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Public acceptance of plantation forestry: Implications for policy and practice in Australian rural landscape

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ABSTRACT

Plantations are expanding in many parts of the world, often accompanied by public debate. If policy makers and plantation managers seek to better align land use policy with social values and to reduce social conflict, they require a clear understanding of public expectations of land use, and the kinds of plantations that are socially acceptable. This paper presents results of a large postal survey ($n = 2167$) conducted in two regions of southern Australia. Residents of Tasmania and southwest Western Australia reported their acceptance of a range of plantations characterised with regard to factors such as type of product, location and size of plantation and ownership. Participants also indicated their beliefs about the impacts of commercial eucalypt plantations. The results showed that participants generally prioritised public good outcomes over individual gains from rural land use, and tended to view plantations as providing more benefits for owners than positive outcomes for the environment or the broader community. Plantations were more acceptable when grown for timber rather than pulp, when planted in areas with good water availability and poorer soils, when planted on part of a property rather than a whole property, and when owned by an individual landholder rather than a plantation company. Results are interpreted to highlight the implications for plantation policy and management in the Australian context, and to illustrate how social research can inform these practices.

Plantations are expanding in many rural areas worldwide (Mercer and Underwood, 2002; FAO (Food and Agriculture Organization of the United Nations), 2010; Nijnik and Mather, 2008), often accompanied by social conflict and debate (Schirmer, 2007). Understanding public acceptance of land use change is an important aspect of resolving such conflict and developing effective land use planning and policy (Howe et al., 2005). A number of studies have explored social acceptance of plantations or afforestation (Carroll et al., 2011; Elands and Wiersum, 2001; Selby and Petajisto, 1995; Williams, 2011), but relatively few use large scale quantitative data sets. Many discussions of the implications of social analysis for policy and practice have therefore been based on small scale qualitative studies (Mercer and Underwood, 2002; Schirmer, 2000). Where policy discussion is based on survey research, it has almost exclusively been conducted in the context of European rural land use policy (Elands and Wiersum, 2001; Selby and Petajisto, 1995). There is a need to explore these issues and policy implications in other contexts and based on a broader range of information. This paper contributes new understanding by examining recent survey findings regarding public acceptance of plantations in the more market-oriented, less protectionist context of rural Australia (Bjørkhaug and Richards, 2008). It identifies public expectations of rural land use and the acceptability of different kinds of plantations in that context, highlighting implications for policy and planning in an Australian context.

Plantations have expanded rapidly in Australia since the 1990s (Dargavel, 1995; Mercer and Underwood, 2002). In contrast with much European reafforestation, these plantations are primarily single species. Prior to 1990 most new plantations were of introduced pines (most commonly *Pinus radiata*) grown for timber production. Since the mid 1990s, there has been a rapid increase in native eucalypt plantations (mainly *Eucalyptus globulus* and *Eucalyptus nitens* species). Some of these plantations have been grown for timber, but the larger proportion have been established for pulp and paper production (Schirmer, 2009a,b) and grown as short rotation tree crops of 10–15 years. Plantations established since the 1990s have predominantly been established on rural land previously used for traditional agricultural production such as grazing. Often plantations have been established on land purchased by a plantation company for that purpose, involving shifts from traditional

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family farming to corporate ownership, and from traditional to non-traditional rural land uses (Barlow and Cocklin, 2003; Williams et al., 2003).

Background

A number of studies internationally have demonstrated relatively low support for plantations (Carroll et al., 2011; Mercer and Underwood, 2002; O'Leary et al., 2000; Selby and Petajisto, 1995; Spencer and Jellinek, 1995; Williams, 2011). This paper particularly builds on work that compared acceptability of plantations with other traditional and non-traditional rural land use changes occurring in southern Australia (Williams, 2011). Based on large scale surveys of residents of two regions (Tasmania and southwest Western Australia), Williams (2011) demonstrated that three forms of plantations (eucalypt plantations grown for pulp and paper, eucalypt plantations grown for timber, and pine plantations grown for timber) were all significantly less acceptable than all forms of traditional agriculture (e.g. dairying and cropping) and also less acceptable than the more controversial and new land use of wind farms. Only rural residential development was viewed by many as less acceptable than the three forms of plantations. Effective interpretation and application of these findings requires attention to two key matters: first, an understanding of the nature of acceptability judgements and the factors that influence these; second, clear attention to the policy context in which acceptability judgments are made.

Understanding public acceptance

Public acceptance is only one of many considerations in developing land use policy, but plays an important role. Public acceptance must be placed in the context of broader social acceptability, recognising that social acceptability also depends on acceptance by local communities and key stakeholders, as well as market acceptance of plantation and alternative products (Wustenhagen et al., 2007). Furthermore, social acceptability is only one consideration in successful policy, which also depends on ecological soundness and economic feasibility (Firey, 1960) among other factors. However, within this complexity, it remains certain that public acceptance has a clear influence on the success of plantations, particularly through public lobbying both for and against plantations (Howe et al., 2005). Understanding the extent and nature of opposition and support to plantations can therefore provide important guidance for policy makers and land managers (Williams, 2011).

Individual people's judgements of the acceptability of land use and management are complex. These are understood to be based on a process of comparison between two or more options, drawing on values and existing beliefs (Brunson, 1996; Ford et al., 2009b), influenced by information (Ford et al., 2009a), and dependent on context and trust in relevant agencies (Stankey and Shindler, 2006). While recognising this complexity, it is nevertheless often appropriate for policy makers and land managers to focus on the aggregate of many individual judgements of acceptability. Well designed social surveys can quantify the overall public acceptance of land use and management, and so define with some precision the level and nature of acceptance and opposition, and the diversity of opinion.

Plantation policy in Australia

There have been few attempts to clarify the policy implications of detailed quantitative analysis of public acceptance of plantations, and these have primarily been undertaken in a European context (Selby and Petajisto, 1995). Sociological and political analysis has highlighted the striking differences in rural land use policy and norms in Australia and Europe (Bjørkhaug and Richards, 2008). The past twenty years of Australian government policy has been characterised as neo-liberal, emphasising the rationality of market-rule, and rejecting many forms of state interventions common in Europe such as subsidies to protect traditional agriculture (Bennett et al., 2004; Hamblin, 2009). Individual property rights have often been seen as absolute (Lockie et al., 2006). Furthermore, while policy analysis and landholder surveys in European nations such as Norway suggest the ideals of agricultural multifunctionality have been broadly embraced, comparative analysis suggests commitment in Australia is not as widespread (Bjørkhaug and Richards, 2008). It is therefore important to give consideration to the implications of public acceptance of plantations for rural land use policy in Australia and other more market-oriented rural economies.

In line with broader agricultural policy, plantation expansion in Australia since the 1990s has been significantly driven by global market forces and by federal market-based interventions. One important factor has been a strategic partnership between the federal government and the national forest industry which aimed to 'enhance regional wealth creation and international competitiveness through a sustainable increase in Australia's plantation resources, based on a notional target of trebling the area of commercial tree crops by 2020′ (Plantations 2020, 2002, p.1). This programme led to a range of strategies to encourage plantations, most notably the use of Managed Investment Schemes (MIS) to encourage plantation investment (Mercer and Underwood, 2002). MIS are a form of Collective Investment Scheme in which funds from multiple investors are pooled, and benefits distributed pro-rata to level of investment. A scheme manager establishes and promotes the scheme, and oversees everyday decisions regarding the funds (Brown et al., 2010). In Australia, a number of plantation companies were established using business models that depended heavily on establishing multiple MIS. While successfully encouraging a rapid expansion of plantations in rural Australia, the fairness of these schemes has been debated since their inception (Mercer and Underwood, 2002; O'Toole and Keneley, 2010). Public concerns have often focussed on the potential for MIS to encourage investment with no realistic expectation of timber production, as well as concerns about unequal treatment of plantation and other forms of agriculture (O'Toole and Keneley, 2010). Financial analysts have raised issues of governance and scope for investors to influence managers when investment is 'locked in' for the life of the scheme (Parliamentary Joint Committee on Corporations and Financial Services, 2009). In 2007 these concerns led to revisions of taxation laws governing MIS, for example allowing investors to trade out after four years. However the collapse of several MIS based companies in 2009 points to continuing concerns regarding market distortions associated with MIS (Brown et al., 2010).

National principles on plantations discourage government constraints on plantations. From a federal perspective, plantations are considered an 'as of right' land use, which should not be subjected to any restrictions that do not apply to other agricultural activities (Australian Government Department of Agriculture Fisheries and Forestry, undated). Public concerns that plantations require greater regulation have often been countered with the assertion that plantations are 'just another crop' (Courtney, 2000). However, since land use planning is primarily a state government (rather than federal) responsibility, this principle is interpreted and applied differently across different parts of Australia. Some local government areas require council approval before plantations are established, others do not. In a similar way, while the national principles assert that social and environmental impacts and benefits of plantations should be taken into consideration in planning, this is envisaged as primarily occurring at a State and local government planning level (Australian Government Department of Agriculture Fisheries and Forestry, undated). Local responses are notably diverse.