Market-based incentives: A consumer’s experience of participating in River Tender

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Abstract

Dockers Plains Pastoral Company (DPPC) owns approximately 660 hectares of remnant riparian vegetation on the lower Ovens River in north-east Victoria. In early 2005 the North East Catchment Management Authority launched the River Tender funding scheme through which financial assistance was made available for projects aimed at enhancing the condition of riparian vegetation. River Tender is an example of a "tender-based" funding scheme, whereby participants are required to submit a “bid” which is their estimate of what they require to implement a negotiated program of restoration works over a fixed period of time. DPPC were successful in round 1 of River Tender and have implemented much of the agreed works over the past 18 months. Unlike more traditional funding schemes that stipulate what activities will be funded and at what rate, River Tender is more flexible. Participants decide how they will implement the agreed works, who they will use to do the works and what funding they require – the resulting bid is a simple dollar figure. This flexibility was the greatest advantage of River Tender. Tender-based schemes are competitive, and probity issues mean that the assistance that the funding body can provide is very limited. For larger projects, bid preparation can be very complicated and there is a risk of both under and over estimation.

Keywords

River restoration economics, landholder perspective

Introduction

The Dockers Plains Pastoral Company (DPPC) owns ~2900 hectares of Ovens River floodplain and Riverina Plains country downstream of Wangaratta in north-east Victoria. In early 2005 DPPC engaged Riparian Management Services (RMS) to prepare a property environmental plan. The commencement of this work coincided with the launch of the North East Catchment Management Authority’s (NECMA) River Tender funding scheme under which assistance was available for the management of remnant riparian vegetation. DPPC was successful in its bid for funds, and is currently implementing a comprehensive program of works aimed at enhancing the riparian vegetation on the Ovens River floodplain portion of the property.

The Ovens River floodplain country owned by DPPC includes ~660 hectares of remnant vegetation extending back across the floodplain from the right bank of the river. Reedy Creek is a major tributary of the Ovens and has its confluence with the Ovens on the property. The Ovens floodplain country is divided into 31 paddocks which are primarily used for the summer grazing of beef cattle (most of this country is inaccessible in winter). Included in this area are 16.5 km of Ovens River frontage (property boundary); 1.2 km of Ovens River anabranch; 16.8 km of Reedy Creek and 2.65 km of Reedy Creek anabranch. With the exception of the Ovens River boundary, the remaining channels are all contained within the property resulting in a total of 57.8 km of river/anabranch banks. In addition to this there are 60 wetlands on the floodplain, which, when measured along their longest axis, total some 17 km.
Environmental management issues on the Ovens River floodplain

Property environmental plan methodology
Prior to engaging in River Tender, the floodplain country held by DPPC was assessed as part of the property environmental planning process, using the following approach:

- Field inspections were carried out to identify the property’s environmental “assets” which were then mapped along with the existing property infrastructure. This was done so that any environmental works proposed could be integrated with the existing paddock layout.
- Likely trends in environmental asset condition under present management arrangements were estimated. Any threatening processes were identified along with other environmental issues.
- Future management actions aimed at maintaining and enhancing the condition of the identified environmental assets were then developed jointly between RMS, the property owner and the property manager. The primary focus here was to develop an environmental works program that was fully integrated into the operation of the wider farm business.

Environmental assets in the DPPC Ovens River floodplain country
The following key environmental assets were identified:

- Approximately 660ha of remnant and re-growth riparian vegetation that fell into three broad groups; (i) floodplain woodland parcels, (ii) linear remnants lining the banks of the various watercourses and (iii) wetlands.
- Aquatic habitat – channel zone. The array of different channel types on the property, (Ovens River and Reedy Creek main channel, Ovens River and Reedy Creek anabranch) provide a mosaic of channel habitat types.
- Aquatic habitat – wetlands. Sixty wetlands were identified on the floodplain. The wetlands on the property were divided into four simple groups; (i) Lagoons (wide more or less oval expanses of deep open water that only dry out occasionally), (ii) Billabongs (former channel meanders), (iii) Reedy Wetlands (wetland areas more or less completely dominated by emergent macrophytes) and (iv) Meadow Wetlands (shallow wetlands that fill briefly after heavy rain/flooding, but at which water plants dominate). Among these wetlands some were filled primarily from floods in the Reedy Creek system, others from floods in the Ovens, and still others from localised overland flow from the plains country above the floodplain. Different wetlands fill at different flood stages on both systems, thus it is possible to have wetlands overflowing along Reedy Creek (from localised thunderstorms in the headwaters of that system) while the Ovens fed wetlands remain completely dry.

In summary, the floodplain country held by DPPC has some of the most significant remnant River Red Gum woodlands and forests held under private ownership on the lower Ovens River floodplain. In addition to this the diversity of floodplain wetlands, both in terms of physical form and flow patterns, is enhanced due to the convergence of the two stream systems on this property.
Figure 1. Billabong wetland on the Ovens River floodplain. The diversity of wetlands on the DPPC property is greatly enhanced by the presence of the Reedy Creek tributary which crosses the Ovens floodplain from the south-east. Both systems have an array of wetlands associated with them but depending on localised rainfall conditions they may fill & dry out independently of each other, a fact that greatly enhances habitat diversity.

**Threats and other environmental issues**

The following key environmental threats were identified:

- Stock grazing and trampling, particularly where this was focused at sensitive areas e.g. the shallow, meadow wetlands and stock camps located on channel banks. (Within the floodplain country all stock water came from natural waterbodies).

- Weed diversity and density varied widely over the floodplain. Generally, the more fertile well drained natural levees along the main channels were the most weed infested, particularly with Blackberry (*Rubus fruticosus*) and Hawthorn (*Crataegus monogyna*). Elsewhere, the small understorey weedy shrub Jerusalem Cherry (*Solanum pseudocapsicum*) was becoming particularly widespread.

- Erosion issues recorded on the property included bank slumping and a developing meander cut-off on the Ovens River frontage and an active headcut in a gully system at the downstream end of a Reedy Creek flood channel.

- The leading edge of an active sediment slug within Reedy Creek was clearly identified on the property.
River Tender

(In this section River Tender is compared to more traditional natural resource funding schemes. The following symbols are used: ↑ = an improvement when compared to traditional funding schemes, ↔ = no real advantage/disadvantage, ↓ = a disadvantage when compared to traditional funding schemes).

River Tender is a tender-based funding program whereby applicants are free to nominate their price (bid) in order to carry out an agreed program of riparian vegetation protection works over a fixed period of time – five years in this case. At each site, vegetation condition is assessed by NECMA staff and given a numeric value which is then divided by the landholder’s bid amount. The resulting score is then put into a list of all the scores derived from all the applicants. The highest scoring site represents the best value for money (environmental gain/dollar) and this project is funded first, then the next highest score, and so on until the available funds are exhausted or a pre-determined cut-off point is reached.

Bid preparation

The floodplain country held by DPPC was assessed during April 2005 and a program of works agreed upon. Under River Tender it was now the responsibility of DPPC to develop their bid, i.e. how much funding did DPPC think they would require to carry out the agreed works?

↑ River Tender positive no. 1: Unlike traditional natural resource funding schemes that typically contain a list of eligible & ineligible activities, along with fixed rates for the eligible ones, River Tender was completely flexible – all that NECMA required from DPPC was a simple dollar figure to do the works. Additionally, there were no fixed requirements for matching contributions – each applicant decides what their own contribution will be. All other factors being equal, the larger the contribution made by the applicant, the more competitive their bid will be. This flexibility is the single greatest advantage of this type of scheme and one example will serve to illustrate this point.

Traditionally, weed control works have either been ineligible for funding, or only permissible if they formed a minor part of a larger project. The rationale for this has usually been that weed control is a landholder’s responsibility – which for some weeds declared under appropriate legislation is the case. But the remnants held by DPPC were also badly infested with an un-declared and generally unrecognised environmental weed. For many landholders, and particularly those with large bush remnants on their property, the limited funds they have available for weed control have to be prioritised – both in terms of the species that are addressed and in which areas weeds are tackled. Economic weeds in productive country usually take priority – because you’ve got to keep the farm business afloat first and foremost. Any remaining funds are usually allocated to declared weeds for which the landholder bears a legal responsibility. Undeclared environmental weeds, out of sheer economic necessity, often take last place (particularly where these occur in relatively unproductive and inaccessible county). In this regard, River Tender offered DPPC an opportunity to get on top of environmental weeds that would otherwise have probably been “let go”.

↓ River Tender negative no. 1: The environmental plan prepared for DPPC identified a range of issues across the whole property – but River Tender was only available for riparian vegetation management in the Ovens floodplain country. Other issues on the floodplain e.g. erosion control problems, and projects elsewhere on the property (including vegetation management), could not be included. From a landholder perspective this compartmentalisation of issues and location makes no sense – the landscape needs to be managed as a whole. A lot of time is wasted with multiple applications trying to implement one property environmental plan.

↓ River Tender negative no. 2: Because River Tender involves a competitive element, i.e. the decision as to how much to bid, NECMA were only able to provide limited assistance with bid preparation. This is in contrast to traditional funding schemes where agency natural resource management staff have often been available to help with both developing and pricing the works – and even writing the application! The detailed design and pricing of on-ground natural resource management projects can be very complicated and there is the risk under River Tender that this work is not done well – resulting in inaccurate bidding. When the bid is too small the landholder runs the risk of either having to contribute more then they intended or both parties (NECMA and landholder) accepting that the project has failed. Where the bid is too high, either a
worthwhile project may not be funded – or the landholder will end up making a profit, which is not really efficient use of public money!

DPPC got round this problem by employing a consultant (RMS) to do the bid preparation work and included part of this cost in their bid, but if the application had failed then this investment would have been lost. Many landholders are unlikely to take this risk – leading to the potential pitfalls outlined in the last paragraph.

↑ River Tender positive no. 2: Putting the difficulties with bid preparation etc aside, throwing the onus back on the applicant to prepare the budget and implement the works does ensure project ownership stays with the landholder.

↓ River Tender negative no. 3: For some project elements is it extremely difficult to get fixed-price quotes. A typical example is for large-scale weed control works, particularly where this involves difficult-to-access country as was the case for DPPC. In these cases, even the most reputable and experienced contractor (as was used by DPPC) can only guess how long the job will take. In these circumstances, it is more economically efficient to pay a daily rate and closely monitor progress than it is to ask for a fixed quote. If a fixed quote is insisted upon it will require the contractor to have a guess and then add a substantial percentage to cover the risk of time and chemical use over-runs.

↑ River Tender positive no. 3: The site assessment information and associated maps provided valuable information regarding the different vegetation communities found on the property and their current condition. This information would have been of value to DPPC whether their bid had succeeded or not.

In summary, the difficulties associated with bid preparation outlined here will tend to mean that the assumed cost-efficiencies of tender-based funding schemes may not be realised as many projects will either be under-funded or over-funded.

Implementation

DPPC submitted their bid on 25th May 2005 and within a month were notified that their bid had been accepted.

↑ River Tender positive no. 4: The speed with which the assessments/bid/notification process took place was a major advantage of River Tender.

↑ River Tender positive no. 5: The five year term of the River Tender management agreements (and flow of funds) better reflects the realities of many on ground natural resource projects – particularly those involving weed control where subsequent follow-up work is almost just as important as the initial assault.

↓ River Tender negative no. 4: The funds awarded under River Tender are provided as fixed sums issued as yearly instalments. DPPC found that the yearly allocations did not reflect the rate of expenditure on the ground. DPPC completed all of their agreed structural works (fencing and the installation of an off-stream watering system) by February 2006. In addition to this, the first round of weed control was also commenced. There is a danger, as was the case for DPPC, that the supply of funds dictates the pace at which works are carried out rather than on ground realities. This is likely to be a particular problem where participants are holding back their weed control works through lack of funds as this is likely to make the overall project less effective.

↔ River Tender comment no.1: Pricing on ground natural resource management projects should always involve risk assessment as such projects are notorious for cost over-runs associated with climatic conditions etc. While this is an issue for both the more traditional funding schemes and tender-based schemes, at least the latter provide the latitude for this to be properly factored in. For DPPC and RMS deciding the risk, and hence cost, associated with maintaining fencing in flood prone land (and under River Tender fencing is to be maintained for a period of ten years) and the possible difficulties with implementing a large scale weeding program in difficult terrain was a challenging task. In the event, the risk contingency allowed for has been barely sufficient even though at the time of bid preparation it seemed quite generous.
River Tender positive no. 6: The flexible nature of River Tender meant that including a budget allocation for project management was permissible. Many traditional funding schemes have in the past stipulated that applying for funding for project management was ineligible. Typically, this has been viewed as the applicant’s responsibility - be they an individual or a landcare group. While this may work for small scale projects, it has been a source of difficulty for larger and more complicated projects where already overstretched landholders or volunteer labour have either not had sufficient time or the required expertise.

Conclusion

River Tender has enabled DPPC to implement key elements of their property environmental plan much sooner than would have otherwise been the case. Some reasons for this are unique to tender-based funding schemes e.g. the landholder being able to nominate (bid) their unique price to carry out the agreed program of works. Other reasons, while present in River Tender, could equally be included in other well-designed incentive programs, e.g. flexibility in terms of the items and activities that are eligible for funding, a funding stream over five years etc.

Developing the bid proved to be the most troublesome part of the River Tender process, as obtaining fixed quotes for on-ground NRM projects is often not possible. Allowing for the risk associated with such projects was also problematic e.g. during the term of our management agreement, how much should we include for having to re-build flood damaged fences? Overall, participating in River Tender has been a positive experience.