, resulting in reinvigorated groups and individuals. To sustain this, periodical follow-on activities are recommended. The participants’ level of prior salinity experience mediated the impact of the workshops, with less experienced participants more influenced by the process than experienced participants.
1. Introduction

1.1 The Salinity Target Setting project

In 2005 the South West Catchments Council commissioned the Department of Agriculture and Food to undertake the Resource Condition Target Setting, Monitoring and Evaluation Systems for Dryland Salinity project (hereafter the Salinity Target Setting project or the project). The key aim of the project was to revise the regional-scale resource condition targets within the land-theme of the South West Regional Strategy for Natural Resource Management (SWCC 2005). (In terms of salinity, a resource condition target might be ‘No more than a 10 per cent increase in the area of salinity in the South West NRM region by 2020.’) However, rather than set the targets themselves, the project team felt there could be advantages in having landholder participation, since it is landholder action on the ground that is the key to ensuring targets are met.

Accordingly, the project set out to:

1. Develop SMART (Specific, Measurable, Achievable, Realistic, Time-bound) catchment-scale targets for selected priority catchments in the South West Natural Resource Management (NRM) region.
2. Set targets for four soil-landscape zones in the South West NRM region.
3. Aggregate the soil-landscape zone targets into a region-scale target.

A review of target-setting processes used by other organisations was consulted to develop the process for this project (see Hu 2006). The project tested and reviewed the target-setting process in selected priority catchments of the region. Once the process was refined, targets were set for an additional seven catchments in the low to medium rainfall area of the South West NRM region (Map 1).

Using the information learnt and the targets set via the catchment-based target-setting phase, the project developed and tested a methodology to set targets for four soil-landscape zones. These four targets were then aggregated into a region-scale salinity target.

Appendix 1 sets out project details, including the program logic (Figure 1) and the project logic (Figure 2).

1.2 Community consultation

In 2006 the Salinity Target Setting project developed and piloted a process to set targets. The process incorporated recommendations from a review of target-setting approaches used by other groups (Hu 2006). A key element of the process was the inclusion of people who own and manage the land. A workshop approach was designed and delivered to set targets with landholder input. It was anticipated that this would enable realistic and achievable targets to be set, and that the landholders would gain a sense of ownership of the targets and therefore be motivated to work towards them (Keipert et al. 2007).
Map 1 Location of the South West Natural Resource Management Region.
The low to medium rainfall area of the region is east of the blue line.
A Community and Stakeholder Reference Group was established to help develop and review the target-setting process. The reference group was responsible for setting out the criteria on which the catchment selection process was based, providing advice on how to engage landholders, evaluating the process and making recommendations for improvements.

The target-setting process consisted of two landholder workshops in selected catchments. Natural Resource Management officers played an important role by initiating contact with the local landholders to gauge interest and encourage participation in the workshops. These officers also participated in the workshops.

At the workshops a departmental scientist presented the landholders with information on the current salinity situation within their catchment. The landholders were shown modelled scenarios of the possible future impact of salinity based on different levels of groundwater recharge. These scenarios were tailored to the specific catchment. Workshop participants had the opportunity to describe their aspirations and preferred options for salinity management, and simple models were used to predict the impact of these. Using this process, the group was able to make informed decisions on realistic and achievable medium-term and long-term targets for dryland salinity.

There were two phases of the project. The first phase was about developing and piloting a target-setting process. The second phase of the project used the refined process to set targets with other catchment groups and dealt with the aggregation of targets into, ultimately, a regional-scale target for dryland salinity. Groups that participated in the workshops conducted during the second phase of the project were eligible for $10 000 funding for on-ground works. The activity logic for the workshops is documented in Figure 2, Appendix 1.

1.3 The evaluation

The evaluation sought to determine the impact of the consultative process used to develop SMART (Specific, Measurable, Achievable, Realistic, Time-bound) catchment-scale targets. In particular, the extent to which the process impacted on capacity (e.g. knowledge, attitudes, aspirations, etc.) and management actions for a) landholders who attended both workshops; b) Natural Resource Management officers who attended the workshops; c) members of the Community and Stakeholder Reference Group; and d) members of the project team. The effectiveness of this approach was also assessed, by testing the following proposals:

- The use of a consultative process can lead to SMART catchment-scale targets that are owned by the participants.
- Ownership of the targets will result in an enhanced level of adoption (i.e. landholders will take action to ensure achievement of the targets).

The evaluation was concerned only with the impact of the catchment-scale target-setting process. Activities relating to the setting of soil-landscape zone targets and regional-scale targets were not evaluated.
2. Methodology

2.1 Data collection

2.1.1 Landholders

A purposeful sampling technique (Patton 2002) was used to select 20 evaluation participants. Two criteria were used to gather data from landholders who attended the workshops: catchment and workshop attendance.

1. Landholders were grouped according to the catchment workshop they attended (Table 1). There were 12 catchment groups, but combined workshops resulted in 10 two-part workshops.

2. Landholders were categorised as attending ‘Workshop 1’, ‘Workshop 2’ or ‘Both workshops’. Of the 91 workshop participants, 41 attended both workshops.

Two landholders who had attended both workshops were randomly selected from each of the 10 catchment workshops. This ensured that any variations due to differences in the workshop delivery across the catchments were captured. By selecting landholders who had participated in both workshops, the value of the full workshop process could be fairly assessed.

Table 1 Landholder evaluation participants by catchment

<table>
<thead>
<tr>
<th>Catchment workshop</th>
<th>No. of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daping Creek</td>
<td>2</td>
</tr>
<tr>
<td>Date Creek</td>
<td>2</td>
</tr>
<tr>
<td>Doradine</td>
<td>1</td>
</tr>
<tr>
<td>East Yornaning</td>
<td>3*</td>
</tr>
<tr>
<td>Fence Road</td>
<td>2</td>
</tr>
<tr>
<td>Lake Towerrinning</td>
<td>3*</td>
</tr>
<tr>
<td>Narrakine + Highbury</td>
<td>2</td>
</tr>
<tr>
<td>Queerfellows Creek + Farmers with a Future Vision</td>
<td>2*</td>
</tr>
<tr>
<td>Upper Crossman</td>
<td>1</td>
</tr>
<tr>
<td>Yilliminning</td>
<td>2</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

* One evaluation participant had attended only one workshop.

Qualitative data were collected from a total of 20 landholders across the South West NRM Region (Table 1). In some instances it was not possible to contact landholders, and this resulted in differences in the number of evaluation participants for the 10 catchments. Due to time limitations, it was not possible to conduct further interviews. One interview was attended by both the husband and wife, both of whom participated in the workshops. This interview has been analysed as one, making the total number of interviews nineteen.

Semi-structured interviews were conducted face-to-face with the evaluation participants. An interview guide listing the questions to be explored during the course of the interview was used to ensure that the same format and topics were covered with each landholder (see Appendix 2). Two pilot interviews were undertaken to refine the interview guide and ensure...
consistency between the interviewers (both interviewers were present at the pilot interviews). All interviews were conducted during October 2008, and were recorded digitally and via handwritten notes.

2.2.2 Natural Resource Management officers

Of the eight Natural Resource Management officers involved in the workshops, one could not be contacted. The remaining seven were invited to participate in a semi-structured group discussion held in October 2008 in Katanning, Western Australia. Three were able to attend. A guide was used to focus the discussion and ensure key questions were covered (see Appendix 3). Questionnaires were sent to three of the four remaining NRM officers, and a semi-structured interview was undertaken with the fourth. Only one questionnaire was completed. The discussion group and semi-structured interview were digitally recorded and handwritten notes taken. Data from a total of five NRM officers were collected.

2.2.3 Department of Agriculture and Food project team

A semi-structured group discussion was held in early November 2008 with four of the five staff members involved in the project. Similar to the NRM officer group, a guide was used to focus the discussion and ensure key topics were covered (see Appendix 4). The information was digitally recorded and handwritten notes were taken.

2.2.4 Community and Stakeholder Reference Group

All twelve members of the Reference Group were sent a questionnaire by email or fax (see Appendix 5). Three responses were received. Because of the low response rate, this group has been omitted from the analysis. However, a summary of the responses are included in Appendix 5.

2.2 Data analysis

All audio files and handwritten notes were transcribed and independently read by the evaluation team. Patterns associated with themes from the initial evaluation focus were identified within each evaluation group, as were any emergent themes and associated patterns. The transcripts and completed questionnaires were imported into N-Vivo 7 qualitative analysis software (QSR International 2006) and coded according to the identified patterns and themes. The data were summarised and interpreted by the team, and associations between themes were explored.

As the data for this study were collected from a sample of participants, it is possible that not all viewpoints or ideas were captured. This is of particular relevance for the landholder group. Care should be taken if attempting to generalise the evaluation findings across the whole population of project participants.
3. Findings

3.1 Landholders

3.1.1 Salinity projections had the greatest impact

A key part of the workshop process was the use of large, catchment-scale maps that highlighted the projected areas of future salinity (Plate 1). The interviewee reactions to these salinity projections were varied, but to the majority they were a real 'eye-opener'. Some appreciated that they now knew 'how it is', whilst others, though resigned to the fact that salinity was a real threat, did not believe the spread would ever be as great as projected. Conversely, one interviewee thought the projections were underestimated. The impact of these projections on landholders, including those who were sceptical, was profound, evoking words such as 'devastated', 'horrific', 'scary stuff', 'distressing', 'frightening'. The emotive language used illustrates the power of visual aids. This was an element of the workshops that all the interviewees remembered—'That was something I will never forget.'

The use of maps that covered the entire catchment (as opposed to individual properties) was important on various levels. For many interviewees, the salinity projections led to the realisation that:

- Salinity is/could be a big issue.
- They needed to work together to address salinity.
- Salinity is an issue that cannot be ignored.
- They weren't the 'only fish in the sea. Everyone's got their salinity or soil problems.'

3.1.2 An understanding of salinity and its impact

When landholders were directly asked how the workshops had improved their understanding of salinity and its impact, the majority felt no improvements had been made. In all cases this was because they felt they already had a good understanding of salinity: 'I've been aware of salt for a long time and I know what it does.' In fact, this response is inconsistent with the reactions to the salinity projections described above. Of the 11 interviewees who believed the workshops did not improve their understanding of salinity and its impact, nine had clearly
been affected by the salinity projections. It is possible that this group of interviewees had a good understanding at the farm-level, but the catchment-scale maps increased their awareness of the potential impact of salinity on their catchment.

Of the eight interviewees who believed the workshops improved their understanding of salinity and its impact, this improvement was primarily due to the information delivered regarding the projected spread of salinity in their catchment. ‘Well it certainly helped [my understanding] in the sense that I didn’t realise there was so much land that is susceptible to salt.’

### 3.1.3 An understanding of the impacts of management actions

There was an even split between interviewees when asked if the workshops had improved their understanding of salinity management options and the impact of these. For those who said the workshops did improve their understanding, there were three key reasons:

1. ‘Discovering’ new options—'Because we ran through it with different farmers, what they would do or what their options are, it did widen my horizons to think, ‘Yes, I could do that as well.’ Like I had never thought before to plant lucerne, for example. Yes, I’d heard that it was a good idea and all that sort of thing, but I hadn't really thought to do that. Trees and drains, yes, but not lucerne. And because others were doing it, I thought, ‘Oh yes, that’s quite a good idea really.’

2. The realisation that saltland can be productive—'Getting something off that salt land. I think that was the main one, was actually getting productivity off your salt land. We’ve got the salt land, let’s do something with it to get productivity off it … not just lock it up and leave it.'

3. The suitability of current salinity management strategies/ideas was reinforced—'For me, it just concreted what we were doing. I don’t think I changed my view on what we’re wanting to do and things like that. I think that it’s concreted it.'

As with the ‘salinity and its impact’ responses above, interviewees who felt the workshops did not improve their understanding of salinity management options believed they already knew the information being presented. It is unclear whether the workshops reinforced the applicability of their current management actions.

It is important to note that, particularly when talking about management, landholders value information from other landholders (Heath et al. 2006). The target-setting process gave participants the opportunity to discuss salinity management options and experiences with one another, which was important for a number of interviewees who were actively looking for options to try on their own properties.

It appeared that improvements in capacity (i.e. landholder understanding) correlated with the landholders’ experience with salinity management—the less experienced interviewees learned more.

### 3.1.4 A change in attitudes/aspirations

In addition to the impacts described above, the Salinity Target Setting workshops appeared to have brought about a change in attitudes and/or aspirations in approximately half the interviewees. These changes were categorised into four key areas:

1. Call to action (11 responses): The ‘wake-up call’ regarding salinity management. That is, the realisation that more can be done and that it needs to be done soon.
2. Working together (5 responses): The realisation that farmers needed to work together as a catchment for the benefit of others within the catchment, public assets (i.e. reserves, lakes), infrastructure and/or aesthetics.

3. Productive saltland (4 responses): That saline areas need to be managed, and can be productive.

4. Realistic views (2 responses): The realisation that it will take time for any effect of management to be noticeable, and not to be disappointed because we're losing ground, because that's to be expected. So it's not that we've done something wrong … That's, I think, the change in attitude.

Note: Responses are not mutually exclusive.

For the interviewees whose attitudes/aspirations had not changed, all had been (and continue to be) proactive in their management of salinity. This included implementation of saltland management to 'help the catchment' and make saline areas productive.

3.1.5 The workshops brought salinity to the front of participants’ minds and led to implementation of management actions

Salinity was a familiar issue to all interviewees, the majority having implemented one or more management options to address the problem prior to the workshops. Nevertheless, the interviews revealed that a number of interviewees had reduced their level of effort in their management of salinity. In particular, dealing with the problem had often been deferred due to constraints such as time and money (‘too many crises around the place, isn’t there, to be worrying about salt at the moment.’). The workshops brought salinity (and its management) to the front of landholders’ minds. It made them think back on what they had done, and think forward on where they would like to be in the future. In general, it was recognised that ‘we’d better continue our efforts, we can’t just back off,’ and, in some cases, it kick-started them into action.

Although implementation of salinity management actions had not been intended as a direct outcome of the project, participation in the workshops did result in implementation by ten of the 19 interviewees. Of these:

- Six had learned something new at the workshops and applied this to their own farms. This ‘new’ management predominantly involved plant-based options such as saltbush and lucerne, but a few had also implemented earthworks for water management.
  
  ‘I didn’t know what to do, apart from fence it off. And then do what? That was the question. So, if it wasn’t for the workshop we wouldn’t have put the w-drain in. We would have probably fenced it off, because of the funding, but we wouldn’t have known what to do on it. This big w-drain, because this is a really big salt area, has done marvellous.’

- Four interviewees used the funding associated with the workshop (i.e. $10 000 for the catchment group) to implement some salinity management works. In all cases, the $10 000 was used by the catchment group to buy seedlings, which were distributed to members of the group.

A further three interviewees had learned something at the workshop that they wanted to try, but had yet to implement.

Although a number of interviewees stated that they were not influenced by the workshops in terms of implementation, this does not mean they weren't managing salinity, or that they did not see salinity as a threat. In fact, all interviewees had taken actions (and indicated that they
would continue to do so) to minimise and manage the effects of salinity on their properties. In many cases the workshops served to reveal graphically to the participants the projected impact of salinity in their catchment and, as mentioned, brought salinity to the fore after a period of relative inactivity. It is also likely that the workshops reinforced the validity of management strategies that landholders had already been undertaken and, in some instances, moved them to prioritise some options over others.

As with any management practice or technology, various barriers and drivers affect adoption of salinity management. A number of these were identified in the landholder interviews conducted for this study (Table 2).

Table 2 Drivers of and barriers to adoption of salinity management practices from interviews with participants of the Salinity Target Setting workshops

<table>
<thead>
<tr>
<th>Drivers of adoption</th>
<th>Barriers to adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived expectations of catchment group</td>
<td>Belief that practice does not work</td>
</tr>
<tr>
<td>Protection of community assets such as reserves, lakes</td>
<td>Lack of finances</td>
</tr>
<tr>
<td>Empathy for other farmers (e.g. those at the bottom of the catchment and thus most susceptible to losses from salinity)</td>
<td>Lack of time and constraints of time (e.g. ‘can’t do it in 12 months’)</td>
</tr>
<tr>
<td>Make money (by adopting practices that minimise/reduce effect of salinity OR that enable money to be made off saline land)</td>
<td>Group ‘burn-out’ (preventing the ‘adoption possibilities’ that come about from being involved in an active group, including easier access to public funding)</td>
</tr>
<tr>
<td>Access to funding</td>
<td>Seasonal conditions</td>
</tr>
<tr>
<td>Ensuring longevity of the land for future generations</td>
<td>Scepticism of the Landcare movement</td>
</tr>
<tr>
<td>Moral responsibility (e.g. do not want to send their dirty water to their neighbours)</td>
<td>Difficulty of accessing seed</td>
</tr>
</tbody>
</table>

3.1.6 The importance of funding

Funding, or the promise of it, was an important motivator for attending the Salinity Target Setting workshops. When asked why they went to the workshops, a large majority of interviewees said it was to access funding. This related to either direct funding ($10,000 per catchment group), or indirect—that is, they had heard that if, as a catchment, they set targets there would be a greater chance of success when applying for funds in the future.

Three of the catchments involved received substantial amounts of funding to implement on-ground works after the workshops. These catchment groups would not have received this money if they had not participated in the workshops. For two of the three catchments, funding had a great impact at both the individual and catchment-scale. It allowed them to work together as a group to implement ideas that had been discussed at the Target Setting workshops. In one case, the group would have folded, but the funding kept the group ‘alive’.

Other catchments that received the $10,000 grant used it to buy seedlings, which were then divided amongst the group. It appears that one group undertook together a ‘tree planting exercise’.

3.1.7 Most significant change

A diverse range of responses was obtained from landholders when asked what they saw as the most significant change resulting from the workshops. These responses were able to be categorised into three key areas:
1. Greater insight into the salinity problems they face and possible actions to take (8 responses): The workshops got the participants thinking about salinity in their catchments and the effect this might have on them, and other landholders, in the future. Participants had the opportunity to discuss management options and came to the realisation that they need to work together as a catchment.

‘The most significant change, possibly—I mean for all us members of our catchment that went to the workshops, we see what’s going in on our farms everyday and even within our catchment. So maybe the one thing that we do sometimes become is a little bit complacent, which means that we don’t realise enough about the overall picture and that. And you sort of think you’re doing your little bit in your farm, but everyone’s got to be doing that little bit for it all to help at the end of the day. Yes, so probably the change factor is in your mind that there’s a bigger problem out there than a lot of people realise.’

2. Getting them back into action (7 responses): As mentioned previously, the workshops brought salinity to the front of the participants’ minds and motivated individuals to take action. In addition, the opportunity to discuss the issue and solutions with others within the catchment resulted in follow-on action by reinvigorated catchment groups. In some cases, funding was an important catalyst for action.

‘… we’ve done some management now. Our whole catchment has done different things to control water and salinity and trees … The LCDC group will be better because everyone has done something either for salinity like we have, or water, trees. And they probably wouldn’t have done that if we hadn’t done that [the workshop]. So for sure, if we hadn’t had that workshop and the funding, probably very little of that would have been done. Probably we might have fenced this off, but we probably wouldn’t have spent a lot of money on big w-drains and anything.’

3. No change (4 responses): Some reported no change, in that they did nothing differently after the workshops. Others reported no change insofar as there had been no measurable change to the extent of salinity.

3.1.8 From the Natural Resource Management officer perspective

Overall, the NRM officers believed that the workshops did have an influence on landholder capacity. The workshops provided an opportunity for the farmers to get together and started them thinking and talking about salinity management as a group. The officers were particularly ‘delighted’ to see the high level of participation by the landholders—‘[They] actually contributed and really thought about it.’ This made a lasting impression on the NRM officers. Three of them believed the workshops did influence landholder thinking about salinity management options and the impact of these. It was acknowledged that the landholders probably already knew some of the information that was presented. However, it was recognised that hearing the information again may have helped them ‘take it on board’, or they may have ‘fobbed it off’ if the information conflicted with their personal experiences.

A few NRM officers believed the attitudes of landholders to salinity management changed from ‘reversal’ to ‘adaptation’. That is, prior to the workshops landholders were aiming to reverse the damage caused by dryland salinity. The information presented and discussed at the workshops gave the landholders a clearer understanding and led to the realisation that they have to adapt. For a couple of the NRM officers, this change in attitude in the landholders was profound. Furthermore, workshops that included the younger generation revealed a shift in attitude within the group, particularly in relation to working together as a catchment:
'The son came along and actually started discussing the issues with the upstream neighbour that Dad's been putting a block up to for years. And then we just started discussing it and opening a few things ... it happened as a result [of the workshop]. So I think that was a real big win because he could have easily just taken on Dad's attitude. But instead, because they've come together fairly young and they started talking as a catchment group, he's brought a different opinion instead of just following Dad or being that blocker. So I think that was a real good point out of [the workshop].'

There is evidence from the NRM officers that some landholders implemented on-ground works due to the workshop (although some landholders were probably thinking about it prior to this). To the NRM officers, the workshops got the landholders thinking about salinity and its management after a period of relative inactivity, and motivated them to take action.

'Before the workshops, farmers were doing their own thing based on their own priorities, and perhaps drawing knowledge gained as an individual in the Focus Catchment Group. After the workshop, they organised and implemented an on-ground works project, which has been completed.'

'It's the switch between 'Okay, we know what to do, now we've actually got to get our hands dirty and do it.' That's the big shift ... They know the problems, they know what the tools are ... The difference is to actually do it, and I think that was the value of these workshops. It got neighbours together and a few of them going, 'Oh, I was thinking of that, you were thinking of that, oh.' That was where the value came in, it didn't do education, it did next steps, let's start.'

3.2 Natural Resource Management officers

Participation in the Salinity Target Setting process had benefits for the NRM officers, mostly in the reinvigoration of their catchment group. The NRM officers believed the workshops successfully got the landholders together as a group to look at natural resource management. This included helping them understand 'what their land resources were like and opportunities for working with it and making better decisions'; getting them to think at a catchment scale; inspiring them to do something about salinity; and getting them to think outside the box (e.g. there are options other than deep drainage). Other benefits included getting interpretations of data from piezometers for specific catchments and the opportunity to access funding because of participation—both direct funding (i.e. $10 000 for catchment groups that participated in the workshops) and funding that was able to be accessed because the workshops gave the participating catchment groups the opportunity to develop a shared vision for their catchment and targets to aim for. 'Having the group together thinking 'NRM' was an influence in getting [a funding] application together.'

The comment was made by one officer that 'the project felt like another hoop to jump through' and 'developed to justify future allocation of funding, rather than achieve real change.' Two other officers considered that the targets were developed for the South West Catchments Council rather than the landholders’ benefit, but acknowledged that the process used did result in outcomes of significance for the catchment groups.

3.2.1 Major gains in NRMO capacity

The workshops had a mixed impact on the capacity of the NRM officers. In general, no improvements were made in their understanding of salinity or salinity management options and the impact of these, as they already had a comprehensive understanding due to their roles. However, comments were made that 'it was interesting to see local situations rather than reading generic statements,' and 'good to hear about how things have changed over time and to get meaningful interpretation of local data.' Where local data were scant, the information presented was vague and perhaps more generalised, which 'greyed the value' of the data.
Although the modelling was ‘interesting’, this part of the workshop did not have as great an impact on the NRM officers as it did on the landholders. Two of the officers did not trust the modelling—they believed too many assumptions lay behind it, and that it may even have been damaging to present the data to landholders when modelling showed that even with management, there was little difference to the ultimate salinity outcome—while the other benefits of management were not mentioned.

‘There are those whole ecosystem advantages in doing things, but you can’t show that in groundwater levels or hectares of revegetation and stuff. But if you just say to the farmers, ‘Okay, if you do nothing you’re going to decline at the rate of 22 per cent a year and if you do something you’ll only decline at the rate of 21.78 per cent’, rather than taking into account your wind and water erosion and soil stability and all of that other stuff that can’t really be measured. So that’s why I found it a bit disappointing … through no fault of the presenters, not saying that, just that the things that we’ve talked about only come across as being, well if you do all this work we’re going to make a micron of a difference.’

The NRM officers appeared to have been more concerned with the reactions of the landholders to the workshops, rather than attending for their own personal learning.

‘I wanted to make sure that it actually worked for my guys.’

The key information that NRM officers took away from the Salinity Target Setting workshops related to the landholders.

‘Gaining insight into the farmer perspectives.’

‘I think we learnt stuff about how a catchment group works together.’

‘I think I learnt more about what the individual farmers wanted to actually do.’

How (or if) this information learnt will be applied by the officers over the course of their work is unclear. However, it is anticipated that these learnings will have a direct impact on the NRM officers, underpinning their interactions with landholders. One officer indicated that participation in the workshop ‘reinforced the reality of salt-affected land—adaptation rather than reversal—versus the aspirations of farmers—reversal, reversal, reversal!’ and raised her confidence at giving salinity advice.

3.2.2 Targets and implementation

In general, the NRM officers felt the setting of targets to be a useful exercise, particularly as it aided access to funding. However, to some ‘it seemed like a number [target] was decided on because it was needed to, not because they [the farmers] wanted to.’ This view was reflected in other comments that farmers are generally committed to ‘doing the best they can,’ and having a target did not change this. It was acknowledged that the process the workshops took the landholders through was itself beneficial, resulting in other outcomes mentioned above. Officers acknowledged that reminders to the catchment groups at meetings would reinforce the messages and keep the targets on the farmers’ minds, but these reminders were not taking place.

The impact on the NRM officers of the targets that were set lay mainly in ‘reassurance from the group that they were all on the same page, in wanting to tackle land and water management.’
3.2.3 Most significant change

Each of the five NRM officers gave a different response when asked the most significant change resulting from the Salinity Target Setting workshops, though the change described was generally associated with the landholder.

'\textit{I would say the actual teamwork. The start to think and talk it through.}'

'\textit{Possibly realising that there’s only so much you can do, and you shouldn’t expect to see greater results, in terms of addressing salinity, than is possible.'}

'\textit{I think it made them reassess some of the information they’d been given previously—and not just reassess the information; it made them actually think about comparing what’s been going on on their place, on their own properties, across the catchment.'}

'\textit{The most significant change for me, or it could have even been the starting point, where I realised that there is so much more that has to go into engaging landholders in managing their natural resources … I used to think it was about land or natural resources. It’s not. It’s about people. We don’t care for the land; we care for the people who care for the land.'}

'\textit{Hopefully, information for SWCC to better invest funds.'}

3.3 Department of Agriculture and Food project team

The Target Setting workshops appeared to have a distinct set of impacts on the Department of Agriculture and Food project team. Although the ultimate purpose of the workshops was to set catchment-scale salinity targets, it was recognised that, from a departmental perspective, there were advantages to be gained by adopting a consultative process to set the targets. All members of the project team indicated areas of personal learning that resulted from participation in the workshop process. In particular, three key avenues of learning were identified.

1. Workshop design and delivery

Commitment to a consultative process to engage landholders in the development of salinity targets delivered important insights into how the project team could improve the process for future delivery. This ‘continuous improvement’ ethos resulted in changes to workshop process in three areas:

1. Workshop design—from the set-up of the room, to ensuring that all view points were captured.

   ‘\textit{Just the way we set the table up. We set it up the first time as a U-shape, had all the Ag Department on one side and the farmers on the other. And it was in the Ag Department office and it just didn’t work. We couldn’t work out why the dynamic was just not there. It was very much us and them … We had a de brief and thought about what happened … So the second time we set the tables up to be like this [U-shape] and set up the Ag Department people to be spread out, and then, consciously, that was what we did at every single workshop, to make sure … the set-up of the room encouraged conversation.'}

2. Relevance to participants—local examples and data were used to give the information greater relevance and be of more interest to the audience.

   ‘\textit{We made a point of taking photographs and incorporating them into the presentation so they had photos of their catchment there, so personalising it.'}
3. Where to from here?—the workshops inspired landholders to take action, but did not provide any follow-on support. To help keep the momentum going, $10 000 in funding was given to participating catchments (only available in the second phase of the project). It was recognised that this would not fully address the issue, but was seen as a start.

2. Landholder interests, wants and needs

Use of a consultative process had the benefit of allowing the project team to gain an understanding of the landholders’ interests, aspirations, attitudes and their capacity to deliver salinity management. It also gave the team the opportunity to gauge farmer attitudes towards the department. In addition, the workshops enabled the project team to get a snapshot of the landholders’ current interest in management options, which can be used to show how the appeal of specific options changes over time.

‘I was surprised that there was still a lot of interest in surface water management from the groups. I was expecting a bit more interest in trees, actually, and in perennials, than there was … I thought there would be strong issues in drains. I didn’t think surface water management would be quite as high.’

3. Salinity and its extent

The workshop process enabled the project team to gain a greater understanding of salinity and its extent. This understanding was evident on two levels. Firstly, a generalised understanding of salinity was gained by one new team member.

‘Well, I learned a lot more about salinity per se. I knew about the basics of it and a little bit, but yeah, I think I learnt a lot more about it and the mechanisms and all those things that are a part of it.’

Secondly, an understanding was gained of the landholders’ perspective on salinity.

● How landholders believe salinity has changed over time
● Current extent of what landholders view as salt-affected land, that will be used for future comparisons.
● ‘Ground-truthing’ of department-developed scientific data:

‘You learn a little bit about each catchment you go to ... We gave them a bit of information and a scale, and we got them to respond and talk about their observations. That’s really useful to us. It’s like a ground-truthing of data or information that you already have either in hard form in a map or in soft form in your head. So that’s really useful. It sort of fine tunes what you know or what you think you know.’

3.4 Effectiveness of the process

As part of the evaluation, the effectiveness of the consultative process was assessed. Did the use of a consultation process lead to SMART catchment-scale targets that were owned by the participants? Did this ‘ownership’ result in action to ensure the targets are achieved?

3.4.1 Over half the interviewees were working towards the targets

The ultimate aim of the workshops was to have realistic and achievable salinity targets for each catchment involved. Ten of the landholders interviewed saw great value in having targets. They were seen as necessary ‘because you’ve got to have something to aim for.’ These interviewees had either implemented practices to actively help achieve the targets: ‘I have more of an idea of what flows downstream, so put in banks to hold the water back and help achieve the targets,’ or would like to reach the target (and have plans in place) but do
not have the resources at present to implement the plans: ‘Well it’s [changed my]—what’s the word—my ideals, it has, but in reality … it comes back to time and money. When you’re not making anything it’s very hard to spend it.’ Finances and time were seen as the key barriers preventing individuals from working towards the targets.

For nine of the interviewees, the targets were arbitrary figures that did not have any impact on an individual’s management of salinity. In general, these interviewees had their own targets for their farms, and were working towards these. Nevertheless, it was recognised that, even though the catchment salinity targets might not come into play, an individual’s work would ultimately assist the catchment in achieving the target. Conversely, for two of these interviewees, the targets set at the workshops did not appear to have been given a second thought since the workshop. Participants who were not actively working towards the targets nevertheless appeared to have considerable experience (practical and/or theoretical) in terms of salinity management.

### 3.4.2 Realistic and achievable targets

A number of interviewees wanted to take action to address salinity but did not have the money and/or time to implement work. This brings into question how SMART the set targets actually were; particularly, whether the targets really were realistic and achievable. Ten of the landholder interviewees believed the targets were realistic and achievable. However, several of these placed caveats on this statement. In particular, comments were made that the targets were achievable if money was made available to do the work required. Five interviewees said the targets were not realistic and achievable, while four could not remember their targets and therefore couldn’t comment. Several farmers indicated their belief that the targets were a ‘stretch’ but that it was useful to have something to aim for even if it might be unachievable. The project team confirmed this view, believing that some groups had set over-optimistic targets given the scientific information at hand (i.e. current salinity trends, etc.).

Other comments made by interviewees suggested that the workshop discussions about targets and management options, and the exchange of ideas and information helped make the targets more realistic.

### 3.5 Unexpected outcomes

As the ultimate purpose of the workshops was to set catchment-scale salinity targets, any outcomes beyond this were considered a bonus. In fact, many of the outcomes of the Salinity Target Setting workshops described above were unexpected. The use of the consultative process was key to the achievement of these outcomes. In addition to those described in the previous sections, there were a number of other outcomes that came about as a consequence of the workshops. These included:

- Groundwater monitoring bores were drilled in the Daping Creek catchment through the Resource Condition Monitoring project. This catchment was identified through the Target Setting project as lacking in groundwater monitoring.

- The Blackwood Basin Group (BBG) funded approximately $200 000 each for three of the catchments that participated in the Target Setting workshops. The list of catchments that participated in the workshops gave the BBG a place to start when deciding on suitable catchments to fund.

- Discussions in the workshops contributed to the Salinity Investment Framework (3), in particular, the categorisation of agricultural land at risk of salinity as an ‘asset’.

- In the workshops a real interest in productive saline land emerged. This led to the initiation of a new ‘productive saltland’ project in the region.
- A sound monitoring system was installed in the Fence Road catchment where large-scale drainage works were to take place. In discussion, the landholders realised there wasn’t reliable data on the impact of deep drainage and so specified the inclusion of monitoring in their drainage plan.

- Analyses undertaken for the workshops have been used elsewhere. For example, as part of a presentation on Western Australia’s groundwater trends at the International Salinity Forum (Adelaide, 2008).
4. **Key lessons**

Although the purpose of the project was ultimately to set catchment-scale targets for the South West Catchments Council, the evaluation showed the project was of value to the majority of farmers that attended the workshops, as well as the Natural Resource Management officers and department staff members involved. In general, the Salinity Target Setting workshops had a positive impact on salinity management actions and/or the capacity of the evaluation participants.

1. **The consultative process was the catalyst for action**

   In general, the consultative process, rather than the targets that were set, was the catalyst for action from the farmers. Although the project did not include activities to directly target on-ground management responses to dryland salinity, the impact of the workshops on participant knowledge, understanding, aspirations, attitudes and/or confidence led to on-ground actions by more than half the landholder interviewees.

   The level of farmer experience in salinity management prior to the workshops affected the impact of the workshops on their capacity—the workshops did not have a great impact on the capacity of the more experienced farmers. Nevertheless, the workshops brought salinity to the fore, and most farmers came to the realisation that it was a major issue to be tackled as a group. The evaluation findings indicate that catchment groups and individuals were motivated to begin, or continue, their efforts in managing salinity. Identified barriers, particularly time and money, were preventing some from implementing works to ‘better the catchment’.

   A key reason for using a consultative process was the belief that the targets set would be realistic and achievable, and that landholders would have a sense of ownership of the targets and therefore a desire to achieve them. Although the majority of landholders interviewed had implemented salinity management actions on their farms (or would like to if finances/time permitted), almost half were not doing this management to help meet their catchments' salinity target. Achievement of the catchment targets did not appear to be a concern to the Natural Resource Management officers. It is possible that the achievement of the salinity targets would be more of a driver for action if progress toward the targets was actively monitored, discussed by the NRM officers and landholders and management plans put in place and periodically reviewed.

2. **Key elements of the process**

   The consultative process used to set the catchment-scale salinity targets incorporated several elements that combined to motivate landholders to take action. According to the interviews, key elements of the workshops that stood out as being influential included the catchment maps (which visually showed the area of salinity and areas at risk) and the various interactions (one-on-one, group discussion/debate, access to expert input, sharing experiences with other landholders). In particular, bringing together landholders with common interests (i.e. from the same catchment) to discuss their aspirations for their catchment built enthusiasm and motivation on a group scale. The incentive of funding (either direct or possible future funds) helped get landholders to the workshops. The chance to catch up with other farmers from the catchment was another important driver for attendance.

3. **Participatory processes build enthusiasm**

   Using a consultation process involving individuals from a defined catchment gave the group a clear, shared vision for their catchment, and targets or actions were agreed upon to fulfil that vision. This planning enabled groups to demonstrate their commitment towards the
management of salinity in their catchment and, with the support of their local Natural Resource Management officer, helped some groups apply for further funding.

Although it was not a goal of the project to achieve management actions, it was anticipated that the consultation process would encourage workshop participants to take their own actions. The evaluations of the individual Salinity Target Setting workshops revealed that this was the case—groups and individuals were inspired to take action (Viv Read and Assoc. 2006). This investigation also supports these findings.

Even though the project anticipated farmer motivation to address the salinity issue, no activities were planned to translate this enthusiasm into on-ground action. In many cases, farmers and groups felt they were left ‘hanging’ at the end of the process, with neither the means nor the follow-up required to persist with preliminary plans or ideas discussed at the workshops. In order for this energy to be translated into on-ground works, continued follow-up would be required. This was partly addressed by offering $10 000 to each catchment group that attended the workshops.

4. Developing SMART catchment-scale targets

A key goal of the workshops was to give the farmers the understanding required to allow the development of Specific, Measurable, Achievable, Realistic and Time-bound catchment-scale targets for dryland salinity. The development of truly SMART targets proved to be a difficult task. A number of farmers indicated that they wanted to achieve the targets, but did not have the resources (time and/or money) to take action. This brings into question how ‘SMART’ the set targets actually were; particularly, whether the targets really were realistic and achievable. Several farmers believed the targets were a ‘stretch’, but noted approvingly that this gave them something to aim for. The project team confirmed this view, believing that some groups had set overly-optimistic targets. Many interviewees believed that the workshops motivated them to take action; however, once the workshops were completed, on-ground action was limited.

As the process was supposed to enable the development of realistic and achievable targets, there was an expectation that the farmers had the capacity to work towards those targets. It is possible that some of the targets were SMART from an individual perspective rather than a catchment perspective. For example, in order to achieve the catchment target, an individual farmer might say I need to do x, y and z on my property over the next five years. This farmer may achieve this, but if other farmers within the catchment do nothing, the catchment target will not be achieved. There are several issues involved, but an overarching catchment plan and a coordinator seem the logical start to ensure the targets are, at least, aimed for. It is possible that the project could have better encouraged the NRM officers to coordinate the achievement of the targets or, at the very least, to keep the targets at the fore of the farmers’ minds.

5. Learning about people

All people are different and a consultative process allows this diversity to be revealed. For the project team, insights into this diversity informed various aspects of their work, including delivery of the Target Setting workshops, development of new projects and perception of gaps in information. For the NRM officers, insights into their farmer group attitudes and aspirations were of particular value.
5. Considerations for future projects

A number of useful insights emerged from this evaluation, consideration of which will contribute to the success of similar projects in the future.

- The experience level of participants will influence a project’s impact on capacity and the implementation of management actions. Consider which target audience will be influenced most. For example, targeting less experienced landholders will see greater improvements in capacity. More experienced landholders can be valuable information sources. In all instances, ensure the target audience is aligned with the project objectives. In the case of the Target Setting project, it was important to have participants from specific geographic catchments, regardless of their ‘level of experience’.

- Interaction with other landholders is valuable. Making opportunities for landholders to interact with other landholders (particularly those with common goals or interests), can make participation more appealing. Landholders value opportunities to share their experiences. Catchment-based workshops are valued by landholders as a means to catch up with others from their local area.

- Farmers value information from other farmers. Landholders place considerable value on information gathered from other landholders. This may have consequences if the information is wrong.

- Two-way discussion with ‘professionals’ is appreciated. Landholders appreciate the opportunity to discuss and debate information with professionals (e.g. department staff), and find it especially rewarding to point out (good-naturedly) mistakes in the information provided! Two-way discussions should always be encouraged, as opposed to ‘lecturing’. The set-up of the room is an important point to consider.

- Relevant maps are of interest. Landholders enjoy seeing images of their land, and the land around them. Aerial photos (or similar) give the landholders the opportunity to point out specific features and discuss the ‘bigger picture’ with their neighbours.

- A continuous improvement ethos is essential. When delivering a project, the project team should always look at how they can improve. Not only does this ensure you are delivering the best service/product possible, it also provides information/learnings that will enable better delivery in the future.

- Funding attracts participation but does not necessarily translate into on-ground actions. For the Salinity Target Setting workshops, many of the interviewees attended the workshops to receive the funding that was associated with attendance (i.e. $10 000 per group), or because it was believed that setting targets as a catchment would increase the chances of successful funding applications in the future. However, even though funding was received, time limitations prevented the money from being used on-the-ground.

- Think beyond the project. When working with landholders it is necessary to address the ‘where to from here’ question. If the project is successful at motivating action by the landholders (even if this wasn’t an objective of the project), the landholders need to be able to take the action. If further action is beyond the scope of the project, then steps need to be put in place to facilitate landholders moving on to the next stage (e.g. they know who to contact, etc.).

- There will always be barriers preventing adoption. Where a project is aiming for ‘adoption’, barriers to adoption should be identified and consideration given to these in order to anticipate the likely impact of the project.

- Use local information. Using local information, including photos, personalises the workshop for participants. This can result in an increased interest in the material being presented and a shared understanding of the local situation.
6. References


Hu S 2006, Methods to set land salinity resource condition targets for the south west: case studies from Australia and New Zealand, Resource Management Technical Report 308, Department of Agriculture and Food, Western Australia.


QSR International Pty Ltd 2006, N-Vivo qualitative data analysis program, Version 7.


Viv Read and Associates 2006, Pilot workshop processes for setting dryland salinity resource condition targets for catchments within the South West Region: Summary report, Report prepared for the Western Australian Department of Agriculture and Food.
Appendix 1: Project detail

**Objectives:** Begin SMARTening current Resource Condition Targets and Management Action Targets for Land, particularly dryland salinity, focusing on low-medium rainfall catchments.
1. Undertake an analysis of the information available to assist in the setting of SMART Targets.
2. Identify additional data sources (and cost estimates) required to set SMART targets.
3. Establish a time schedule for the SMARTening of targets and the key problems or issues that are being targeted.

**Outputs:**
- Workshops with 5 groups
- Workshop summaries
- Consultant reports
- Workshop evaluation reports
- SMART catchment-scale targets for five catchments
- Report documenting the consultation process used
- Poster
- Articles

**Influence Activities:**
- Pilot workshops to set SMART catchment-scale targets

**Foundational Activities:**
- Report on groundwater trends and salinity risk
- Case studies' report
- Data sources spreadsheet
- Communication and community engagement plan
- Posters
- Maps
- Articles

**Objectives:** Targeted outcome: Effective and targeted management responses to dryland salinity in the South West NRM region through improved understanding of likely future extent of salt affected land and the impacts of prospective management actions through the setting of achievable and realistic Resource Condition and Management Action Targets.
1. Using the methodology developed in L7-G2, set realistic and achievable targets for land salinity and native vegetation resource condition and management actions with 7 landholder/catchment groups.
2. Develop and test a methodology to set realistic and achievable RCTs for land salinity and native vegetation for 4 soil-landscape zones within the SW NRM region. This will be aggregated to a regional scale salinity target.
3. Review and revise the RCTs for land salinity and native vegetation and associated management action targets within the regional NRM strategy for the SW region.

**Outputs:**
- Workshops with 7 groups
- Workshop summaries
- Workshop evaluation reports
- SMART catchment-scale targets for 7 catchments
- Landholder survey
- Report of survey results
- SMART targets for 4 soil-landscape zones
- SMART regional salinity target

**Foundational Activities:**
- L7-G2 project
- DS.01d project

**SWCC Aspirational Target:** Appropriate responses to the hydrological imbalance are determined and applied to minimise, avoid or reduce the impact of salinity on agricultural land, remnant vegetation and high-value public assets in the Region.

**Resource Condition Targets:**
- LRT1: Total area of land affected by dryland salinity no more than x times the 2004 area at 2020.
- LRT2: Rates of rise of depth to groundwater reduced by at least x% across the Region by 2020.

**Management Action Target:**
- MAT LT1: Resource Condition Targets for land affected by salinity for priority catchments by December 2005.

Figure 1 Salinity Target Setting project: summary program logic.
Figure 2 Salinity Target Setting workshops: summary project logic showing the workshop activity logic.
Appendix 2: Landholder interview guide

Interview guide—Salinity Target Setting Evaluation

Background to the workshops

- Consultation with those who own/manage the land in order to set realistic/achievable targets
- Listening to the aspirations of landholders
- Finding out how much they want to be involved (level of investment) in order to achieve targets
- Two-day workshop (combining the latest scientific information and simple models with local knowledge of salinity and its management) to set long- and short-term targets.

Workshop aims

1. Develop a common understanding and biophysical knowledge base through trust in the information provided.
2. Undertake processes to assess risk (future extent and timing of impact; responsiveness to treatment).
3. Assess a range of possible management strategies and expected outcomes.
4. Encourage and evaluate local scenario development.
5. Set SMART (Specific, Measurable, Achievable, Relevant and Timebound) targets for resource condition outcomes and proposed management actions.
6. Construct an ‘adaptive management’ framework (through monitoring and evaluation) for continuous review of actions undertaken to achieve the targets.

The expected outcomes from the workshops were to:

1. Derive local aspirations for salinity risk and its management control (i.e. the extent to which salinity affects assets in the future).
2. Present catchment information on current salinity impacts, trends for the future and an assessment of the likely impact of potential salinity management efforts.
3. Identify salinity management options of interest to the landholders.
4. Provide an estimation of the likely impact of those options favoured by the landholders.
5. Agree to a catchment resource condition target for land salinity and native vegetation.
6. Develop preliminary management action targets (if relevant).
7. Assess ‘trade-offs’ that may result from taking management action, or from not taking action.

Workshop 1: Linking science to local aspirations; Workshop 2: Setting targets for action (2007)
Stakeholders’ reactions to the workshops and associated activities

1. To what extent did the stakeholders value the workshops and associated activities?
   - Why did you get involved in the workshops?
   - What were your expectations? Did the workshops meet your expectations? How/why?
   - What made you come back to the second workshop?
   - Were the options that were modelled of interest to you?
   - What did you think about x (use prompts)? Was it valuable? Useful? Explain.
   - Were you happy with the targets set? Explain.

2. To what extent has participation in the workshops impacted on stakeholder capacity (knowledge, attitudes, aspirations, confidence, understanding)?
   - What parts of the workshop did you find most useful? Why?
   - What parts of the workshop did you find less useful? Why? How could these be improved?
   - What were the benefits to you from being involved?
   - How has the workshop improved your understanding of salinity and its impact?
   - How have the workshop improved your understanding of salinity management has and the impact of these?
   - How has the workshop impacted on your confidence in managing salinity?
   - Has your view of saline land changed since your involvement in the workshop? How/Why? (attitudes/aspirations).
   What was your view before the workshop? (attitudes/aspirations)

3. To what extent has participation in the workshops influenced stakeholder management responses to dryland salinity?
   - Have you/do you plan to do anything different (management changes) as a result of the workshops? What/when/why?
   - Why have you chosen that option? What benefits do you expect to gain from the change in salinity management?
   - What were you doing to manage salinity before the workshops?
   - Have the targets that were set at the workshop influenced your management of salinity on your farm? How? Are you working toward the target?
   - Were the targets set realistic/achievable?

4. What were the unexpected outcomes?
   - Since your catchment group was involved in the workshops, has there been further group activity? What?
   - Have farmers in your catchment who didn’t go to the workshops made any changes to their salinity management?
   - What do you see as the most significant change resulting from the salinity target setting workshops?
   - Is there anything else you would like to add?
Appendix 3: Natural Resource Management Officer discussion group guide

NRMO ‘Focus Group’ guide—Salinity target setting project

- Why did you get involved?
- Did you continue to be involved in the target-setting process? Why?
- What were your expectations from the workshops?
- Did the workshops meet your expectations? How/why?
- What happened?
- What parts of the workshop did you find most useful? Why?
- What parts of the workshop did you not find useful? Why? How could these be improved?
- What were the benefits from being involved?
- Was it valuable/useful? How?
- How has the workshop improved your understanding of salinity and its impact?
- How has the workshop improved your understanding of salinity management options and the impact of these?
- Has the workshop impacted on your confidence in providing salinity management advice (or other job-related impacts)?
- Has your view of saline land changed since your involvement in the workshop? What was your view before the workshop?

Impact on catchment group

- Do you think the workshops had any impact on your catchment group? What/how?
- How were the catchment groups managing salinity before the workshops? What are they doing now? How do you think the workshop influenced their decisions?
- Do you think the workshops had any impact on landholder capacity? What/how?
- Since your catchment group has been involved in the workshop, has there been further group activity? What?
- Do you know of farmers who didn’t go to workshops but have made any changes to their salinity management?
Setting targets

- What did you think about setting targets?
- Was it useful?
- Were there any benefits from setting targets?
- Were the targets realistic and achievable?
- Have the targets that were set at the workshop influenced salinity management in that catchment? How? Any influence on others within the catchment who didn’t attend the workshop?
- What do you see as the most significant change resulting from the salinity target setting workshops?
- Were there any unexpected outcomes?

Is there anything else you would like to add?
Appendix 4: Department of Agriculture and Food team discussion guide

Focus Group Guide—Salinity target setting

What were the stakeholders’ reactions to the workshops and associated activities? To what extent did the stakeholders value the workshops and associated activities?

- What were your expectations from the workshop?
- Did the workshop meet your expectations? How/why?
- What parts of the workshop did you find most useful? Why?
- What parts of the workshop did the farmers find most useful? Why?
- What parts of the workshop did you not find useful? Why? How could these be improved?
- What parts of the workshop did the farmers not find useful? Why? How could these be improved?
- What were the benefits to you from being involved?
- What were the benefits to the farmers from being involved?
- What did you think about the (show):
  1) report
  2) certificates
  3) funding opportunities (2008 only)
- How valuable was the input from the farmers?
- What were the perceived benefits of getting farmers involved in workshops?
- Do you think that the process used in the workshops was a valuable tool to set targets? Why/how?

To what extent has participation in the workshops impacted on stakeholder capacity (knowledge, attitudes, aspirations, confidence, understanding)?

- Do you think the workshops had any impact on your capacity? What/how?
- Do you think the workshops had any impact on landholder capacity? What/how?

To what extent has participation in the workshops influenced stakeholder management responses to dryland salinity?

- How were the catchment groups managing salinity before the workshops?
- What are they doing now?
- How do you think the workshop influenced their decisions?

What were the unexpected outcomes?

- Were there any unexpected outcomes from the workshops? Explain.
- What do you see as the most significant change resulting from the salinity target setting workshops?
- Is there anything else you would like to add?
Appendix 5: Reference Group questionnaire and summarised responses

Note: As only three responses to this questionnaire were received, the information has not been analysed for reasons relating to validity.

1. Was being involved in the stakeholder reference group a positive experience for you? Please explain.
   - Yes—it was an opportunity to learn what the aims and objectives of the project were.
   - No—did not have enough time to become heavily involved, which impacted upon ability to interact with the other members of the Group.
   - Yes—gave the opportunity to promote the local area and be involved in a larger project.

2. To what extent did you feel that you were able to influence the selection of catchments for workshops?
   - To a very large extent. This was the primary purpose of the Group. However, some of the reasons given for ‘rejecting’ a group were rather lame.
   - None. The criteria for catchment selection were not related to field of expertise.
   - Was able to promote local catchment. There is always some bias in this type of process.

3. Do you think that the process used (i.e. consultative catchment group workshops) was a good way to set targets? Explain.
   - Believe that it could work at a catchment level, but didn’t in this instance due to targets being set hastily, low representation from landholders, landholders uninformed about process and distrust of the agency.
   - Yes, for the majority of landholders present.
   - Yes. It is necessary to have the people who are ‘responsible’ for the target be involved in the setting of it.

4. To what extent did you feel that you were able to influence the workshop process used to set targets?
   - None (did not participate)
   - Limited
   - Felt that contributed in the best way possible through the discussions. Believed the Group was run in way that allowed individuals’ ideas to be heard.

5. In your opinion, was the Community and Stakeholder Reference Group worthwhile? Explain.
   - No. Felt that the formation of this group was just to ‘tick the box’ for community consultation.
   - Yes. Felt that is was essential to engage the community in the process to set targets, especially as it supported ownership.
   - Yes.
   ● Participation was mandatory.
   ● Probably not, because it wasn’t related to field of expertise, and therefore not given high priority.
   ● Yes. Enabled information learnt through the group to be passed to landholders.

7. What impact has being a member of the Stakeholder Reference Group had on you?
   ● None. The Group was abandoned as soon as contract finished. At the time felt very used.
   ● Limited impact.
   ● Gave the opportunity to meet new people and get new ideas.

8. Since the Community and Stakeholder Reference Group ceased, have you heard about or been involved in the second Salinity Target Setting project? If yes, what was your impression of the project?
   ● No. No communication has been forthcoming from the project team.
   ● No.
   ● Yes. Have both heard about it and been involved.

9. What do you see as the most significant change resulting from the Salinity Target Setting workshops?
   ● Response not relevant to question.
   ● Have not followed the outcomes of the project closely, but hope there will be a desire to undertake measures to control hydrological impacts so that landowners can meet individual and catchment targets.
   ● Made the landholders reassess the information previously given to them and think about things from a community perspective—the opportunity for landholders to reflect.

10. What do you see as the most significant change resulting from your participation in the Community and Stakeholder Reference Group?
    ● The opportunity to work in collaboration with an agency-run project team helped to break down some of the barriers.
    ● Participation was limited.
    ● Hope that contribution had some impact on the Group (e.g. direction, discussions)—that the contributions were valuable and valued.

11. Any other comments?
    ● There are a myriad of factors that must be considered when aiming to minimise impact of salinity. This cannot be achieved, duly considered, and tested over two workshops without suitable landholder engagement over a longer time frame, which did not occur. The workshops seem to have been held, targets set and then that was it.