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Barriers to and Opportunities for Increasing Participation in Conservation Auctions

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Executive Summary

Lessons for the design and implementation of competitive tenders

Competitive tenders are a form of market-based instrument that are being increasingly applied by Australian governments and regional natural resource management organisations. Tenders can deliver cost effective environmental outcomes while providing landholders with considerable flexibility in their response. As competitive tenders move from novel trials to mainstream instruments for achieving voluntary land use change there is a perception that landholders can be reluctant to participate, with consequent restrictions on their potential. This concern is fundamental to their success. In this report the potential barriers that may deter landholders from participating in a tender are identified, along with opportunities that exist for overcoming these barriers through better design and implementation of the tender process. The focus throughout is on landholder perspectives and interaction with competitive tender instruments. Throughout the document we identify 26 lessons for managing participation in competitive tenders.

In narrow economic terms, **increased participation will lead to greater economic efficiency and increased environmental outcomes** per dollar of public investment on-ground, which is a desirable outcome in itself. However, there is a downside to increased participation, in the form of higher administration and **transaction costs** and a greater proportion of unsuccessful bidders. Therefore agencies should aim to **optimise rather than maximise** participation. The optimal level of participation will depend on the amount of money to be allocated (or the amount of services to be purchased) and the objectives of the tender. A **target for participation** should therefore be set early on in the process.

Lessons:

1. Participation should be optimised rather than maximised.
2. Design tenders to build on existing complementary programs and to avoid potential adverse impacts of competing incentive programs.
3. Clear participation objectives should be established taking into account the need for and nature of competition and program objectives.
4. Support actions for unsuccessful bidders should be an integral part of participation management.
5. Quantitative participation targets should be set. Targets will give measurable objectives for each phase of participation and for evaluation during and after tender implementation.

Having set a target for participation, the next task is to **identify if there is likely to be a problem meeting the target**, and the nature of potential involvement. The outcomes will determine what, if any, actions should be undertaken to increase participation rates (or avoid excessive participation).

A five step framework for identifying barriers to participation is presented describing:

1. **Alignment:** “getting into the landholder decision set”
2. **Opportunity:** “what’s in it for me?”

3. **Engagement:** “easing the way in”
4. **Contracting:** “mutual agreement”
5. **Post-participation:** “impact of experience on future involvement”.

The framework is used to identify factors that are likely to influence participation at various stages in the competitive tender process and develop a series of **recommendations for increasing participation rates**.

Lessons:

6. Alignment of desired management actions and outcomes with landholder goals will increase participation.
7. Alignment and resultant participation can be improved through complementary programs focusing on awareness, demonstration and integration into farm management plans of the desired management outcomes.
8. Active promotion of eligibility is needed to overcome lack of awareness.
9. Participation is reliant on landholders perceiving likely benefits outweighing their net costs.
10. Flexibility in tender and management requirements are likely to increase participation.
11. Participant support targeting skill needs will tend to increase participation.
12. Not all participation is good. Self-selection of stronger (cost and outcome competitive) bidders will reduce participant and administration costs.
13. A communication plan should be developed and implemented in order to support participant recruitment.
14. Adopt best practice tender design taking into consideration pragmatic participation tradeoffs.
15. Workshops explaining the competitive tender process, management requirements and bid construction are likely to increase participation. Trial auctions within workshops are highly regarded.
16. A five step structured enrolment strategy is likely to enhance participation: (i) a non-binding expression of interest (EOI) phase; (ii) structured information exchange via workshops and site-visits; (iii) bid submission using a standardised management plan; (iv) offer acceptance (or rejection) and contract signing; and (v) commence management changes and payments.
17. Adopt best practice contract design making pragmatic tradeoffs about the participation impacts of each component.
18. Effective management of unsuccessful bids represents an opportunity to increase future participation and encourage enrolment in related schemes.

Targeting an issue that has a closer alignment with existing landholder aspirations is likely to increase participation rates. However by definition alignment should never be complete, otherwise there would be no case for incentive payments. Rather, an agency should look to achieve its objectives in ways that most closely align with landholder interests. Competitive tenders offer **opportunities** to landholders, financial and otherwise. Clearly the more money on offer, the more people are likely

to get involved; they can also provide non-financial opportunities such as knowledge, support and recognition in changing management practices. Local bodies with a strong community presence are generally best placed to engage with landholders.

Better contact will provide better outcomes. In particular, a **site visit** by a knowledgeable field officer can provide landholders with clear expectations and greatly facilitates their engagement. Running **workshops** to familiarise landholders with the tender mechanism and the objectives of the scheme has also proved useful.

It is still unclear exactly how the length of contract affects participation.

Landholders generally prefer short term contracts, but longer contracts may be required to realise long-term environmental objectives. Perpetual contracts and contracts that cover land title will be less acceptable to landholders generally, but may be more palatable for particular groups with a strong focus on environmental outcomes. Participation in any scheme, whether consummated or not, will inevitably **influence perceptions and expectations of future schemes**. This is particularly relevant for competitive tenders, in which there will inevitably be unsuccessful participants. The participation assessment framework was used to evaluate six case study tenders covering a variety of land management objectives. These case studies provided pragmatic on-ground lessons in managing participation in real tender applications and resulted in several further lessons for participation management in tender design.

Lessons:

19. Alignment is likely to vary across heterogeneous target populations. Active consideration of target populations can aid in instrument design and marketing.
20. Eligibility information, such as mapping, should be available in advance of the EOI phase where possible, backed up by effective discussion during site visits.
21. Site visits are regarded highly by landholders and the quality of these visits are critical to good participant retention.
22. Field staff need to be well trained, flexible and able to redirect landholders in order to maximise participation.
23. Support for bid construction should be tailored to participant needs (within reason). This includes effective training of field staff and supporting materials such as accredited suppliers of works or lists of potential subcontractors.
24. Pragmatic contract design can aid in meeting landholder needs for participation and overcoming constraints to participation such as finances.
25. Tailoring contract length and restrictiveness to stakeholder expectations and concerns is likely to increase participation. Such expectations are likely to differ between communities.
26. Incorporate active review, adaptive design and implementation flexibility in order to incorporate learnings and improve future participation.

1. Introduction

In Australia there is increasing interest in ensuring that land, water and native vegetation resources are appropriately managed by landholders. There is a recognition that existing agri-environmental policies such as charges, subsidies, regulations and extension programs are failing to deliver satisfactory natural resource management (NRM) outcomes (van Bueren 2001) or to ensure a satisfactory return on public investment (Industry Commission 1997). This has led to the consideration of alternative policy mechanisms, such as market-based instruments (MBIs), which have the potential to produce more cost effective NRM outcomes by allocating and managing government funding through the use of market forces.

There are a number of key benefits arising from the use of MBIs that include (Rolfe and McCosker 2003:10):

- greater flexibility of resource management
- provision of incentives to individuals and companies to achieve natural resource outcomes
- specialised knowledge can be applied at the operational level to achieve natural resource outcomes
- outcomes achieved at lowest cost; and
- more adaptable to changed conditions.

Where MBIs are employed to allocate public funds, their use can allow the private costs of individual landholders to be revealed through their voluntary responses to production and incentive signals.

A conservation auction, also referred to as a competitive tender, is a type of MBI that can be used to encourage landholders to provide conservation or other environmental outcomes on private land. Landholders who participate in a tender are required to submit a bid that identifies the area of their property where the conservation effort will be focused and the amount of compensation they require to provide the desired outcomes. All bids are assessed in terms of environmental benefits and ranked on the basis of their relative value (environmental benefits per dollar). The most cost effective bids, that is those providing the best environmental outcome at the least cost, are then accepted until a budgetary or other limit is reached.

The traditional mechanisms used to allocate public funding to NRM activities are fixed price grant schemes. These schemes have been used widely, particularly by regional NRM groups or Catchment Management Authorities (CMAs), to provide landholders with a financial incentive to adopt management practices that have better environmental outcomes. However, fixed price grant schemes are likely to be less efficient than tenders as the socio-economic heterogeneity of landholders and biophysical variation across different properties are not taken into account. In a competitive tender, the most cost effective bids are accepted. This means that more ecosystem services or outcomes can be purchased per dollar of public investment than under a fixed price grant scheme, where there is no discrimination between landholders on the basis of costs of provision.

As competitive tenders move from novel trials to mainstream instruments for achieving voluntary land use change there is a perception that landholders can be

reluctant to participate, with consequent restrictions on their potential. As well, competitive tenders rely on having an adequate level of competition at a single point in time, in contrast to grant mechanisms that tend to operate across longer time intervals. This means timely participation is more crucial to the performance of a competitive tender than a grant process.

The aim of this report is to identify potential barriers that may deter landholders from entering a tender, and the opportunities that exist for overcoming these barriers through better design and implementation of the tender process. We do not set out to comprehensively review the literature that pertains to adoption and uptake – this has been covered recently by Pannell *et al.* (2006) for broader conservation measures and by Morrison and Greig (2006) with respect to MBIs. Nor do we discuss the selection and design of MBIs in general – this is described in detail by Windle and Rolfe (2005) and Whitten *et al.* (2006). Rather, the focus is on understanding, from a landholder's perspective, how the various stages in the tender implementation process impact on participation, and how competitive tenders might be designed and implemented in order to achieve optimal rates of participation.

In the next section of the report the advantages and disadvantages of increased participation in tenders are discussed. While high levels of participation can be advantageous for achieving efficiency, and may be important for particular landscape objectives, there are trade-offs in the form of higher transaction costs and a greater proportion of disappointed unsuccessful bidders. Therefore, simply maximising participation is not necessarily useful. Rather, there is an optimal level of participation which will depend on the objectives of the tender and the circumstances in which it is implemented.

In Section 3, a framework is outlined for understanding potential barriers to participation at various stages in the tender process. Five aspects of the tender experience are considered, from a landholder's perspective:

- alignment – how the tender fits in with a landholder's existing decision set;
- opportunity – does the tender offer something the landholder wants or needs;
- engagement – communication and interaction with the agency;
- contracting – what is involved in entering a formal agreement with the agency; and
- post-participation – experiences gained in the tender process will shape attitudes to future tenders and incentive schemes.

This framework is then tested by applying it to a series of case studies where tenders have recently been implemented (Section 4). Consideration is given to how various features of design and implementation are likely to have influenced landholder participation. In the final section of the report, the lessons from the case studies are discussed and some key recommendations are put forward.

2. Participation Targets

There are a number of ways in which participation can be defined. Complete participation will require a landholder to submit a bid, be awarded funds and successfully complete their full contractual requirements. A less stringent definition of participation would require landholders to actively engage until they either complete their contractual obligations or are otherwise eliminated from the tender program via an unsuccessful bid or, in a more encompassing definition, are ineligible for a variety of reasons (not within a target area for example). A still wider definition simply requires engagement in some part of the program including workshops, expression of interest, or other formal engagement.

The critical point for successful participation in the context of effective and efficient tender outcomes is submission of a bid. Prior to this point participation has little effect on the efficiency outcomes from the program. After this point future participation is a function of whether or not the bid is successful and therefore contingent on decisions outside of the landholder's control. In the ensuing discussion participation generally refers to active engagement via submission of a bid.

The importance of barriers to participation (and therefore the importance attached to their removal) can only be judged within the context of the relevant tender. When setting goals for participation it should be noted that even the best designed voluntary mechanism is unlikely to achieve participation by the entire target population. Indeed, beyond a point increased participation may come at an increasing cost to economic efficiency. That is, at some point there are likely to be trade-offs between the interests of the buyer and those of sellers and an absolute limit to desirable participation.

Participation targets are also shaped by tender context including institutional, organisational and biophysical parameters. Budgetary limits mean there is a limit to how many participants can be paid and therefore fully participate. Organisational contexts mean that there are likely to be a range of other programs operating with potential interaction with tenders. Landscape heterogeneity may mean that only some landholders can contribute towards the NRM goal. Biophysical relationships may mean single large areas are strongly preferred over many small areas. Therefore, it is important to determine clear participation goals at the outset of a project. The likelihood of adequate participation (and consequently the importance of barriers to participation) can then be assessed against participation targets.

2.1 Context – economic efficiency, tenders, agency goals and competing instruments

Competitive tenders, like all MBIs, rely on heterogeneities among market participants to maximise overall economic efficiency. They differ from classical markets in that there is a single buyer (typically a public agency in the case of auctions for ecosystem services) and a number of competing sellers (typically landholders). If the sellers are heterogeneous in their costs of supply, the competitive nature of the auction can reveal these varying costs and allow the agency to buy its target quantity at the lowest possible price (or if it is budget limited, allocate its budget to buy the maximum possible quantity). The buyer will accept the offers that provide it with the best value for money.

The objective of most conservation auctions is to maximise the quantity of service supplied within a given agency budget. The more sellers that participate in the market, the more offers the buyer has to choose from, which is likely to result in a better outcome for the buyer. Therefore it follows that increased participation by landholders should lead to a better outcome for the agency in terms of the quantity of ecosystem service purchased. This is in contrast to fixed price incentive schemes, such as grants, in which there is no direct link between participation rates and economic efficiency. A caveat is that increased participation does result in higher costs for the agency, due to more site visits and administration.

Of course for sellers, the more sellers that participate in the market, the greater the competition, and so the lower each individual's chances of making a successful offer. Increased competition also reduces the opportunities for sellers to make a profit by raising their price above their costs. Therefore a seller would prefer participation rates to be low, provided they are sufficient to keep the buyer in the market. Paradoxically, if landholders expect participation rates to be low they may be more likely to take part, since they will perceive that their chances of success are greater. Participating in a competitive tender comes at a cost to landholders in terms of time, and possibly money (e.g. for professional advice), so they will be less likely to take part if they perceive their chances of success as being low.

While it might appear there is a trade-off between the interests of the buyer (more participation is preferred) and those of the seller (less participation is preferred), there may be different attitudes to participation depending on the institutional perspective of the managing agency (buyer). Most of the environmental tenders recently implemented in Australia have been managed by CMAs which have developed close relationships with landholders. Fostering this engagement is an important social goal for many CMAs and will be considered alongside other economic and environmental goals. In this case, the interests of the buyer and sellers may be more closely aligned. For example, neither CMAs nor landholders are likely to want high participation rates that result in large proportions of unsuccessful bidders.

Lesson 1: Participation should be optimised rather than maximised.

As well as how many people participate, it also matters who they are. Tenders work by promoting low cost suppliers. However, if only high cost suppliers participate there will be no benefits in terms of cost effectiveness. There is a danger of this occurring if a tender is run in parallel with a fixed price incentive scheme for the same outputs – low cost suppliers will tend to favour the fixed price scheme if they are guaranteed a profit, while higher cost suppliers will gravitate towards the tender. The perfect tender has only the lowest cost suppliers and no one else, enabling the objective to be achieved as efficiently as possible. Of course the point of using a market mechanism is that it is not possible to know in advance exactly who the lowest cost suppliers are, so broad scale participation is required.

Tenders are unlikely to operate in isolation from a wide range of government and non-government programs and incentive schemes. For example, conservation tenders as implemented in Australia typically incorporate specific extension components as part of their engagement process (as will be further discussed in Section 3). The impact and interaction of other programs and incentive schemes could be non-existent, complementary, or adverse. Complementary interactions are likely where programs raise awareness or otherwise facilitate or encourage engagement in the tender

program as discussed in Section 3. In most cases participation in such programs is likely to increase participation in conservation tenders which provide financial incentives for implementation.

Adverse participation interactions are likely to result from two main sources:

- programs or incentives promoting competing land-uses. These may include perverse impacts of production-oriented programs that expand or encourage land use for purposes that are not complementary with the desired NRM outcomes. Such programs may also increase leakage, whereby new land is brought into production as a result of incentive payments, or increase bid prices
- competing programs or incentives targeting identical environmental outcomes. Where these programs involve a fixed price grant they are likely to effectively set a minimum price in the conservation tender (albeit using a different metric). Competing conservation auction programs may similarly increase prices bid through the incidence of strategic behaviour. There may also be adverse participation impacts from confusion, choice between programs and other factors.

Relatively little is known about the degree to which different groups of landholders may prefer different incentive approaches and therefore avoid the impacts described above. There is little evidence to suggest opportunities where theoretically competing programs are in fact able to achieve complementary outcomes, and a prudent conservation tender implementation approach would avoid potential competition with other incentive programs where possible.

A key conclusion is that concurrent programs and incentive schemes should be evaluated in order to identify whether synergies exist that are likely to raise participation and which can otherwise aid in tender design or delivery. Where possible, conservation tenders should not be run concurrently with other incentive programs that are likely to have a significant adverse impact on participation. Options should be sought to avoid conflict between programs where possible.

Lesson 2: Design tenders to build on existing complementary programs and to avoid potential adverse impacts of competing incentive programs.

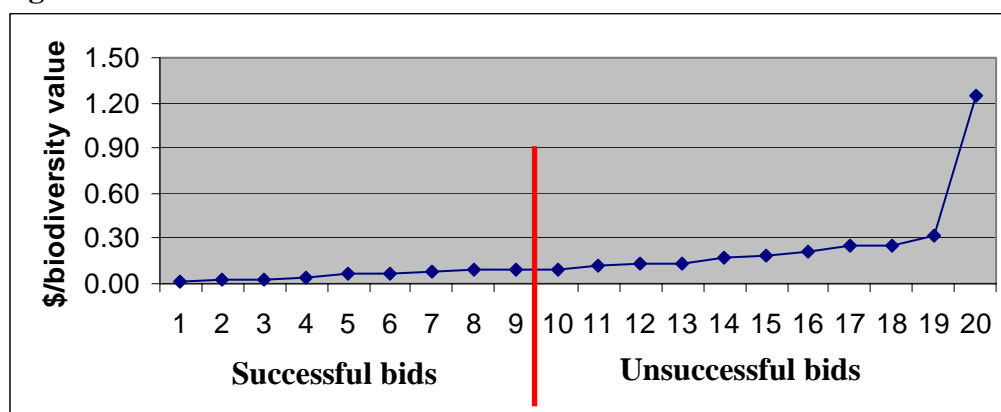
2.2 Project design and objectives

There are various aspects in the design of a project (in which the use of a tender mechanism is only a tool) that will influence participation and need to be considered in determining participation targets. In most cases the key constraint on participation is the size of the budget. Tenders for ecosystem services typically have a fixed budget (usually a few hundred thousand dollars), so the amount of outcomes that can be purchased will be limited. This will have a major impact on the benefits of increased participation. For instance, if there is a budget of \$200,000 it is not desirable to have 400 bids; most will be unsuccessful, and it is likely that a large proportion of the budget will be absorbed in transaction and administration costs. The participation target will therefore depend in part on the size of budget.

Another constraint is the scope of the project and how it determines the number of potential or eligible participants. The objectives of a project may limit participation to landholders with remnant native vegetation or riparian habitat, or those in a particular locale. If only a small number of landholders meet the criteria, there is a risk that

participation will be too low to achieve the project objectives. Setting a reserve price, above which purchases will not be made regardless of whether budget is still available, limits the risk to the agency if the number of participants is low. There is relatively little research on what constitutes a minimum level of participation to ensure some competitive efficiency. In the guidelines for competitive tenders in Queensland, Windle and Rolfe (2005) suggest that there should be at least eight active bidders in a tender and ideally more than 15. For example, in the Fitzroy Basin Association (FBA) tender (see Case Study 1 in Section 4 for details) there were 16 participants with 20 bids in the final assessment. The distribution of successful and unsuccessful bids (Figure 1) suggests that there was sufficient competition with 16 participants. This was confirmed in the tender evaluation (Windle and Rolfe 2006).

Figure 1: Distribution of relative bid values in the FBA tender



The objectives of a particular project may also influence the target level of participation. For example, in auctions with landscape scale objectives, such as forming corridors or linking fragmented habitat, increased participation has advantages beyond simple cost effectiveness. Forming a corridor across a landscape requires the involvement of a number of landholders. For each landholder who does not participate, the opportunities to form a corridor may be considerably reduced. In such auctions, the value of the services offered by any one seller depends on what other services are available nearby. This is an example of combinatorial, or package, values. For instance, in a conservation auction the biodiversity benefits on one property may be greater if a neighbouring property is also conserved. The more sellers that participate, the higher the value of each offer to the buyer. In most cases such combinatorial values can only be realised if a sufficient proportion of landholders in a particular landscape submit offers.

In some circumstances, the goal of an incentive program might be to encourage landholders to trial a new technology with environmental benefits. Similarly, if a new practice offers both private benefits to the landholder and public benefits to the wider community, but its adoption is slow due to the costs of changing (such as learning costs), incentives may help overcome adoption lags (Pannell 2006). This will be particularly important for practices with low trial-ability, for example those involving relatively large areas of land-use change (Pannell *et al.* 2006). Competitive tenders can offer a means of cost effectively delivering such schemes. The aim in these cases is to spread a new technology or trials as widely as possible and clearly the more people that participate, the greater the likely benefits. In this case efficiency is measured differently, by how many people change their management practices or trial the new technology for a given budget, rather than how much overall output is

produced. Factors such as high visibility and geographical spread may also be important, and hence be included in the metric used to assess the bids.

Lesson 3: Clear participation objectives should be established taking into account the need for and nature of competition and program objectives.

2.3 Landholder experience and their impacts on future involvement

The experience that landholders gain from their participation in a tender will affect their own attitudes towards participating in future schemes, and those of the people around them. Similarly, past experiences with incentives and the organisations running them will influence participation decisions. If the process of entering a bid in a tender proves costly or complex, some landholders might be reluctant to participate in future schemes, particularly if their bid was unsuccessful. The more people participate, the greater the potential impact on future schemes.

One important influence on participation in future schemes about which little is known is the issue of how landholders respond to unsuccessful bids. The economic theory that underlies market-based instruments does not take into account how unsuccessful participation experiences can affect people's motivations. In the case of ecosystem services, many landholders are intrinsically motivated to provide them voluntarily to some degree. Many voluntarily exceed their minimum duty of care, providing public benefits at some cost to themselves (although these costs are often offset in the medium to long term by increases in productivity). One line of reasoning suggests that introducing financial incentives can crowd out these intrinsic motivations (Frey and Oberholzer-Gee 1997; Reeson and Tisdell 2007a). These effects may be particularly acute among those with unsuccessful bids – an economic experiment found that individuals who were unsuccessful in a competitive tender stopped making voluntary contributions to a public good (Reeson and Tisdell 2007b). Therefore having a large number of unsuccessful participants in a tender may negatively affect the overall provision of ecosystem services.

Alternatively, rather than crowding out voluntarism, participation in a tender may actually crowd it in. Landholders who take part in a tender may learn more about how to supply an ecosystem service, and will see that it is valued by the community. This may increase their propensity for voluntary actions, even if their bid is unsuccessful. A survey of participants in the WA auction for Landscape Recovery found that around two thirds of those who had made unsuccessful bids said they were likely to carry out the works anyway (Clayton 2004). Similar results were found in participant evaluation surveys for the Fitzroy Basin Association's Biodiversity Tender (Windle and Rolfe 2006) and the Mackay Whitsunday Incentive Program (Rolfe *et al.* 2006). However, whether these intentions result in on-ground actions is unclear.

A key conclusion is that tenders should be implemented in a policy environment where there are support actions for unsuccessful bidders. Options for engaging with unsuccessful participants once they have taken the step of entering a tender often involve invitations or automatic enrolment into a range of support programs. Another option is to place a cap on bid prices – this is likely to increase the number of successful bids, but at the cost of overall efficiency. Large projects, which often deliver the most efficient outcomes, will be excluded. A cap is likely to be useful for technology uptake incentives, but not output-based objectives.

Lesson 4: Support actions for unsuccessful bidders should be an integral part of participation management.

2.4 Setting targets for optimal participation

Competitive tenders deliver economic benefits in the form of increased cost efficiencies of incentive payments. On the whole, the higher the participation in a competitive tender, the greater the competitive efficiency, and so the greater the benefits of the auction mechanism. However there are some trade-offs, with total transaction costs increasing with participation, and the possibility of negative effects arising from failed bids. The key is therefore to optimise rather than maximise participation, according to the objectives and constraints of each auction.

The optimal level of participation will vary, depending on the goals, budget and context of a particular tender. It is important to set a target for participation early on, and evaluate whether this is likely to be met by the current scheme. In some cases it may be necessary to adjust the design or scope of a tender in order to increase the chances of reaching the target. Factors to consider in setting targets for participation include:

1. approximate number of bids likely to be accepted, given available budget, supply potential and engagement goals
2. degree of variability among landholders in their costs of supplying the desired ecosystem services – if costs are highly variable, the advantages of increased competition from high participation rates are likely to be greater
3. whether there is an upper, or lower, limit on the size of individual bids
4. benefits of engaging with landholders, including trialling new management practices, pathways to other programs, inclusive process, improved networks and social outcomes for organisation running auction (more is better)
5. cost of assessing bids to agency running tender (fewer is better)
6. likely impact on unsuccessful bidders (fewer is better); and
7. other factors in tender success such as whether large numbers of participants are required in order to achieve competition between groups of bids as well as between individual bids (for example to achieve corridors or other coordinated outcomes).

Setting participation targets is an inexact science, and relies very much on experience and common sense. An inherent feature of a market-based instrument is that the size and cost of bids, and the level of variability, is not known in advance. However, a rough estimate based on local knowledge will suffice. For example, a recent tender, had a budget of \$200,000, and it was expected that bids would cost very approximately \$1000 per hectare. Average paddock sizes in the region are around 10ha; it was expected that a typical bid would cover a single paddock, and so cost roughly \$10,000. The tender is therefore likely to fund around somewhere in the vicinity of 20 bids. As a very rough approximation, if there are around twice as many bids as can be funded then there will have been strong competition without an excessive number of unsuccessful bids. In this case around 40 bids would seem a reasonable target.

There are a number of steps that a landholder must undertake prior to submitting their bid. A tender will typically begin with a call for expressions of interest. Landholders who register will be sent an information pack, and possibly invited to attend a workshop in which they can learn more about the tender process. There will then be a site visit at which the specifics of a potential bid, in terms of the area covered and the actions to be undertaken, can be discussed. Following the site visit, landholders will have a period of time in which to work out the price they require for carrying out the agreed actions, and submit their tender. It is likely that participants will drop out at various stages of this process. Therefore if the target is 15 bids, it will probably be necessary to carry out 20-25 site visits, which will require around 40 landholders to submit initial expressions of interest.

The next question is to evaluate whether this level of participation is realistic. For instance, if there are only 50 properties in the district, it is most unlikely that 30-40 landholders will submit EOIs. Similarly, if there are 400 properties in the target area, participation may be too high. Levels of participation in previous schemes in the region can also provide guidance as to the likely response from landholders. The level of resources invested in communicating a tender may be based on the expected and target levels of participation. To some extent participation rates are likely to vary naturally, based on potential participants' perceptions about the amount of funding available, and the number of landholders eligible to compete for it. Another approach is to modify the scope of the tender, for example limiting to particular sub-catchments.

During the various stages of implementation, progress towards the target should be monitored. There are opportunities for adjusting the way a scheme is implemented if it appears that the target will not be met. However, great care needs to be taken that all potential participants are treated equally, and the rules cannot be substantially changed once a tender is underway. If participation levels are in danger of falling short, an agency can put extra effort into communicating with landholders. It is worth noting that the risks involved in managing successful participation provide a strong rationale for setting reserve prices. This ensures that money is not wasted if only a small number of high-priced bids are received.

Lesson 5: Quantitative participation targets should be set. Targets will give measurable objectives for each phase of participation and for evaluation during and after tender implementation.

The impact and importance of potential barriers to participation discussed in the next section can be assessed in relation to achieving a target. The nature of the tender, and the way in which it is designed and implemented, is crucial to fostering participation.

3. Framework for Identifying Barriers to Participation

The focus in this section is to describe a robust framework for identifying barriers to landholder participation in MBIs and opportunities to reduce or remove such barriers or to otherwise encourage participation. The framework draws on a number of bodies of knowledge including extension and adoption, behavioural economics, and the new institutional economics with a particular focus on the nature and impact of transaction costs. Though the framework superficially resembles and is inspired by a number of adoption and diffusion type approaches, our approach is broader, encompassing the nature of the incentive offered as well as the constraints to adoption.¹ Furthermore, while MBIs are intended to support increased adoption in an efficient manner, the issues influencing participation extend beyond the traditional extension and adoption models to include the nature of the incentive offered and interactions with the policy agents through recruitment and contracts. Our goal therefore is to set out a clear framework for considering participation decisions in this section and then to populate this framework with lessons from practical experience in a series of case studies.

The framework is presented exclusively from the perspective of potential landholder participants in competitive tenders. It is intended to identify potential barriers to participation as well as practical measures to overcome some of these. During this approach we assume that a competitive tender is the most appropriate policy tool for the issue in question. However, design and implementation of conservation auctions does involve trade-offs between efficient instrument design and pragmatic incentive delivery. Therefore policy proponents should give careful consideration to the degree to which a barrier is likely to impact on participation and the consequences of any change to design for auction efficiency before making changes to the proposed instrument. As emphasised in section two, participation is but one factor in effective MBI implementation.

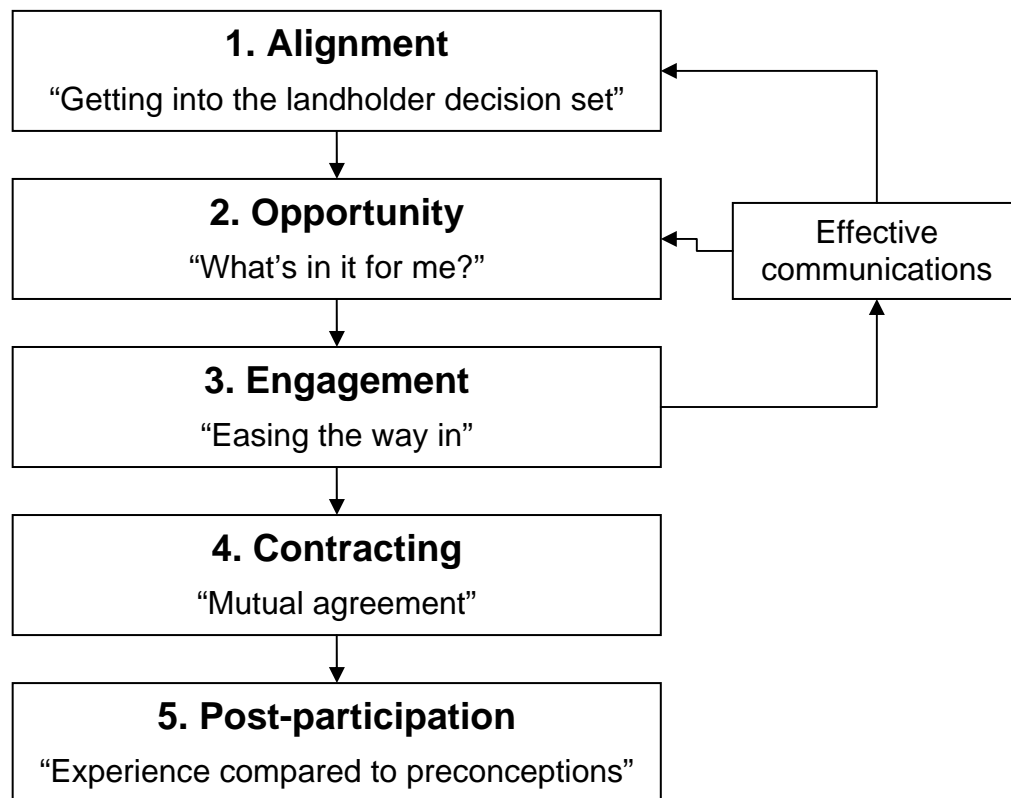
The framework, as illustrated in Figure 2, contains five stages:

1. **Alignment:** “getting into the landholder decision set”
2. **Opportunity:** “what’s in it for me?”
3. **Engagement:** “easing the way in”
4. **Contracting:** “mutual agreement”
5. **Post-participation:** “impact of experience on future involvement.”

These stages are non-exclusive, as actions in one area are likely to impact on others (as discussed further below). Some barriers and opportunities also overlap across stages, for example engagement activities may include actions that enhance the scale of opportunity. In the following discussion we also note where interactions between MBI design factors and participation will directly impact on the effectiveness of the step in the framework.

¹ As this is not intended to be a review paper, we do not provide an extensive list of the relevant literature in each section, but rather cite a number of key influences on our thinking. See for example Morris *et al.* (2000), Pannell *et al.* (2006), Barr and Cary (2000), Nelson (2004), Kraft *et al.* (2003).

Figure 2: A framework for identifying barriers to participation



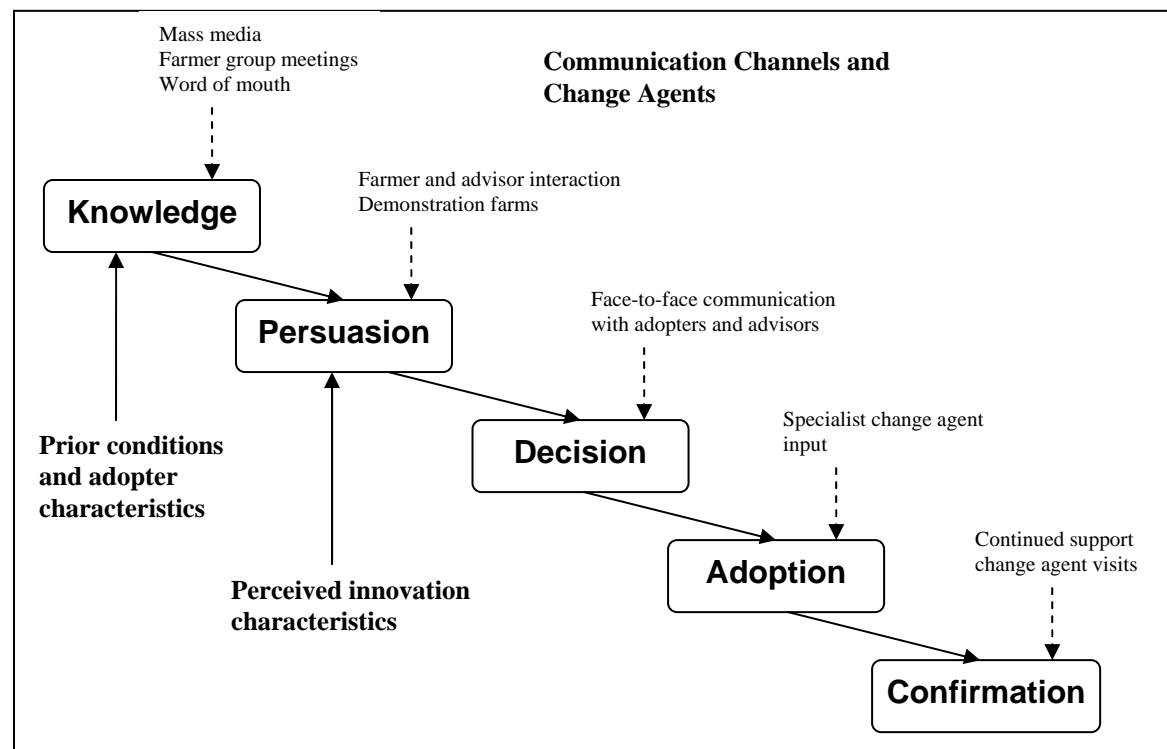
3.1 Alignment

Clear outcome-oriented goals underpin well designed MBIs. These goals generally translate into a set of desirable management changes or actions that the MBI is intended to encourage or support.² Alignment is the degree to which these desirable changes and actions lie within existing landholder decision sets.

The extension and adoption literature emphasises the importance of achieving alignment in order to facilitate at least some level of adoption. Pannell *et al.* (2006, p 1408) note that considering and changing management involves a “process of learning and experience to inform adoption decisions”. They also note that the adoption process is described in a similar way across a number of disciplines. A typical description of adoption includes six steps: awareness; non-trial evaluation; trial evaluation; adoption; review and modification; and non-adoption or dis-adoption (Pannell *et al.* 2006). Morris *et al.* (2000) describe a similar five step adoption and diffusion process explicitly incorporating government agents: knowledge; persuasion; decision; adoption; and confirmation (Figure 3).

² Even where MBIs pay on an outcomes basis a set of desirable management actions to achieve these outcomes will most likely have been identified.

Figure 3: The Innovation-Decision Process



Source: Morris *et al.* (2000) p. 243

Landholder participation in MBIs requires active consideration of the desired management actions. In Pannell *et al.*'s terms it requires that landholders have at least reached the non-trial evaluation phase of adoption. Specifically, landholders must have moved to the point where they consider relevant management actions to be "potentially of practical relevance" (Pannell *et al.* 2006 p1409). At this point landholders "begin noting and collecting information ... in order to inform the decision about ... trialling the innovation" (Pannell *et al.* 2006 p1409). Aspects that may influence alignment include (Barr and Cary 2000; Nelson 2004):

- perception of need, including accepting environmental impacts are being caused, and identifying the potential for change (or seeing degradation per Barr and Cary (2000))
- compatibility with existing operations and goals including integration with production outcomes; and
- complexity and social acceptability of the innovation.

Note that in examining the barriers to participation in MBIs we are focussed on whether landholders have reached a stage where the desired management actions are within the set considered feasible. We do not address what actions might be undertaken outside of the MBI framework to reach this point. This has been considered by a range of studies undertaken in Australia and beyond.

In practice, alignment requires that landholders know broadly what management activities will deliver the desired MBI outcomes, and are willing to, or are already considering, integrating these activities into their programs. Landholders will be more comfortable with management changes that are seen to be within their 'comfort zone' and those which are seen to be integrated with production outcomes. For

example, a program to minimise soil erosion by promoting reduced stocking rates is likely to be well aligned with many landholders' existing mental models of land management. They are likely to be aware that erosion is a problem, and that it can be effectively managed in this way. A program promoting alternative land uses to mitigate salinity impacts may be aligned in the sense that landholders are aware of the potential severity of the problem, but the science linking the actions to the outcomes are likely to be less clear to the non-expert and the benefits are less tangible. Alignment might be lower still for a program to conserve biodiversity, particularly obscure or un-loved species or groups.

Lesson 6: Alignment of desired management actions and outcomes with landholder goals will increase participation.

Alignment should not be complete, as publicly funded incentives are unlikely to be necessary in such circumstances. Where alignment is poor a number of options remain available to boost participation, including enhanced engagement effort or increasing the scale of opportunity (see for example Baerenklau 2004). Other options that could be considered include awareness and demonstration campaigns. Details about the degree to which the scale of opportunity is commensurate with landholder expectations and management needs, while related to alignment, are discussed under engagement.

Lesson 7: Alignment and resultant participation can be improved through complementary programs focusing on awareness, demonstration and integration into farm management plans of the desired management outcomes.

3.2 Opportunity

Monetary incentives, such as those supplied through MBIs, represent an opportunity to landholders. The degree of opportunity relates to:

- the extent of alignment
- the scale of incentives offered
- expectations about the impact of the desired management action on farm management, incomes and risk; and
- the accessibility and constraints imposed by the MBI.

Opportunity is essentially the assessment of 'what's in it for me?', or in economic terms the consideration of 'relative advantage' (Barr and Cary 2000; Nelson 2004; Pannell *et al.* 2006) or perception of the relative marginal costs and benefits taking into account the incentive offered.

There are a number of factors that affect opportunity including:

- perceived eligibility
- trial-ability and reversibility of management actions
- perceptions about implementation and opportunity costs
- perceptions about scheme requirements
- perceived likelihood of success of management changes; and
- interactions with other aspects of landholder capacity to change.

Landholder perceptions about eligibility are often incorrect (see for example Kraft *et al.* 2003). Most eligibility issues are regarded as awareness problems. However, the distinction between alignment and opportunity divides perceived inability to produce the desired ecosystem service and perceived ineligibility for incentives. Awareness and broader extension campaigns within or prior to the MBI are appropriate where landholders believe that they are unable to produce the desired environmental outcomes. But communication and engagement strategies may be more appropriate where landholders believe that they are ineligible for assistance. For example, where entry requirements are imposed these will need to be transparent and effectively communicated to landholders, as will any specific constraints on bids (such as minima or maxima or eligible activities).

Lesson 8: Active promotion of eligibility is needed to overcome lack of awareness.

Landholders typically prefer to trial management changes on small areas prior to full scale adoption (Pannell *et al.* 2006). However, the degree to which trials can be implemented prior to full-scale implementation, and the degree to which trials can be reversed, vary depending on the nature of the desired management action. Activities such as new farming techniques or fencing off riparian areas are amenable to small-scale trials. Revegetation or whole of operation changes such as effluent capture on dairy farms are more difficult to trial on a small scale. A related factor is the degree to which success can be directly observed (Barr and Cary 2000; Nelson 2004; Pannell *et al.* 2006; Stanley *et al.* 2006). For example, riparian fencing may offer some rapidly and directly observable success factors but broader revegetation activities may take too long or be too difficult to evaluate to facilitate trial applications.

There are several important interactions between incentive scale and trial-ability. Where target management actions can be trialled and are expected to generate a net benefit to landholders in the short term (in the absence of incentives), then the scale of opportunity can be fruitfully limited to short term, trial assistance opportunities. Similarly, where up-front costs are preventing adoption of beneficial actions, short term cost-share opportunities are appropriate. However, where actions are irreversible or impose long-term costs then longer-term opportunities are more appropriate.

The scale of opportunity needs to match the perceived net farm costs of management change. These include (Kraft *et al.* 2003):

- any lost production and the costs of implementing the desired management actions
- lost future options (that is a loss of future flexibility); and
- any loss in land value.

Lesson 9: Participation is reliant on landholders perceiving likely benefits outweighing their net costs.

More complex management may also be costly in a time or resource constrained environment. Perceived future benefits to landholders, including non-monetary benefits, are typically netted-off from such costs. While a key principle of MBI development is that landholders are in the best position to know these costs, it is important that an agency has some idea about landholder perceptions. For instance, if an agency believes that private benefits are high but these are not recognised by

landholders, the scale of opportunity will need to be higher than where private benefits are recognized by landholders.

Perceptions about scheme requirements will also be crucial to the scale of the opportunity that is perceived by landholders because they represent the transaction costs of involvement. For example, gathering information about the MBI, submitting a tender, costing and submitting a contract and other factors all impose participation costs on landholders. More important are factors such as length of contract, lack of flexibility in management, perceived loss of control over land, and monitoring and enforcement activities associated with incentive payments. The impacts of scheme requirements on opportunity are discussed under 'engagement', 'contracting' and 'post-participation'.

Lesson 10: Flexibility in tender and management requirements are likely to increase participation.

Regardless of the scale of opportunity offered, there may remain a number of other impediments to landholder capacity to change. Some of these, such as complexity of the new management technique, have already been discussed. Others relate to structural or organisational constraints on the farm enterprise. For example, opportunities that require substantial time commitments by landholders may not be taken up by time-poor landholders such as those with off-farm employment. Similarly, opportunities requiring detailed project management and sub-contracting may not be taken up by landholders with few skills in such project management. Hence, care should be taken to ensure that opportunities match resource and structural constraints in the target landholder population.

Lesson 11: Participant support targeting skill needs will tend to increase participation.

Landholder estimates of their likelihood of success in a tender also impact on their perceived opportunity. They will be driven by an internal calculation of the costs and the benefits they are able to offer relative to other potential participants, the probability of others participating and the scale of the budget available. An important caveat on examining possible barriers and opportunities is the potential for beneficial self selection to arise from well-informed landholder perceptions of the opportunity offered by MBIs. MBIs are designed to leverage heterogeneity in costs and performance. Hence, some landholders (through no fault of their own) will be inherently less competitive than others within such a scheme. Therefore, if information is provided through the communications and engagement process that facilitates self selection of stronger bidders, the costs of administering the scheme and the costs imposed on landholders will be lower.

Lesson 12: Not all participation is good. Self-selection of stronger (cost and outcome competitive) bidders will reduce participant and administration costs.

3.3 Engagement

Engagement covers the processes of communication, information exchange and bid preparation that are involved in MBI participation. The theoretical underpinnings of engagement are primarily drawn from consideration of transaction costs, information asymmetries and the marketing literature.

Communicating for improved participation

The communication strategy for any incentive policy should be carefully considered. For example, strategies may be needed to overcome poor perceptions of eligibility or uncertainties about new and unfamiliar MBI processes. Ideally, a clear, staged communication process will be developed in advance, encompassing all stages of MBI implementation from raising awareness through to post-contract management.

Engagement in any incentive program involves considerable effort and cost on the part of landholders, both to obtain and provide the relevant information and to negotiate the resultant contracts. Effective engagement strategies are designed to minimise these transaction costs, usually via a straightforward process containing some or all of the following steps:

1. clear guidelines on eligibility
2. awareness raising leading to non-binding expression-of interest registration
3. information exchange (often including a voluntary workshop)
4. site visit and associated discussion of management
5. bid preparation and submission; and
6. notification of success or failure.

A staged communication or invitation to the program involving a number of layers offers the best chance to maximise participation. Initial awareness and contact with the MBI process is often initiated via a media campaign involving interviews with local radio, articles in local papers and relevant producer newsletters, and media releases or letters to local agribusiness advisors. Previous studies of incentive programs suggest they are not “self adopting” in the sense that information provided circulates freely through the community (Kraft *et al.* 2003). As a result, Kraft *et al.* suggest that some form of “industrial marketing” is required, frequently incorporating direct one-on-one personal interaction between the program proponent and the landholder. Regardless of the initial interest raising process, entry via a *non-binding* expression of interest (EOI) process provides for a staged program of engagement with landholders. The EOI procedure is a simple tool for targeting communication and follow-ups in ensuing stages of the engagement process.

Lesson 13: A communications plan should be developed and implemented in order to support participant recruitment.

Engagement and tender design

The goal of the engagement process is for interested landholders to construct and submit bids. The auction design employed within the tender process defines the bid requirements, and consequently impacts on landholder participation. Auction design also interacts strongly with the scale of opportunity perceived by landholders through factors such as eligibility and price rules. Auction design has a strong theoretical base and a wide body of literature. Despite the depth of theory, the use of auctions for ecosystem service provision is relatively new, and mechanisms are still being trialled and refined. Hence, the specific impacts of auction design are not always certain and may interact with other design or engagement factors.

Theory and practical experience provide a range of options for designing auctions and the associated contracts. The selection of different key design criteria will affect both

the efficiency of the auction process and the impact it will have on landholder participation. This means there may be a number of trade-offs to be made in terms of better economic or environmental outcomes on the one hand and landholder participation on the other. For example, it is unrealistic to expect substantial environmental outcomes in a short time period, but short-term agreements are currently preferred by most landholders, and in some cases are imposed by institutional funding restrictions (e.g. regional NRM groups in Queensland). Another example might be the trade-off between increased efficiencies that multiple bidding rounds can provide (Rolfe and Windle 2006) and the adverse impact it might have on participation as transaction costs increase.

Important components of auction design are described in Table 1, along with their likely impact on participation. Note that many of these design components will also influence alignment and opportunity as well as the engagement process but are considered together for completeness. A number of the components in Table 1 are also further discussed in Section 3.5. The case studies in Section 4 are qualitatively evaluated against these guidelines in order to extend the practical conclusions for participation. In many instances market research, or other means of assessing community preferences, can prove useful in assessing the participation impact of alternative design options.

<p>Lesson 14: Adopt best practice tender design taking into consideration pragmatic participation tradeoffs.</p>

Table 1: Auction design and engagement

Issue	Considerations	Recommendations
Eligibility	Rules can limit eligibility to landholders with particular resources (e.g. vegetation type) or locations. Relaxed targeting increases the eligible population but may increase costs of managing auctions and include participants with limited ability to contribute a successful bid.	Consider participation targets when choosing scope of scheme (area and number of eligible landholders).
Level of service provision	Landholders can be rewarded based on: <ul style="list-style-type: none"> • overall outputs – rewards landholders for past as well as current beneficial actions • outputs beyond duty of care (DOC) – limits rewards to outputs above minimum legal requirement • increase in outputs from status quo – maximises economic efficiency (subject to crowding out), but may favour those not currently meeting DOC. 	Overall outputs favours participation by existing providers; increase from status quo favours non-providers. Outputs beyond DOC generally regarded as appropriate trade-off.
Range of eligible management actions	Eligible management actions may be defined narrowly or not at all, providing landholders with varying degrees of flexibility. Limited actions may reduce risk to agency, but at the cost of innovation and alignment.	Depends on monitoring potential and contract payment basis. Limiting actions will tend to reduce participation.
Caps	Specifying a maximum bid area or price may ensure more ‘winners’ and spread risk but at the cost of lower total expected outcomes. There are likely to be more small bids but fewer large ones, and hence higher transaction costs.	Theory suggests use caps only where trials are being encouraged or supported.
Discriminatory or uniform pricing	Discriminatory pricing awards successful bids their asking price. Uniform pricing awards all successful bids the same price. ^a Auction theory suggests uniform pricing is more economically efficient. It is likely to enhance participation if well understood as it guarantees a profit above costs. Pragmatic experience suggests discriminatory auctions are better understood by landholders and stretch limited government funds further.	Best practice suggests discriminatory pricing. It is widely accepted, so adverse impacts are unlikely. This conclusion should be reviewed if auctions are frequently repeated.
Reserve price	A reserve price limits the maximum price paid per unit of output. It reduces the risk that the auction manager will accept high price bids, particularly if there turns out to be limited competition.	Reserve prices may reduce participation if perceived to limit the opportunity. However they are an important risk management strategy.

Issue	Considerations	Recommendations
Support for participants	Competitive tenders are based on presumption that landholders know their own costs – this is not always the case, particularly for unfamiliar actions. Some assistance with costing bids may therefore be warranted. However, formal cost advice may reduce competition and may not be correct, especially in heterogeneous environments.	Assistance will aid participation, but too much is likely to reduce competition and efficiency. Tailor assistance to participant needs taking into account likely unfamiliarity of costing exercise.
Number of bidding rounds	Multiple rounds of bidding with cost feedback may increase cost competition and so improve efficiency. They can also be used to improve bid alignment (for example for corridors). More rounds mean more work for landholders in revising bids, and therefore higher transaction costs all round.	Single round is standard practice where coordinated outcomes are not required, and is preferred for participation.
Sealed or open bid	The contents of sealed bids remain confidential; unlike open bids. ^b Theory suggests that sealed bid is the preferred option. Landholders are likely to prefer that their bid details are kept confidential.	Sealed bid likely to increase participation.
Multiple bids	Landholders may be allowed to enter multiple bids for differing projects and sites on their property. This should increase overall efficiency.	Multiple bids not likely to increase overall participation but will increase bid numbers.
Group bids	Individuals may prefer to submit as part of a larger combined project – especially where external support for constructing the bid is available. However, this will reduce competition and may lead to contracting complications.	Group bids may increase the number of landholders involved but reduce the number of tenders.
Management plan structure	Management plans define the offer made by landholders. Options range from standardised plans (or a uniform template) to landholder drafted plans with little guidance. Preparation is costly and may be complex. Standardising management plans and preparing them on behalf of landholders reduces the difficulty and improves consistency between plans, but may serve to reduce flexibility.	Preparing plans on behalf of landholders at site visit stage (see below) is likely to increase participation.
Bid submission	Bids must either be submitted by a certain closing date, or within a set period from a site visit. Landholders must have enough time to prepare and cost bids thoroughly (bearing in mind that this may require them to obtain quotes from contractors).	Where actions are complex, and/or likely to require third party contractors, landholders may need longer to cost their bids.

^a A first price uniform auction awards successful bids the asking price of the last successful bid. A second price uniform auction awards successful bids the asking price of the first unsuccessful bid.

^b Sealed bids are the standard procurement auction model while open bids reflect call auctions such as clearing sales, house auctions and so on where all bidders can see who has submitted the bid and the bid value.

Competitive tender processes are often new and unfamiliar to landholders, particularly site assessment, bid development and assessment procedures. Landholders may also be uncertain about the managerial requirements of ensuing contracts. One option to reduce such uncertainty is to offer a voluntary attendance workshop at which details of eligibility (including future management requirements, if any) are provided followed by a hypothetical tender exercise that allows landholders to undertake the critical steps in tender preparation and submission in a non-threatening simulated environment. In particular, it can help familiarise landholders with the competitive bidding process. For example, in the Fitzroy tender, seven out of the eight successful bidders had attended a workshop with a trial tender exercise (Windle and Rolfe 2006). Consideration may be given to making payments to cover the costs of attending information workshops but caution should be exercised to ensure these do not lead to token applicants with no intention of follow-through.

Lesson 15: Workshops explaining the competitive tender process, management requirements and bid construction are likely to increase participation. Trial auctions within workshops are highly regarded.

Information exchange and costs involved in constructing and submitting bids

A key rationale in employing MBIs is to overcome information asymmetries. As Latacz-Lohman and Van der Hammsvoort (1997, p. 204) note: “farmers know better than the program administrator how participation (in conservation actions) would affect their production plans and profit”. On the other side of the equation, Stoneham *et al.* (2003 p. 483) note: “environmental experts, not landholders, hold information about the significance of environmental assets that exist on farm land”. Effective bid development processes therefore require information about environmental significance to be combined with impacts of changing management on landholder costs and benefits.

Most MBIs employ some combination of prior information exchange, including the workshop processes previously described, and a mail-out of information designed to inform landholders about the significance of environmental assets. The mail-out often nominates areas that are most likely to contribute environmental outcomes via a map or photographic description. One-on-one interaction is usually initiated at this point to aid in information exchange through a site visit at a time convenient to landholders. At the site visit the proposed site is mapped, environmental significance may be assessed if on-site measurements are required, and the applicability of alternative management requirements are discussed in some detail. The authors’ practical experience to date, as well as international experience (Morris *et al.* 2000; Kraft *et al.* 2003), suggests that the site visit is the single most important feature in the entire engagement process, in terms of reducing transaction costs to landholders and overcoming information asymmetries.

One-on-one site visits may also generate other positive outcomes that are not strictly part of the MBI. These include:

- supporting and encouraging non-financial motivations for improving environmental management
- improving regional networks, particularly with respect to local program management; and

- opportunities to provide general advice on environmental management beyond the goals and objectives of the MBI program.

A further strategy in reducing transaction costs to both landholders and program managers is a standardised management plan format and clearly specified tender submission process. Following the site assessment process, an agreed site and management plan is prepared by the program manager for landholders using a standardised framework. Where possible, management plans are flexible and landholders can opt in or out of specific requirements, albeit with impacts on the environmental value generated by their bid. Standardised management plans aid in facilitating transparency in management requirements and reducing associated red-tape costs (Falconer and Whitby 2000).

The standardised management plan format also aids landholders in costing bids. Nevertheless costing may be a difficult and time consuming exercise for complex or unfamiliar management activities, particularly if there are non-standard interactions with other elements of the farming enterprise or for long time periods into the future. Note that this should not be taken to suggest that governments may have a better idea of costs. Rather the heterogeneous nature of impacts in different enterprises leads us to expect differences in costs and benefits. Individual landholders, while they may find the process difficult, are clearly best placed to take these differences into account in assessing the impacts (including beneficial impacts) on their enterprise and the resultant payments they would require. A number of strategies have been employed to aid landholders in framing their cost decision. First, hypothetical trial auctions using sample costs provide a risk-free environment for landholders to consider the implications of management change on their farming enterprise, including discussions with other landholders. Second, some tasks (such as fencing) may be sub-contracted to third parties at a known cost. In such cases the program manager can play a facilitation role by aiding landholders to identify providers and notifying providers of anticipated demand. Third, in some cases the program manager may directly provide key elements of the desired management. For example, Wimmera CMA supply tube-stock (young trees ready for planting) to successful 'Catchment Tender' recipients, rather than requiring landholders to source and cost tube-stock.

The impact of transaction costs on engagement has led to discussion of bid payments as a potential mechanism to encourage participation. Evidence to date suggests that bid payments are unnecessary to achieve participation goals (see case studies in next section). Our experience suggests that bid payments should only be considered where there are very high transaction costs to entry, or where high participation rates are required for success and transaction costs would otherwise reduce participation. For example, high transaction costs may be imposed if the bidding process is necessarily complex, costly or arduous for participants (in general all these factors should be minimised). Alternatively, high participation rates may be necessary in order to achieve competition for coordinated outcomes such as corridors.

Lesson 16: A five step structured enrolment strategy is likely to enhance participation:

- i) A non-binding expression of interest phase
- ii) Structured information exchange via workshops and site-visits
- iii) Bid submission using a standardised management plan
- iv) Offer acceptance (or rejection) and contract signing
- v) Commence management changes and payments

Engagement and unsuccessful bids

Notification of successful tenders does not end engagement for successful bidders, but does shift the focus from engagement to contracting. For unsuccessful bids, the impact is not so clear. The downside of unsuccessful participation is perhaps emphasised in competitive tenders where there are a clear set of winners and losers. For this reason many competitive tenders are structured to automatically provide entry into other programs for unsuccessful tenders (and interested landholders who are ineligible), thus reducing the possibility of a ‘failure’ tag that may otherwise be experienced. The treatment of losing tenders may be particularly important for managing perceptions about future tenders and the benefits of participation in these.³

As discussed in Section 2.3, unsuccessful participation may crowd out future voluntary actions, but there is also some evidence of the opposite effect. Such crowding out or crowding in could happen at both the individual and community level. Introducing payments for ecosystem service provision may commoditise a previously voluntary activity, and create an ongoing expectation of payments. Alternatively it may raise awareness of the value of the service and the actions that individuals and communities can take to supply it. The way in which a scheme is communicated and implemented will influence whether it has a positive or negative effect on voluntarism.

3.4 Contract

The impacts of contracting on participation are viewed from a transaction cost perspective. Many contract issues were previewed as constraints on the perceived opportunity available to landholders (Section 3.2). In particular, aspects noted by Kraft *et al.* (2003) such as loss of control, reduced management flexibility, distaste for dealing with government and monitoring and enforcement issues may affect participation. Other contractual issues that may be important include payment structures, perception of risk and the actual contracting process. Theory again provides best practice advice on a range of potential design options, but rarely guidance on the impacts on participation. In Table 2 the most critical contract design issues are described.

Obvious strategies to reduce participation impacts from loss of control and lack of flexibility are outcome-based contracts. Such contracts do not enforce specific management actions upon landholders, but rather allow complete flexibility in how

³ Note that past experience will inevitably impact on alignment in a policy sense and opportunity in a probability of success sense. Our discussion largely ignores these impacts because to date very few landholders have had the opportunity to participate in multiple tenders. Hence, managing the impacts of past experience on current tenders will become increasingly important in the future.

specified outcomes are achieved. Caution should be exercised however, as outcomes may be difficult or expensive to measure, or poorly linked to current performance due to time lags and natural stochastic variation. Furthermore, outcome-based contracts place more risk on landholders achieving the desired outcome (which may reduce participation if landholders are risk averse). Contract length is also an aspect of flexibility. Kraft *et al.* (2003) suggest that shorter and more flexible contracts are preferred over permanent or long-term options with extensive and restrictive requirements. In general shorter contracts are expected to increase participation over longer-term contracts.

Landholder distaste for dealing with government is widespread and has a significant impact on participation within and beyond Australia (see for example Kraft *et al.* 2003, Lockie and Rockloff 2004). Possible strategies to reduce the potential impact of government contracts include devolution of management to local NRM groups or producer organisations, as has been trialled in Queensland. In some instances, third party service providers such as Greening Australia have also been involved in delivery. It should be noted that devolution is not always the best strategy as it incurs an additional layer of coordination between government and landholders, and in some cases may reduce the incentives for adequate monitoring of whether in fact the desired outcomes were achieved. Furthermore, some aspects of contracting cannot be devolved. For example, in most states the government or a statutory authority must be party to any conservation covenant.

Table 2. Issues in contract design

Issue	Considerations	Recommendations
Length of contract	Longer contracts are preferred by agencies to ensure NRM outcomes are achieved and maintained. Agency funding periods are often limited to 3 years or less. Landholders generally prefer to trial new mechanisms and minimise impacts on flexibility of future management.	Short contract lengths are likely to increase participation.
Permanent protection options	Permanent protection is highly regarded for NRM outcomes that are difficult to achieve or take many years. Thus permanent protection options such as conservation covenants are often sought to protect such outcomes. However, permanent protection is a permanent reduction in management flexibility and potential land use.	Permanent protection is likely to reduce participation.
Payment schedule	Theory suggests that payments should be tied closely to performance across the duration of the contract to ensure incentives are well targeted. But for many NRM outcomes costly investment is required many years in advance which is often compounded by cost-flow considerations for landholders. It is also less administratively complex to minimise the number of payments.	Upfront payments will tend to increase participation, especially where substantial investment is required well in advance of NRM outcomes being achieved.
What to contract	Theory suggests contracts should be tied to the desired outcome. However, long time lags between changing management and achieving outcomes, difficulty in effectively measuring outcomes, and risk or scientific uncertainty about the effectiveness of some recommended actions leads to contracts based on inputs.	Input-based contracts reduce risk to landholders and are likely to increase participation relative to output and outcome based contracts.
Apportioning risk	Incentive theory suggests risk should be apportioned to the stakeholder best placed to manage it. Therefore only risks that can be effectively managed by landholders should be apportioned to them. Hence, risks such as drought and fire are generally borne by government while risks relating to specific management activities are borne by landholders.	Reducing the risk exposure of landholders will tend to increase participation.

Issue	Considerations	Recommendations
Form of contracts	Contracts range from relatively simple management agreements that are not legally enforceable to complex binding agreements with potentially stringent penalties for non-compliance. Given the costs and difficulty in enforcing NRM contracts a formal, binding legal contract may be considered excessive unless large sums of government funds are allocated to individuals under what are considered risky scenarios. In general it is preferable to have a simple form of contract that is easy to understand.	Simple contracts are likely to be preferred and increase participation relative to more complex and costly legalistic forms.
Monitoring	Monitoring is required partly to ensure funds are well spent but also as a feedback mechanism for future program development and continual improvement of landholder management. Monitoring should be targeted towards the key knowledge and probity needs while minimising the costs to landholders. A strategic mix of photo points, brief progress reports and spot audits where appropriate is preferred.	Onerous reporting and monitoring requirements are likely to deter would-be participants.
Penalties for non-compliance	There is a significant body of literature devoted to required penalties to ensure compliance – much of which concludes that the threat of substantive penalties backed up by a reasonable expectation of discovery ensures optimal outcomes. Practical experience suggests that nearly all landholders will endeavour to comply and most non-compliance is caused by issues other than fraud or incompetence. Hence measures designed to rectify poor outcomes rather than penalise landholders are will likely be better received and lead to better outcomes.	Non-punitive, corrective based measures will tend to increase participation.
Sponsor or contract manager	Landholders may be less willing to contract with government (or specific levels of government) than with other organisations such as regional NRM groups. Other potential contract managers include non-profit groups (such as Greening Australia), industry bodies (such as Growcom), or consultant service providers (such as Earth Tech).	Contracts with respected locally based organisations are likely to increase participation.

Source: This table has been developed and expanded from Rolfe *et al.* 2004

The perceived impact of monitoring and enforcement on participation can be minimised by care in program design and delivery. Monitoring need not be pursued in an adversarial fashion. Instead the process can be designed primarily as a feedback mechanism to aid in demonstrating program success and identifying whether the overall goals of the program (rather than the management or outcome requirements) have been met. For example, a requirement that landholders submit dated photographs from specified photo-points on a regular basis should be as much about landholder achievements and demonstration of program success to non-participants as about monitoring. Site visits should be similarly structured to ensure that they provide positive support for continued improvement rather than being seen as an examination of past performance. Similarly, enforcement should be a transparent process and preferably offer opportunities to make-good before any punitive actions are considered. As well as being costly to both parties, there is a danger that excessive monitoring can crowd out trust and so actually reduce overall compliance (Frey 1997; Fehr and Rockenbach 2003).

Payment structures are usually of most interest when compared to the cost structures of landholders. One obvious deterrent to participation is large up-front costs with payments or benefits spread into the future. Another less obvious adverse participation impact of payment structures may be the tax or income management impact of upfront payments for multi-year contracts.

Perception of risk in contracts can be critical to participation. Landholders will be reluctant to take on risks that cannot be adequately managed, such as the impact of bushfire or drought, particularly if such risks are correlated with risks to existing farm income. Furthermore, contracts are necessarily incomplete in that it is too expensive and administratively burdensome to fully specify all possible contingencies and responsibilities. Landholders also bear a greater proportion of risk if contracts are outcome oriented. Participation impacts can be minimised by clear specification of key risks and performance criteria. Nevertheless caution should be exercised to ensure that adequate probity about the use of funds is maintained, and as a general principle, risks should be assigned to the party which is in the best position to manage them.

The actual contract to be signed by landholders which will specify, at least to some extent, the contractual obligations discussed above can also have significant impacts on participation. Long and complicated contracts will increase landholder costs with consequent impacts on participation. Similarly, complex legal arrangements, such as those surrounding the use of conservation covenants, will have the same effects.⁴ Short, clear contracts with well specified, plain english content will act to increase participation. In addition to being less costly, shorter contracts can actually result in improved performance by promoting trust (Bohnet *et al.* 2001). Clear attribution of risk, particularly in the landholder's favour, will also act to increase participation but at the expense of increased risk to the program manager.

Lesson 17: Adopt best practice contract design making pragmatic tradeoffs about the participation impacts of each component.

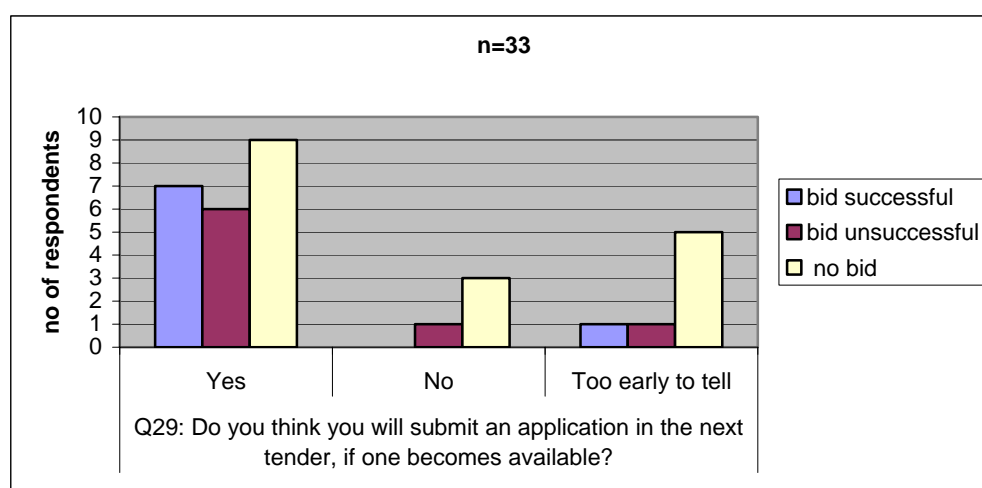
⁴ Note that for some landholders the increase in security of protection for their environmental achievements may well outweigh the potential negative impacts of additional red-tape.

3.5 Post-participation

Participants will inevitably form expectations about future MBIs based on what they have learned from participation in the present scheme. In particular, landholders will evaluate the actual costs of participation against their beliefs about costs and adjust future expectations accordingly. In some cases they may also adjust their current land management based on changes to beliefs about the likelihood and benefits of future incentive programs. Hence, it is important to minimise the costs of participation and create a favourable impression of MBI participation where possible.

Particularly important aspects in maintaining favourable post-participation impressions are management of landholders who participate but decide not to tender, management of unsuccessful tenders, and monitoring experiences (some of which are discussed above). Broader communication of the outcomes of the tender can also lead to favourable impressions for future tenders. In the Fitzroy tender, most participants indicated that they would be willing to take part in a future tender, regardless of whether their bid had been successful (Figure 4). However, in the WA Auction for Landscape Recovery many unsuccessful bidders did not participate in a follow-up tender, in some cases citing disappointment with the outcome of the first round (Clayton 2004).

Figure 4: Fitzroy participants' expectations of submitting a bid in future tenders



Source: Windle and Rolfe 2006, p14

Lesson 18: Effective management of unsuccessful bids represents an opportunity to increase future participation and encourage enrolment in related schemes.

4. Case Studies

In this section, six case studies are presented and examined in terms of the framework outlined above. A brief description of each case study is provided here, with a broader assessment of the factors that may act as barriers or opportunities for increasing participation presented in the Appendix. The key learnings from the case studies in terms of participation in MBIs are then discussed. The analysis is enriched by the direct experience the authors have had with most of these schemes. It should be noted that while the factors affecting participation are discussed throughout, participation rates were not identified as a problem in most of these programs.

4.1 Case study summaries

Case study 1: Fitzroy Basin Association – Biodiversity

The Fitzroy Basin Association (FBA), a regional NRM group in Central Queensland, implemented a single round, discriminatory price, sealed bid auction in 2006.

Main aim: To develop and trial a new incentive mechanism to achieve biodiversity outcomes.

Environmental objectives: To protect areas of remnant vegetation with high biodiversity values by setting minimum land condition standards for selected areas. Bids were selected on the relative value of the biodiversity outcomes, but minimum management conditions (minimum ground cover levels for different land types) were specified.

Participation objectives:

- a) To engage with landholders and help establish relationships in a previously poorly serviced sub-catchment in the region (Isaac/Connors & Mackenzie).
- b) To maximise participation of eligible landholders (those with high value remnants – approx 120 landholders).

Participation outcomes:

- initial untargeted mail-out to all addresses in region
- landholders from 17 properties attended workshops (incl. a trial auction)
- 20 landholders submitted EOI (approx 17%)
- 19 landholders received a site visit
- 26 bids submitted (16 properties)
- 9 successful bids (8 properties)
- 7 of the successful bidders had attended a workshop
- 13,647 ha protected for 2 years for \$180,000.

Considerations and design restrictions: Government restrictions meant contracts were only for two years. The FBA were provided with external funding to help design and implement the tender.

Post tender evaluation survey: Results indicated there were no indirect costs associated with the competitive process that might affect participation and the success of this tender would likely improve participation in subsequent schemes. The

majority of unsuccessful bidders, as well as those who had shown some interest in the scheme but had not submitted a bid, indicated they were willing to participate in another scheme (Figure 2).

Case study 2: The Desert Uplands Committee – Landscape linkage

The Desert Uplands Committee (DUC), a sub-regional CMA, implemented a multiple (three) round, discriminatory price, sealed bid auction in 2006 in western central Queensland. Landholder cooperation was required to encourage the alignment of bids to establish landscape linkage.

Main aim: To establish an east-west corridor of vegetation with high biodiversity values.

Environmental objectives: To improve biodiversity values by protecting high quality areas as a corridor across the region.

Participation objectives: To maximise participation and encourage cooperation - 112 landholders.

Participation outcomes:

- approximately 30 landholders attended workshops but others had attended in the pilot trial
- 26 landholders submitted EOI (25%)
- 28 bids submitted (22 properties)
- 15 bids successful (15 properties)
- landholders did cooperate and coordinate bids (linkage scores in metric) - 11 of the 15 successfully formed a corridor (with two small gaps)
- 85,092 ha of remnant veg (with an extra 3,640 ha of non-remnant linkage strips) protected for 2 years for \$330,000.

Considerations: The auction had already been designed as part of a national MBI pilot. Government funding restrictions meant contracts were only for two years.

Case study 3: Queensland Government VIP – Non-remnant vegetation

A state government department implemented a single round, discriminatory price, sealed bid auction across the state, between 2004 and 2006. The tender, known as the Vegetation Incentive Program (VIP) was implemented in four phases, in six regions. Greening Australia (GA) were contracted to implement the process.⁵

Main aim: To protect and manage good quality non-remnant vegetation.

Environmental objectives: To improve biodiversity values in areas of regrowth and revert back to remnant condition.

Participation objectives: Not clearly defined.

Participation outcomes:

- 217 landholders submitted EOI
- 109 bids submitted (97 properties)

⁵ Thanks to Emma Comerford for input into this case study.

- 38 bids successful – mainly lifestylers rather than primary producers
- large regional differences in participation and tender success rate
- low participation – not all funding allocated.

	Southern	Far North/Coastal	Central/Southern/Western	South East
	<i>Phase one</i>	<i>Phase Two</i>	<i>Phase Two</i>	<i>Phase Three</i>
Date finished	July 2005	December 2005	December 2005	June 2006
Queries	76	160	90	400
EOIs	21	58	26	112
Applications	8	31	8 (7 people)	62 (51 people)
Approved	0	14	2	22
Avg property size (ha)	130	11.5	2441	130

Source: Emma Comerford, Qld NRW

Considerations: The program has not been completed and contracts are still being processed. The phase one covenant was amended to other forms of permanent protection (nature refuge) when no bids were successful. Nature refuge contracts will be with the Environment Protection Agency rather than the original program manager.

Case study 4: Wimmera CMA – Salinity

Wimmera CMA implemented a single round, discriminatory price, sealed bid auction targeting revegetation of high recharge sites in the upper catchment in early 2006. A second tender was conducted in late 2006 with an expanded set of priority sites.

Main aim: To reduce salt in Wimmera River (as measured at Horsham).⁶

Environmental objectives: To reduce recharge in priority (high recharge) sites through the re-establishment of native vegetation. Priority areas were modelled to cause the export of larger quantities of salt (relative to other sites) and predicted to have a relatively short response period (10 to 30 years).

Participation objectives: Wimmera CMA estimated the required number of participants based on the funding available, likely rate of participation, and scale of bid. The project target was 150ha for less than \$150,000. The target area comprised 7600 ha across 191 titles (181 correct addresses).

Participation outcomes from first tender:

- 50 landholders submitted EOIs (a further 23 attempted to register after EOIs had closed)
- 34 landholders attended a pre-tender workshop
- 30 site visits were undertaken
- 19 bids were submitted (13 landholders)

⁶ Thanks to Rob Moir for input into this case study.

- a number of landholders did not submit due to difficulty in obtaining quotes from sub-contractors for ripping or similar works
- 8 bids were successful totalling 360 ha for \$280,000.

Participation outcomes from second tender:

- 150 landholders submitted EOIs
- 54 landholders attended a pre-tender workshop
- Over 75 landholder visits were undertaken covering 128 sites
- 26 bids were submitted (19 landholders)
- 14 bids were accepted (10 landholders) totalling 393 ha for \$450,000.

Considerations: The design phase of the first tender included a workshop with prospective landholders to check and refine specific issues such as degree of alignment, necessary opportunity, and response to proposed engagement activities. A reserve price was calculated (but not revealed) on cost per hectare rather than per tonne of salt export reduced. Additional funds were committed to the program and additional tenders awarded to tenders below the reserve price.

Case study 5: Goulburn Broken CMA Bush Returns – Native vegetation

Goulburn Broken CMA implemented a single round, discriminatory price, sealed bid auction targeting natural regeneration of vegetation on high potential sites commencing in 2004 (targeting the mid Goulburn catchment). A second tender was conducted in 2005 on a catchment wide basis.⁷

Main aim: To develop and trial a new incentive mechanism to achieve large-scale increases in native vegetation on private land.

Environmental objectives: The primary measured environmental objective is to improve the scale and quality of native vegetation through managing land to promote natural regeneration. The services targeted were biodiversity, salinity, aesthetics and lifestyle values.

Participation objectives: An approximate participation target was estimated based on number of landholders, likely area suitable for program, available budget and projected incentive payments. Note that GBCMA extended their EOI period in order to meet participation targets in round one.

Participation outcomes from first tender:

- 19 landholders submitted EOIs (8 initial EOIs were received followed by a further 11 in the 1 month extension to the EOI period)
- 15 site visits were undertaken
- 9 management plans prepared for 251 ha (6 of the 15 sites visited were not suitable for the program)

⁷ More information on Goulburn Broken CMA programs can be found at: www.gbcma.vic.gov.au. Thanks to Carla Miles for input into this case study.

- 5 bids were submitted (some landholders who received site visits commented that the management plan was all that they needed to assist them in carrying out activities, i.e. not the money or formal agreement)
- 4 bids were successful totalling 168 ha for \$126,700 (*Average \$716/ha (\$124/ha/yr): mix of 5 & 10 yr agreements*).

Participation outcomes from second tender:

- 95 landholders submitted EOIs
- 85 site visits were undertaken and 56 management plans prepared
- 32 valid bids were submitted
- 17 bids were successful totalling 517 ha for \$652,500 (*Average \$1309/ha (\$111/ha/yr): mostly 10 yr agreements + 4 covenants*)
- Note - two successful landholders did not sign agreements. Therefore 15 landholders signed contracts covering 502 ha for \$648,405.

Considerations: Unlike other tenders, payments were for the full duration of contract and paid annually. Pre-implementation landholder interviews were undertaken about barriers and drivers for large-scale restoration activities in round one target area in order to improve development and targeting of program.

Case study 6: Southern Rivers Bush Incentives⁸

Southern Rivers CMA in NSW has now run two successful trials of their 'Bush Incentives' tender focusing on biodiversity with a third tender in progress. This tender is similar to previous case studies and involves a single round, discriminatory price, sealed bid auction. The target was to bring priority native vegetation (those communities with less than 30% of their original distribution under conservation management) under conservation management, particularly those communities that are threatened; and to reduce fragmentation in native vegetation communities (Fritz & Hazell 2006).

Main aim: To develop and trial a new incentive mechanism focusing on high conservation value native vegetation communities and compare the performance of the mechanism against previous programs.

Environmental objectives: The focus was on sites that support high conservation value native vegetation communities including: grasslands; woodlands; open forests; heathlands; rainforests; and wetland plant communities. Emphasis was given to communities that are officially listed as threatened, have been largely cleared across the region or exist only as small isolated remnant patches in the landscape (Southern Rivers Bush Incentives Brochure).

Participation objectives: A participation target of 100 expressions of interest was set. Southern Rivers CMA targeted an area with sufficient landholders to meet this objective assuming a five percent response rate. Ultimately response rates of four percent and one percent were achieved in the two target areas in Round 1 but this was sufficient to produce a competitive and fully subscribed round.

⁸ More information on Southern Rivers CMA programs can be found at: www.southern.cma.nsw.gov.au. Thanks to Sandy Fritz and Donna Hazell for input into this case study.

Participation outcomes from first tender (2004-05): (Fritz & Hazell 2006)

- 54 landholders made enquiries about the program
- 52 sites were assessed and management plans prepared
- 46 bids were submitted (44 eligible) by 38 landholders
- 31 bids were successful totalling 2218 ha for just under \$500,000
- Of the 2218 hectares, 2080 hectares were priority vegetation and 350 ha of Federal/State significance.

Participation outcomes from second tender (2006):

- 50 landholders submitted EOIs
- 30 management plans prepared
- 18 bids were submitted, 17 eligible
- 15 bids were successful totalling 1129 ha for almost \$240,000
- Of the 1,129 hectares, 870 ha are priority vegetation and 171 ha of Federal/State significance.

Considerations: An evaluation of landholder participation in the first tender was undertaken by Lowe (2005).⁹ Participant feedback indicated:

- less than one-fifth of landholders described themselves as full-time farmers
- less than half of participants had used other forms of conservation assistance in the past (suggesting a broader audience than existing schemes)
- personal contact via Landcare or contacting individuals directly was important to gaining participation
- site visits were very highly regarded by participants including their contribution to the development of management plans
- many landholders indicated they would have undertaken some conservation management in any case but regarded the site visit as critical in informing them of the appropriate action and financial support in increasing their works
- many landholders had difficulty with bid preparation (especially costing) and competitive bid allocation process
- unsuccessful landholders wanted detailed feedback on why they were unsuccessful and noted impacts of the disappointment of unrealised expectations
- evaluation of experience resulted in adaptive management outcomes to future rounds within program.

⁹ Further information will be available in a forthcoming publication (Lowe, A., Hazell, D., Fritz, S. & N. Moffat. Evaluation insights from landholder feedback on a tender-based incentives program) and in Arianne Lowe's PhD thesis on improving evaluation in environmental conservation, which includes Southern Rivers Bush Incentives as a case study.

5. Participation in Practice

5.1 Alignment in practice

The case studies target different NRM goals in different parts of Australia, with correspondingly different degrees of alignment to landholder farm management goals and aspirations. The two central Queensland tenders (FBA and DUC) were well aligned with landholder aspirations, primarily because the objective was a relatively minor adjustment to current management practices (stocking rates) rather than adopting a new practice or technology. In addition there was a perception among many landholders that stocking rates need to be reduced in some areas. In the Wimmera CMA the tender was directed towards tree planting with potential for reduced production and large up-front costs of implementation. This meant there was more potential for the scheme to be poorly aligned. However, the salinity focus and implications for production and water quality has had a long history of communication at the local level coupled with well known and accepted needs for land management change. As well, areas targeted in Catchment Tender 1 were low productivity and highly prone to erosion, with consequent management difficulties and landholder preference for de-intensification.

The primary goal of the remaining case studies was biodiversity conservation (in combination with salinity in the Goulburn Broken). Many landholders regard biodiversity oriented management as incompatible with their production goals. Indeed, most biodiversity oriented communication efforts with respect to desired management focus on removing land from production through activities such as fencing-off, revegetation and so on. Furthermore, the initial VIP and Bush Returns tenders required binding caveats to be placed on land titles thus reducing perceived flexibility (though the Bush Returns caveat was temporary). Consequently, participation in the initial deployment of these instruments was lower but improved with expanded target areas and relaxed contractual conditions in subsequent applications.

The target population of the incentive is also important. Biodiversity conservation objectives are well aligned with “lifestyle” landholders. Evaluations indicate that participation by these landholders was strong in coastal Queensland applications of the VIP program and in the NSW Southern Rivers Bush Incentives tender.

Lesson 19: Alignment is likely to vary across heterogeneous target populations. Active consideration of target populations can aid in instrument design and marketing.

5.2 Delivering opportunity

Eligibility

Previous studies have shown that there are often landholder misconceptions about eligibility. Eligibility for funding for NRM outcomes is often complex and reliant on modelling that is not easily observable at the target site. Four of the case study tenders targeted existing native vegetation which is generally obvious to landholders, with some exceptions for scattered woodlands and grasslands. However, landholders are seldom aware of whether their native vegetation is of high biodiversity value. Hence most target landholders would have been aware that they may have been eligible in the Fitzroy, Desert Uplands, VIP and Bush Incentives case studies but unsure of the importance of their site. In the Desert Uplands the relative opportunity

was more complex for landholders to assess because of the need to link into regional corridors. In addition, some unconnected bids and/or bids with small remnant areas may have been perceived as having little value, but may have proved to be crucial “stepping stones” in an overall vegetation corridor. In this case, perceptions of potential success are likely to relate to where they think the corridor/s may be formed, which in turn may discourage participation in more isolated parts of the region and on “edges” where potential connectivity is reduced.

Mapping is a common tool to aid landholders in identifying their eligibility, along with assessment of individual site values during a site visit. Provision of likely eligibility mapping is particularly important in promoting the opportunity to landholders that was little used in communication in the case studies. Site maps were used in the Wimmera case to indicate different priority groundwater systems but not relative priority.

Lesson 20: Eligibility information such as mapping should be available in advance of the EOI phase where possible, backed up by effective discussion during site visits.

Trial and permanency

The objectives of the case study tenders differed with respect to permanency. The Fitzroy Basin and, to a lesser extent, Desert Uplands and Bush Returns schemes were all designed to encourage landholders to trial the impacts of different management with the goal of wider adoption. The relatively short contract periods (two years) encouraged trials in the Desert Uplands and Fitzroy while the long contract (and title caveat) reduced trial options within Bush Returns but was necessary to achieve regeneration objectives. The permanent agreements under VIP appeared to be acceptable in later tender rounds, but similar permanent protection options were not widely adopted by landholders within the Wimmera Catchment Tender. In contrast, the majority of landholders participating in the Bush Incentives tender adopted the longest available contract (10 years in the first tender).

Scale of opportunity and management requirements

Many of the case studies were pilot programs but nevertheless there was considerable variation in the overall budgets available. The smallest pilot was the initial Bush Returns pilot (\$150,000) while the VIP program was the exception with access to a multi-million dollar budget. In no case was there an explicit cap on maximum bid values. In the Fitzroy, this limited the number of successful tenderers as one bid accounted for half the funding. Overall the wide variety of bids submitted indicated that landholders believed the funding opportunity was suitably adequate to support reasonably sized bids and it was worth the effort of applying.

The management requirements also varied in the degree of flexibility offered in each case. The DUC, FBA and Bush Returns tenders required participants to meet minimum management conditions, but were not overly prescriptive as to how this should be achieved. Bush Incentives provided a greater range of management options, with landholders awarded extra points in the assessment for agreeing to particular actions. The nature of the tree planting sought in the Wimmera meant that there was little opportunity for flexibility of management actions. Unlike some of the other schemes, planting trees also implies a more permanent land-use change, even though the contracts were only for five or ten years. The VIP scheme offered some flexibility in management, but in the early rounds required permanent protection, which would greatly limit future options for landholders.

5.3 Effective engagement

Communicating for improved participation

The engagement process is typically framed by a sound communications plan. Detailed evaluation of communications plans was beyond the scope of the case studies however each followed a similar pathway that approximated the five steps in Section 3.3. Each scheme began with a broad based communication effort, which was followed up by a more closely targeted engagement with potential participants. The exact process followed within each case study differed. In most cases it involved a mix of media advertisement, targeted letters and invitations, and in some cases phone calls or similar personal contact. There was anecdotal evidence that personal contact impacted positively on participation but there are concerns that such communication introduces favouritism to the tender process.

Case studies were managed by CMAs (except the VIP) who have invested much time and effort building trust and relationships with landholders and the broader community. Direct contact with landholders, particularly one-on-one contact in the field, is seen as having broad intangible benefits beyond simply completing the task in hand. In many circumstances, the actual engagement process of a competitive tender is quite similar to that of the more familiar devolved grant process; there is an awareness campaign, an application process and an assessment process. However, not all CMAs have comprehensive up-to-date landholder contact lists for their area which may make it difficult to communicate via direct mail-outs and similar strategies. Simple factors such as the lack of a comprehensive list of names and addresses of landholders can limit engagement and hence participation (and even when available, they can not always be accessed, particularly by partner organisations, due to privacy legislation).

Information exchange and site visits

Landholders who expressed interest following the initial communication were generally guided through a process leading to a site visit. These site visits were the key aspect of the engagement process. Follow-up evaluations indicate they were highly regarded by landholders, providing an opportunity for learning and feedback between landholders and field officers. During the site visit an agreed management plan can be drawn up; this one-on-one contact makes the process much more straightforward for landholders, and also provides greater scope for flexibility in how landholders respond (which is one of the ways in which markets can enhance efficiency).

Lesson 21: Site visits are regarded highly by landholders and the quality of these visits are critical to good participant retention.

In the FBA and DUC tenders, where the number of participants was quite low, the field staff were able to spend time with landholders in the field as well as providing a follow-up service. In both areas, there was a high translation rate from field visits to submitted bids (80% and 85% respectively). Had participation been higher at the beginning, the level of service provided by the CMA may have been reduced, and so participant retention may not have been so high. In the VIP, the translation rate of site visits to bids was much lower at 45%. In the Wimmera, the translation rate was also lower (43%), but this was related to time limits and difficulties in getting quotes from contractors. Of some concern is the fall in conversion of site visits to less than 30% in the second Wimmera tender. In the latter two schemes, landholders were only able to

fully assess their potential opportunity after they had received a site visit. This uncertainty may be compounded when detailed management plans form the basis of bid assessment. If landholders then reassess their opportunity downwards following site visits, they are more likely to drop-out of the process. Evaluation of the Southern Rivers Bush Incentives scheme suggested that lifestyle landholders may have more difficulty assessing the relative opportunity compared to their costs due to a lack of experience in costing and comparing their likely proposals to other potential entrants (Lowe 2005).

The level of trust landholders had in the field staff (and/or the organisation they represented) may have had an important influence on participation. Participation in the VIP varied considerably across the four regions, with over 50% of all bids coming from one region (also the most recently implemented) and a third coming from another region. This variation appears to have been largely influenced by the attitudes of landholders to the field staff with whom they had direct contact. For example, field staff from a conservation agency, some of whom were not well known in the region, may have been viewed negatively by some landholders for their pro-environmental attitudes, whereas this may have attracted participation from more like-minded landholders. In the VIP a third party was engaged to manage the tender process, and while field staff were trained, they were not always clear about what could or could not be included in the management plans. This meant they had to check back with the funding agency, which may have reduced landholder confidence in their ability to assist with management plans. In addition, contract field staff were focused on the task of developing a management plan, whereas field staff from the local CMA were also building better relationships. However, in general, the site visits were the main component in the tender process that really galvanised participation.

Lesson 22: Field staff need to be well trained, flexible and able to redirect landholders in order to maximise participation.

Use of communication workshops

A number of the case studies employed workshops within the engagement process to aid in delivering information about the incentive approach and mechanism and the desired management actions and outcomes. Some workshops involved a trial auction (Desert Uplands, FBA, and Wimmera). Having landholders participate in a trial auction is an effective adult learning tool as it provides participants with practical examples and experience in developing their offers and in the competitive assessment process. The workshop process highlights opportunities for landholders to increase their chances of success in the tender by providing higher value bids and illustrates the nature of the cost competitive and outcome process employed. As a counterfactual, the Bush Incentives scheme did not employ a workshop and evaluation feedback noted that a significant proportion of participants did not fully understand the competitive aspect of the tender process.

In the FBA workshops, the trial auction was used to familiarise both landholders and FBA staff about the tender mechanism and how different bid formulation strategies might be successful. In the post tender evaluation it was revealed that (Windle and Rolfe 2006):

- all of those attending a workshop (17 people) found them useful
- half the respondents (9 people) thought the practical application of the mock auction was the main benefit

- all participants, bar one, thought they received a better understanding about how to improve their chances of submitting a successful tender
- the majority (12 people) also thought they received a better understanding of the biodiversity values on their properties
- seven of the eight successful bidders had attended a workshop.

Costs of bid construction

It is also important to consider the effort required of landholders to engage in the tender process. In the VIP, there was considerable uncertainty and effort involved in developing the management plans, which formed the basis of the bid assessment process. This had a notable impact on participation as these transaction costs were viewed differently by different landholder groups, effectively encouraging some while deterring others. In the Desert Uplands, given the uncertainty of success, several landholders reduced the effort of developing a bid. Instead of estimating a detailed bid for a particular section of their property, they offered the whole property area. This makes sense in extensive rangelands where properties are managed as one whole area, rather than as separate paddocks.

In Wimmera, there were high transaction costs that could have deterred participation. In particular, the need to obtain quotes from sub-contractors meant there were time delays and some landholders were unable to submit bids within time restrictions. However, there were other aspects of the scheme that offset the effort of developing a bid and encouraged participation. The opportunity costs of being involved in the project, if a bid was accepted, were relatively low. Contractors were used for major works and the project managers sourced the trees in advance to ensure their timely availability. Nevertheless potentially unfamiliar project management skills are required to effectively coordinate such large-scale revegetation exercises within a relatively short period of time.

Lesson 23: Support for bid construction should be tailored to participant needs (within reason). This includes effective training of field staff and supporting materials such as accredited suppliers of works or lists of potential subcontractors.

Tender design

The case studies did not formally evaluate the tender design that was implemented in each case and many of these issues have been covered previously in this section. A large degree of consensus has been reached on the principal components that are required for effective and probity compliant implementation of conservation auctions. These include use of sealed bid, discriminatory price auction procedures with clear bid submission pro-forma or content and timing rules. None of the case studies varied from these principle suggestions. Only the Desert Uplands case varied from a single bidding round due to the desire for coordinated outcomes.

The case studies also did not employ factors such as specific rules about group bids and caps on bid size. Eligibility rules tended to be framed in terms of location (within target area), ability to supply the desired outcome, and a requirement to conform with specific eligible management actions, though these were relaxed for the more output oriented Fitzroy and Desert Uplands applications. Reserve prices were common, though not universal, but did not appear to reduce participation where present. Overall, no evidence was found in the case studies to alter the participation conclusions presented in Table 1.

5.4 Contractual arrangements in the real world

The contractual features employed in the case studies represented pragmatic trade-offs between the theory and practice. The contracts used in the FBA and DUC tenders were very similar. They were simple and as they were for only two years they were of little cause for concern amongst participants. Indeed, it provided an opportunity for landholders to trial the scheme without too much commitment. This was more important in the Desert Uplands where landholders had less exposure to grants and other forms of incentive payments. Some also had a strong focus on production outcomes and participants may have been uncomfortable with the idea of providing environmental services. One of the real successes of the linkage tender was that landholders with a wide range of attitudes to NRM issues participated in the scheme, and were able to cooperate and coordinate their bids to achieve landscape linkage.

In all the case study tenders, payments were split, with a combination of upfront and ongoing payments. The use of upfront payments was designed to overcome financial constraints that might have influenced participation, for instance with landholders being unable to afford the required initial capital investment. Frontloading of payments was also influenced by program requirements that all funds be spent well before contractual obligations were complete in the Wimmera CMA and Bush Incentives case studies, or resulted in short-term contracts in the Desert Uplands and Fitzroy cases. The VIP program was longer-term and the Bush Returns program developed a mechanism to park payments for out-years beyond the current funding cycle.

Lesson 24: Pragmatic contract design can aid in meeting landholder needs for participation and overcoming constraints to participation such as finances.

Landholders are likely to find longer contracts of up to five years quite reasonable, particularly if the length of contract (and payments) match the type of management inputs involved. For example, in the Wimmera, a contract period of five years which covers the period of tree establishment appears quite reasonable (second auction), whereas extending the period to 10 years (first auction) may be less acceptable. The extended period also increases the difficulty of constructing a bid and estimating a bid price as well as exposing landholders to the risk that the native vegetation will be covered by native vegetation protection laws.

The use of highly restrictive covenants as a permanent protection tool in the initial stages of the VIP clearly deterred participation of production focused landholders. However, in regions with a greater proportion of non-production landholders (such as 'lifestyle landowners') they were more acceptable. This conclusion is supported by the voluntary selection of longer-term contracts in the Southern Rivers Bush Incentives Program. In the Goulburn Broken tender, both the length and complexity of contracts were likely to have had a negative influence on participation.

Lesson 25: Tailoring contract length and restrictiveness to stakeholder expectations and concerns is likely to increase participation. Such expectations are likely to differ between communities.

Considerations about monitoring and the apportionment of risk did not play an obvious role in influencing participation in the case studies. In the case studies where the authors had intimate involvement there were often questions about the degree of monitoring, who bears the risk of occurrences such as fire and drought, and penalties

for non-compliance. The pragmatic approach to each of these components of contracts within the case studies is not likely to have adversely impacted on participation and supports the participation conclusions in Table 2.

5.5 Managing post-participation

There are two components to post-participation: contract implementation with monitoring and enforcement; and management of unsuccessful tenders. The tenders outlined in the case studies have only recently been implemented so it is unclear how participants will react to the requirements of the associated monitoring programs. Our experience suggests that landholders in all case studies are quite comfortable with their arrangements. These include for example, the use of annual progress reports and photo points as well as spot audits in the case of central Queensland, and specified site visits in the Wimmera and Bush Returns. The main issue that has yet to be tested is the willingness and ability of agencies to enforce contracts in the unlikely event that landholders are unwilling to comply.

Feedback to unsuccessful landholders varied across the tenders with a common request for detailed information about the reasons for bid rejection (including cost-information). Detailed evaluation of unsuccessful bids in the Southern Rivers CMA's Bush Incentives Scheme emphasised the importance of providing good feedback to landholders about why bids were unsuccessful in order to manage their expectations and increase the likelihood that they would participate in future schemes. Most case studies provided information about alternative opportunities for funding or information to unsuccessful landholders. The Bush Incentives evaluation also noted the importance of evaluating the performance of contracted landholders to identify and refine schemes for future implementation.

5.6 Summary

While the tenders in these case studies superficially appear quite similar, there are marked differences in terms of the alignment, opportunity, engagement and contracts they offer to potential participants. The Central Queensland tenders (FBA and DUC) were well aligned with existing landholder decision sets in that they involved reducing stocking rates in order to increase ground cover. In addition to biodiversity benefits, many landholders consider this valuable for the long-term sustainability of their enterprises. Both tenders also appear to have benefited from being led by locally based CMAs with strong links to the community and existing relationships with many landholders. They featured strong communication components, with site visits and workshops for interested landholders. They also offered short-term contracts and avoided arduous monitoring requirements. Both achieved satisfactory levels of participation, in that they achieved their objectives, and had an adequate number of bids to choose from. All available funds were allocated; had participation been higher, efficiency might have been improved marginally, but there would have been more losers and higher transaction costs all round.

Similarly, the Wimmera tender would be considered a success in terms of participation. In this example the alignment was somewhat less, as tree planting is not a typical option for sheep graziers. However, the program was targeting salinity, which is recognised as a significant problem both at the individual farm and the community level. The program was entirely owned and run by the local CMA, and communicated through mail-outs, site visits and workshops. Contracts were relatively

long (10 years for tender one), but transaction costs and risks to the landholder were minimised through clear input-based contracts with highly achievable performance goals (80 percent survival after one year). The CMA allocated extra funds to the first tender as they considered that the bids represented good value for money. Despite this, over half of the bids submitted were unsuccessful. Higher participation would no doubt have further increased economic efficiency to some degree, but would again have brought greater transaction costs all round and resulted in more disappointed tenderers.

Participation appears to have been more of an issue in the VIP and initial rounds of the Goulbourn Broken and Southern Rivers tenders. These programs targeted native vegetation, including promoting revegetation or protection of non-remnant vegetation in the Bush Returns case. There was therefore far weaker alignment with production-oriented landholders. In the case of the VIP there was a strong state government involvement, and in contrast to the CMA schemes it relied on staff employed by a third party to undertake site visits. The VIP also sought permanent protection through special covenants in the initial phase in which there were no successful bids. The subsequent use of Nature Refuge covenants which are managed by the Environmental Protection Agency proved more acceptable, but only to a particular type of landholder. Despite initial difficulty in recruiting participants the Bush Returns (Goulburn Broken) and Bush Incentives (Southern Rivers) pilots were regarded as successful with subsequent tenders achieving increased participation in both cases. Improved participation may be partly attributable to subtle refinements of initial schemes including broader awareness activities from initial tenders.

<p>Lesson 26: Incorporate active review, adaptive design and implementation flexibility in order to incorporate learnings and improve future participation.</p>
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6. Postscript: Discussion and Future Directions

Participation is necessary, but not sufficient, for a competitive tender to succeed. Therefore it is but one of many considerations in the design process. This paper has set out to provide a framework for considering participation in a rigorous manner during the design and implementation of a tender.

There appears to be a perception that participation in MBIs is a ‘problem’. However this is not borne out by our case studies. While at first glance participation rates appear low, these schemes had relatively small budgets, competition for funding appeared robust, and the number of bids received was sufficient for them to achieve their objectives. In most cases it is far from clear whether the increased efficiency from higher participation rates would have offset the increased transaction costs and the risks of negative sentiments caused by failed bids. Increased participation does not necessarily relate to improved outcomes!

The recommendations of this report include determining at the outset what level of participation is likely to be required, and what is likely to be achieved, before taking additional steps to increase participation. Measures to increase participation rates involve tailoring the alignment, opportunity, engagement and contract processes offered by a tender in ways that encourage the relevant landholders to take part. However, it should also be remembered that no tender is likely to come close to universal participation – if this is required other policy mechanisms will be more appropriate.

The framework presented in this report has proved useful as it considers broader aspects of a program, rather than simply instrument design. Some of these were particularly important in the case studies, such as the engagement process and the degree of alignment. From a landholder’s perspective, these various aspects do not exist in isolation, and are all relevant in deciding whether or not to participate. The framework and case studies suggest that programs implemented at a local level by community based CMAs are more likely to be well aligned and encourage participation because of the close relationship between landholder and scheme managers. Where particularly high participation rates are required, efforts should be made to increase one or more of the alignment, opportunity and engagement factors offered by the MBI, and minimise any contracting obstacles.

Questions to be addressed in future research include examining the impact of perceived likelihood of success on participation and bidding behaviour. It is possible that people may increase their bid prices if they believe there is a larger budget or fewer potential competitors, which would jeopardise the efficiency gains of the auction mechanism. Alternatively it may raise efficiency by encouraging people to take more care with their bids. Such questions are amenable to experimental economics techniques. Other issues, such as the impact of transaction costs and contracts of differing duration on participation could also be addressed in this way.

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Appendix: Analysis of the Participation Impacts in Each Case Study

Case study 1: Fitzroy Basin Association – Biodiversity

Category	Influence on landholder participation
1. Alignment	
Minimum ground cover standards in high biodiversity sites (reduced stocking rates)	<ul style="list-style-type: none"> + Well aligned with known problem and management needs – Landholders may not have known if had high value biodiversity site
2 year contracts	+ Short term “trial”
2. Opportunity	
Effective minimum entry standard (ability to achieve outcome)	<ul style="list-style-type: none"> – Must meet entry standard – Must have areas of high biodiversity
Flexibility in ways to achieve min standard	+ Flexibility
\$200,000 in incentives – no cap on bids	<ul style="list-style-type: none"> + No cost constraints + Large bids accepted – Limited budget which might affect perceptions of likelihood of success
3. Engagement	
Unaddressed mail-out to all households (no landholder contact list), radio, local press, other FBA activities; some direct invitations to those with high biodiversity sites	<ul style="list-style-type: none"> + Broad based communication – Communication largely untargeted
Workshops /trial auction	+ Training workshop
Non-binding EOI process (post workshop)	+ Ability to get information at no risk (EOI – site visit & workshop)
Site visit for all EOIs - feedback with condition score sent to landholders	+ Direct one-on-one contact at site visit
Provided property maps (satellite image) & regional ecosystem maps, & biodiversity significance maps	+ Potential opportunity for other schemes
Metric details explained to participants	– Complex metric information
4. Contracting	
Output based (minimum land condition). Specified risk (fire, weeds), other conditions apply. Exceptional circumstances can apply. Must de-stock in drought	+ Risk on achieving outputs, but assurances given about exceptional circumstances
Simple contract – no permanency	+ Simple standard contract
Contract with FBA (local CMA)	+ Contract with local group
Monitoring on annual progress report and photo points. Spot audits with two weeks prior notice	+ Simple clear monitoring (non intrusive)
Payments: 40% upfront; 30% 1 st yr end of dry season; 30% final payment	
Unsuccessful tenders offered other schemes	+ Other follow-up opportunities for unsuccessful tenders

Case study 2: Desert Uplands Committee – Landscape linkage

Category	Influence on landholder participation
1. Alignment	
Backed onto MBI pilot	+ Strong history of local ownership
Prior talks about concept & need	+ Known management issue
Also aligned to biodiversity management goals	– Know must cooperate to achieve corridor
2 year contract	+ Short term “trial”
2. Opportunity	
Compensation for opportunity costs; \$330,000 in incentives – no cap on bids	+ No cost constraints
Flexibility to meet specified targets (re: start point) but mandatory achievement required	+ No prescribed management actions
Must have biodiversity and opportunity to cooperate and/or adjoin strategic area	– Knowledge of biodiversity – Must believe can achieve benchmark
Incentive to coordinate with neighbours	? Likelihood of coordination given neighbours
3. Engagement	
Driven by high credibility local group – direct contact through landholders in DUC	+ Local group better placed to encourage cooperation for corridors
Targeted mail-out to all landholders, radio, local press	+ Targeted communication
Workshops/trial auction	+ Workshop training
Non-binding EOI (post workshop)	+ Ability to get information at no risk (EOI, site visit & workshop)
Site visit	+ Direct one-on-one contact at site visit
Three round process with feedback on bid quartile & all bid locations	+ Feedback, but can lead to “gaming”
	– Coordination uncertainty
	– Transaction cost of multiple round bids; bids can remain unchanged
Property maps provided (sat image) + regional ecosystem map + biodiversity significance map	+ Property maps
4. Contracting	
Contract with DUC	+ Contract with local group
Simple 2 year contract – performance based	+ Simple standard contract
	– Risk on achieving outputs
Monitoring – progress report, photo points and random audits (2 weeks notice)	+ Simple clear monitoring (non intrusive)
Payments 40:30:30; specified risks (fire, weeds)	

Case study 3: Queensland Government, VIP – Non-remnant vegetation

Category	Influence on landholder participation
1. Alignment	
Protection of non-remnant areas	+ Focus usually on remnant vegetation
	– Not aligned with production goals (producers)
	+ Well aligned (lifestylers)
	– May not have known if had high value regrowth site
Five year management plans & permanent protection	– Permanent protection (producers)
Govt dept associated with tree clearing legislation	– Dealing with govt (producers)
2. Opportunity	
\$12 million total budget	+ Large budget
Minimum size restrictions for vegetation types	– Must have good regrowth & meet entry standard & minimum size
Flexibility in management plans but not covenant (more flexibility in Nature Refuge)	? Management flexibility but plans difficult to develop/cost (important element in bid assessment)
3. Engagement	
Widespread coverage using GA networks & mailing lists, press, radio, brochures in shops	+ Broad based communication (GA networks may have targeted more lifestylers than producers)
Non-binding EOI process used as filter – eligible invited to submit bid	+ Ability to get information at no risk (EOI – site visit)
	– Had to submit EOI to determine eligibility
Site visit used to develop management plan	+ Direct one-on-one contact at site visit
Site visit for all eligible – conducted by third party	– Not all field staff had credibility. GA field staff too “green” (producers)
	– 3 rd party field staff had to verify some management actions – extended process
Two bid prices required: a) management plan and b) covenant	– Difficult to determine bid price for covenant
	– High engagement costs
Bids assessed by expert panel	– Less transparency
4. Contracting	
Management plans & early covenant contract with DNRW. Nature Refuge contract with EPA	– Two contracts with different govt depts
Input based	+ Low risk on management plans
Contracts are still being processed	– Extended process, some uncertainty
Payments: annual payments for plans, lump sum for covenant	– High uncertainty about long term effects on property values & management (producers)
Currently no clear monitoring requirements	

Case study 4: Wimmera Catchment Management Authority – Salinity

Category	Influence on landholder participation
1. Alignment	
Plant trees in high recharge area to minimise salt export	+ Well aligned to previous programs
Long history of promotion of recharge reduction via tree planting	– Known management requirements
Limited actions (only tree planting) mean that tender may miss other effective options to reduce salt export	–
Long history of promoting improved management on low production & highly erosive soils in steep hills of upper catchment	+
Alignment checked via a workshop in design phase of tender	+
2. Opportunity	
Must have eligible “high priority” land	– Must know high priority site (mapping provided post EOI)
Compensation for costs of tree planting (incl. opportunity costs); \$150,000 in Auction 1 (2005), more in Auction 2 (2006)	+ Compensation for valued public good service (and expensive management action)
	+ Low opportunity cost of existing grazing
Mandatory actions (prescribed management plan for tree planting)	– Fixed management plan –low flexibility
Minimum size on bid	– Minimum size (may have appeared trivial but two bids submitted below minimum)
Trees ordered by CMA in advance of tender (provided)	+ Tree tube-stock secured in advance
3. Engagement	
Targeted mail-out to all identified landholders with high priority sites. Some other local promotion (radio, general field days)	+ Targeted communication
EOI = invitation to workshop (non binding on submission	+ Easy, transparent engagement process (EOI, workshop, site visit, submit bid)
Workshop/simulated auction	+ Workshop with trial auction
Site visit (ID site, discuss management) mailed priority map in advance	+ Direct contact site visit/workshop
Site map & management plan sent to landholders	+ Clear prioritisation/map info
	– Priority areas identified but additional (within priority) variation in salinity impact included in evaluation
	– High transaction costs to cost bid; too little time to develop costs (quote issue)
Losers offered other options	+ Eligibility for other schemes

4. Contracting	
Input based (defined management plans)	+ Clear input based contract
Contract with local CMA	+ Contract with local body + Simple standard contract
Contracts 10 yrs (1 st auction); 5 yrs (2 nd auction); payments split: upfront 50%; planting 30%; end year 1 (20%) contingent on 80% survival rate	– Risk of getting costs wrong for expensive projects
Defined risk on drought and fire	Risk – difficulty with pest and weed control (rabbits, wallabies and weeds are all problems in parts of the region)
No stock for period of contract (tree establishment period)	Can graze after contract
Site visit for monitoring	High monitoring effort (site visit)

Case study 5: Goulburn Broken – Revegetation

Category	Influence on landholder participation
1. Alignment	
Trial of new goal with impact of many actions unknown	Unknown effectiveness of management requirements (possible perceived increased risk to landholders) –
Revegetation may be poorly aligned with production goals of many landholders	Poor alignment with agricultural production in the short term, unknown in longer term – “I grow cows not trees” –
	Some early concern about impact on other farming activities/management (e.g. will weed control be poor) –
Long history of promotion of recharge reduction/biodiversity enhancement via revegetation	– May not have known if had high value or regeneration potential site
New and unfamiliar incentive mechanism in region	– Anecdotal evidence that some landholders did not like price competition within MBIs
	–
2. Opportunity	
Compensation for opportunity costs of encouraging regeneration; \$200,000 in Auction 1 (2004), \$650,000 in Auction 2 (2005)	+ Compensation for valued public good service (covering opportunity cost); low opportunity cost of existing grazing
Must have eligible land in-line with priorities in metric	– Must know the basis of a high priority site
Management agreement contained standard mandatory actions (e.g. do not remove fallen timber). No flexibility in standard actions without permission of all parties	– Management plan allows some flexibility but was restrictive
Ten year agreement binding on title (results in permanent native vegetation protection)	– Significant impacts on flexibility for future management
Flexibility in grazing management depending on regeneration needs	Possibility of continued grazing use where used as a management tool
3. Engagement	
Briefings (Landcare groups, local implementation committees, local extension officers etc.), ads, editorials and media releases, radio, official launch event, brochures, information kit, extension staff also recruited target landholders (outside of project directly)	+ Mix of targeted and broad-based communication
Public workshops; EOI followed by site visit (no obligation to submit bid)	+ Easy, transparent engagement process
Site visit (ID site, discuss management, often refined in management plan drafting phase)	+ Direct contact site visit/workshop with no obligation and opportunity to discuss potential and management options
	+ Clear management plan actions/map info
	– Only generic information on priorities available prior to site visit
	+ Opportunity to amend management plan if necessary

Site map, summary of site values & management plan sent to landholders for consideration of bid; pre-addressed bid envelope and prepared bid sheet (via registered post)	+ Summary of values (not raw scores) provided to landholders detailing conservation significance, regeneration potential, duration etc
Feedback provided to landholders on roughly how much bid was unsuccessful by; automatic notification of future auctions to unsuccessful tenders	+
4. Contracting	
Input based (defined management plans)	+ Clear responsibilities defined in input based contract
20% payment upfront and remaining payments split across contract period	+
2 contracts: with CMA and DSE (DSE contract needed to enter agreement on land title)	- Multiple contracts (especially with duplicates for all parties)
	+ Contract for payment with local body (Goulburn Broken CMA) but concern that government changes may break contract. -
Contracts 10 yrs and binding on title	? Addresses land ownership change (encumbrance on title versus protecting good management into future)
Contract ("Land Management Cooperative agreement" Sec 69 of <i>Conservation, Forests and Land Act 1987</i>) designed to be a binding legal document	- Additional complexity in contract details
Option of a perpetual covenant with Trust for Nature as alternative to cooperative agreement	+ Permanent protection opportunity provided
Each management plan is unique with respect to management actions (accounting for likely impact on regeneration)	+ Flexibility in management according to specific site needs
No defined risk on drought and fire (but generally in landholders favour)	- Risk – difficulty with pest and weed control (rabbits, kangaroos and weeds are all problems in parts of the region)
Claim form / report required verifying actions prior to payment, photos and records from monitoring points	Reporting documentation to receive annual payment
Site visit for monitoring	
Unsuccessful tenders received information about other options	

Case study 6: Southern Rivers CMA Bush Incentives - Biodiversity

Category	Influence on landholder participation
1. Alignment	
Trial of new incentive scheme with unfamiliar processes and management requirements	Unknown impact of management requirements (possible perceived increased risk to landholders). –
	+ Evaluation indicates landholder acceptance of most proposed management actions
	– Some landholders did not like price competition within MBIs
Targeting of threatened, highly cleared vegetation communities	– May not have known if had high value or regeneration potential site
Native vegetation management may be poorly aligned with production goals of some landholders	– May not have aligned well with agricultural production
Large number of non-production oriented landholders interested in conservation management and a more flexible incentive scheme approach	+ More flexible approach suits landholders with alternative (not necessarily agricultural production) management goals
2. Opportunity	
Compensation for capital and opportunity costs of management change; \$500,000 in each round.	+ Compensation for valued public good service (covering opportunity cost)
Must have targeted vegetation types in designated region	– May not realise their bush is valuable and live in specified region
High degree of flexibility through negotiated management plan to suit vegetation type and landholders	+ Flexible management plan with clear bonus points for specified option
Impacts on future land management through 5, 10 or 15 year agreement	? Length of agreement expected to impact on flexibility. However, of the 46 successful bidders from rounds 1 and 2 there was only one 5-year contract, 36 ten-year contracts and nine 15-year contracts. 15-year contracts were not offered in first round so it is more notable that 9 out of 15 contracts in round 2 were for 15 years. Round 3 will only offer 10 or 15 year contracts
Specified landholder services receive extra points on top of score for site	+ Possibility of continued grazing use
3. Engagement	
Local media, mail out, Landcare networks, notices at rural outlets, field days, and SRCMA staff contacting landholders directly, having heard of potential interest from other NRM sources	+ Mix of targeted and broad-based communication
Simple EOI by phone	+
Information kit mailed out in response to EOI	+ Information kit to explain process and requirements
Site visit (ID site, assess conservation value, discuss management with landholder)	+ Direct contact site visit with no obligation and opportunity to discuss potential and management options

Site map, summary of site values & management plan sent to landholders; no obligation to submit bid	+ Clear prioritisation/map information + Opportunity to learn more about management of native vegetation
21 days to return bid following receipt of management plan	+ Easy, transparent engagement process (EOI, site visit and assistance with management plan, submit bid)
Assessment period extended to expand participants (though the assessment period end date was only approximate)	- Some participants commented that they did not like the assessment period being extended
4. Contracting	
Input based, individually flexible defined management plans	+ Clear responsibilities defined in input based contract
60% payment upfront and remaining payments split across first three years of contract period; Contracts 5, 10 or 15 years	- Difficulty in estimating costs for non-full time farmers. Some landholders noted that they would prefer to receive an offer
Landholders complete annual report form verifying actions prior to payment	? Monitoring does not involve an annual site visit by SRCMA (SRCMA prefers to make follow up site visits but likelihood and regularity unclear). Review noted return site visits favoured by many participants
Flexibility in management according to specific site and landholder needs	+
5. Post participation	
Letter advising unsuccessful landholders of alternative funding opportunities	Landholder survey (Round 1) suggested more detailed feedback needed to encourage future participation and understanding of why bid unsuccessful. In response more information was provided to unsuccessful bidders in Round 2. They were advised: - that in general, the conservation value of sites with unsuccessful bids was significantly lower than those of successful bids + - of the range of conservation values (measured in conservation units) represented by successful bids - in all cases, unsuccessful bids were more expensive in terms of cost per conservation unit; and - how their bid was positioned in terms of the average cost per conservation unit. They were also encouraged to contact SRCMA staff if they wished to discuss their bid or other funding opportunities
Independent evaluation of tender process with successful and unsuccessful bidders and non-participants	+ Landholders appreciated opportunity to provide feedback through survey (Round 1). Evaluation of landholder experience used to refine future tender design
Workshops with contracted landholders to discuss monitoring processes	+ On-going engagement with landholders demonstrated through workshops, field day and newsletters.