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Designing conservation tenders to support landholder participation: A framework and case study assessment

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ABSTRACT

Conservation tenders are emerging as a critical mechanism for supporting payments for ecosystem services in Australia and have been applied at the national, state and regional level. These tenders are designer markets or policy mechanisms in which the proactive participation of landholders is required for success. In this paper we develop a five step framework to identify barriers to participation and to support the design of conservation tenders. We consider participation in six case study tenders covering a variety of land management objectives using our framework. These case studies also provide further pragmatic lessons in managing participation in tenders. Participation supporting factors include alignment of management priorities, opportunity for payment/compensation, effective engagement via information workshops and site visits, and clear and uncomplicated bidding and contracting experiences. Post-contract support may require further attention. Attention to these design elements is likely to support adequate participation and achieve the competitive allocation of funds from which conservation tenders derive their economic efficiency outcomes.

1. Introduction

Internationally 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 environmental outcomes or to ensure a satisfactory return on public investment (Auditor General, 2008; United States Government Accountability Office, 2007; European Court of Auditors, 2011). This has led to a movement towards alternative policy mechanisms with a greater focus on linking service delivery to payment, such as payment for ecosystem services schemes (PES), and competitive allocation of payments, such as via conservation tenders. These policy mechanisms have the potential to produce more cost effective environmental outcomes by allocating and managing government funding through the use of market forces.

Conservation tenders are auction mechanisms which allocate funds to the most cost effective offers until funds are exhausted, a price limit is reached or, a target purchase outcome is achieved (Latacz-Lohmann, 2000; Rousseau and Moons, 2008). As tenders move from novel trials to mainstream instruments for achieving voluntary land use change there is a need to ensure adequate participation to deliver the desired environmental and efficiency objectives. Tenders rely on having an adequate level of competition within a reasonably short timeframe (when offers are accepted), in contrast to PES mechanisms that tend to operate across longer time intervals. This means timely participation is more crucial to the performance of a competitive tender than other PES processes.

Our aim in this paper 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 by Wilson and Hart (2001), Pannell et al. (2006), Knowler and Bradshaw (2007) and Baumgart-Getz et al. (2012), amongst others. Nor do we discuss the selection and design of payments for ecosystem services in general—this is described in general by Jack et al. (2008), Engel et al. (2008) and Sommerville et al. (2009). Rather, the focus is on understanding, from a landholder's perspective, how the various stages in the tender implementation process may impact on participation, and how conservation tenders might be designed and implemented in order to achieve optimal rates of participation. We test our assumptions against landholder participation in six case studies of tenders in Australia.

The paper is structured as follows. In the next section we define participation in conservation tenders and who might participate. We then set out a framework for understanding potential barriers to participation in the tender process along with design options to reduce their influence. The framework

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draws on a range of literature including agri-environmental extension and adoption, behavioural economics and contractual economics. In Section 4, we apply the framework to consider participation evidence from six case study tenders. We conclude the paper with some further lessons from the case studies and a synthesis of the key elements in conservation tender design from a participation perspective.

2. Participation in conservation tenders

2.1. What is participation?

Competitive tenders, like all markets, rely on gains from trade to generate economic efficiency. They differ from classical markets in that there is a single buyer (often a public agency in the case of ecosystem service tenders) and a number of competing land managers as sellers. Economic efficiency results from a surplus of tenders relative to the purchase constraints (budget or purchase target). 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, increased participation by landholders should lead to a better outcome for a public agency in terms of the quantity or cost of ecosystem services 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.

At first glance, economic efficiency results from increasing participation where landholders submit a tender—termed 'active participation'. However, two other stages of participation also impact on the potential for economic efficiency within a tender and for future tenders. First, a sufficient pool of potential land managers must be attracted to the conservation tender knowing that some will drop out of the process (or find they are ineligible) before submitting a bid—termed 'partial participation'. Second, only a subset of tenderers will normally be offered (and accept) contracts, and go on to implement the desired ecosystem service managements—termed 'complete participation'. These participation definitions are illustrated against the standard steps in conservation tender implementation from a land manager perspective in Fig. 1.

2.2. Who might participate and why?

As well as how many participate in competitive tenders, it also matters who they are. Tenders work by promoting low cost suppliers so it helps to know who these might be. Landscape heterogeneity and biophysical relationships may mean that only some land managers are able to produce the desired ecosystem services. The size of the available budget or other limitations may suggest a desirable level of participation: sufficient to ensure competition without suffering adverse consequences of too much participation such as costs of supporting the tender, managing expectations of unsuccessful land managers, and adverse interactions with voluntary managements (Reeson and Tisdell, 2010; Ulber et al., 2011). Therefore, it is important to determine clear participation objectives at the outset of a project.

In practice there are likely to be a range of other programs operating with potential interaction with tenders. Hence, even before moving into questions of tender design it is important to identify likely interactions with other active approaches in the landscape (Jack et al., 2008). 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). Other programs such as communication, practice oriented extension, and supporting development of individual farm plans may complement or support tenders (at least in the longer term).

3. A barriers and opportunities framework for supporting participation

Our framework exploring participation in conservation tenders is exclusively from the perspective of potential landholder participants. It is intended to identify potential barriers to participation and facilitate identification of practical measures to overcome these. The framework superficially resembles and is inspired by a number of adoption and diffusion type approaches including those advanced by Morris et al. (2000), Barr and Cary (2000), Kraft et al. (2003), Pannell et al. (2006) and Siebert et al. (2006) as well as broader design based approaches (such as Jack et al., 2008). Our approach is broader, encompassing the nature of the incentive offered and interactions with the policy agents through recruitment and contracts offered. While we draw on a broad range of participation, behavioural economics and contracting literature, there is very little specific literature on participation in conservation tenders. Our resultant five-stage participation framework is illustrated in Fig. 2. Stages are non-exclusive, as actions in one area are likely to impact on others. For example, engagement activities may include actions that enhance the scale of opportunity. We explore each of these five stages in the remainder of this section.

Steps in participating in a conservation tender from land manager perspective	Definition of participation
1. Receive information about conservation tender	
2. Register interest / attend information workshop	} Partial Participation
3. Site visit by extension officer	
4. Agree on management actions to cost	
5. Calculate and submit tender	Active participation
6. Accept contract	} Complete participation
7. Payments received / actions implemented	
8. Ongoing actions as required / participate in monitoring	

Fig. 1. Types of participation in conservation tenders.