From Productivism to Multi-functionality in the Gascoyne–Murchison Rangelands of Western Australia.

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Running Title. Land use transition in the Gascoyne-Murchison rangelands

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Abstract. A sustainability assessment of the Western Australian (WA) rangelands identified a range of issues associated with regional economic decline typical of many marginal rangeland regions in Australia. As part of a regional rejuvenation strategy, the WA state government purchased selected pastoral lease properties for incorporation into the conservation estate. It was intended as a means of land use transition from monofunctional productivism to multi-functionality incorporating protection of significant rangeland bioregions and development of tourism.

A one year project was conducted to assess the issues relating to this transition. Archived information was obtained from government relating to the characteristics of the lease properties at the time they were purchased. Site visits were undertaken to purchased leases acquired by the government as well as neighbouring leases. During site visits, interviews with pastoralists and purchased lease managers were conducted. A series of facilitated community discussion groups in the region was held to ascertain the views of
landholders and managers, government representatives, indigenous interests and commercial
operators in the region.

This paper describes how the transition to a combination of protection and consumption
exchanged one set of problems for another. This was due partly to the intrinsic character of
the land, in terms of previous over grazing, isolation, large distances, and limited
infrastructure and services. More importantly, the top down approach to land transition failed
to allocate adequate management resources to replace those lost when the former pastoral
leaseholders left. The consequences of inadequate management included theft and rapid
degradation of assets, inadequate control of pests and weeds; inadequate fire prevention
management and poor communication between the government and other stakeholders over
management decisions. This paper discusses the dynamics of this WA rangeland transition
with reference to the multi-functional rural transition concept.

Additional keywords: Land use, rural transition, protection, tourism, management.

Introduction

This paper documents issues in the transitioning of land use from mono-functional
productivism to multifunctional conservation and consumption in remote rangeland areas.
Changing economic and social circumstances in many rangeland regions have resulted in a
decline in the viability of pastoralism as an economic activity (Holmes 1996; MacLeod and
McIvor 2006). Some underlying factors contributing to this decline include relatively low
productivity, unreliable climate, and complex multiple land use issues (Holmes and Knight
1994; Williams and Thomas 2005; Holmes 2006). In view of this, MacLeod and McIvor
(2006) contend there is an urgent need to implement sustainable resource management
regimes for the Australian rangelands in order to establish a balance between economic and
ecological imperatives. Change in land use practices and in the generation of new or more diversified economic opportunities are considered necessary in such circumstances to bring about regional recovery or even to ensure local economic and ecological survival (Parr 1999).

Public acknowledgement of the need for such changes has been evidenced by the state government’s purchase of several pastoral lease properties in the interior Gascoyne-Murchison rangelands of Western Australia as part of a regional rejuvenation strategy. This strategy identified several key issues threatening the Gascoyne-Murchison region, including a decline in biodiversity and the need to broaden the hitherto productivist economic base (URS 2004). The acquisition of land was viewed by government as an opportunity to incorporate important bioregions into the conservation estate and to develop tourism as a means of revitalising a traditionally low profile and economically depressed region. Interestingly, Holmes (2006) noted that the graziers in the Gascoyne-Murchison region were entrenched in a narrowly productivist pastoralist paradigm thereby creating significant cultural resistance to a shift to multi-functional land use. This paper presents a detailed consideration of the government land purchase strategy in the Gascoyne-Murchison region. The purchase was intended to diversify land use and thereby to improve local economic, social and environmental fortunes, through biodiversity conservation and the facilitation of tourism.

Given the government’s policy of change in land use to a more complex form, our frame of reference for this study is Holmes’ (2006) multifunctional rural transition concept. This concept postulates a trend in rural land use shifting from ‘mono-functional’ productivist activities (cropping and grazing) to a more complex and frequently multipurpose range of uses (Holmes 2006). The multifunctional transition in rural areas is considered by Holmes (2006) to be a product of shifts in societal values with greater emphasis now being placed on sustainable resource management, biodiversity conservation and landscape protection and
indigenous land rights. Holmes identifies seven modes of land occupation based on varying emphases and combinations of land uses (Table 1).

While the agricultural productivist mode is included, the remaining six modes describe a transition from a less viable ‘mono-functional’ and productivist form of land use to other modes in which production is either combined with consumption and/or protection or is absent altogether (Holmes 2006). While contested land uses do occur in areas with high production values, Holmes noted that in remote Australia there is generally a spatial separation between land which is optimal for production and that which is desired for consumption. This reduces, to some extent, the likelihood of contestations between these different modes of land use in remote regions. The government purchase of the pastoral leases in the Gascoyne–Murchison region of WA was primarily for biodiversity conservation which therefore represents a transition from productivism to the “Conservation occupance” mode identified by Holmes (2006, p149) However, while nature conservation provided the primary motivation for the resumption of these leases, the official acknowledgement of the importance of these areas for indigenous uses and tourism reflects the complexities inherent in the multifunctional rural transition framework.

According to Holmes and Knight (1994), the leasehold arrangements characteristic of the rangelands afford the state greater influence in determining how land is used, as compared to the freehold tenures of more densely settled regions. Lease conditions and associated powers to resume land provide mechanisms whereby the state can readily intervene in land use practices. However, state intervention does not always generate desirable results. Holmes (2002) noted the example of pastoral lease subdivision. This
exercise was intended to encourage closer settlement and increase population density in remote rangeland areas. That is, it was intended to intensify agricultural production rather than facilitate a move to multifunctionality. This former policy unfortunately resulted in unviably small properties and subsequent severe economic and environmental stress in certain rangeland regions. Conversely, O’Grady (2004) argued that pastoralists have historically practiced sustainable management of their leases owing to a need to adapt to the harsh conditions. This meant balancing grazing with conservation of grassland ecology to ensure an ongoing income out of necessity for survival. However, this stance belies the documented environmental degradation and loss of productivity in the rangelands of the Gascoyne-Murchison region of WA (Southern Rangelands Advisory Group 2009). The rangelands include a substantial proportion of submarginal pastoral land that is increasingly surplus to production requirements, yet even here there are still significant social, cultural, political, institutional and financial barriers to transition (Holmes 2006). O’Grady’s (2004) thesis, based primarily on the views of pastoralists, emphasised the view that state intervention in pastoral lease management was usually misguided and unwelcome. A separate survey of the pastoralists about the changes in land use in the Gascoyne-Murchison demonstrated a lack of awareness about the connection between ecological management and pastoral practices (URS 2004). Thus, these negative perceptions may be more a reflection of past government policy and the entrenched productivist pastoralist mentality described by Holmes (2006) rather than of any concern for effective land management and conservation.

The current strategy in the Gascoyne-Murchison region represents a fundamental shift in government policy away from the traditional stance of productivism toward a version of multifunctionality that includes tourism and conservation. Holmes (2006) identified tourism as one diversification alternative based on the amenity associated with conservation and protection of selected rangeland locations. Fargher et al (2003) stated that tourism in the
Australian rangelands is often perceived as an attractive alternative economic activity to pastoralism. Woinarski and Fisher (2003) noted that tourism in the rangelands can generate significantly greater economic returns than does pastoralism. This is evident in GDP figures published for the mid 1990s when pastoralism represented 0.2% of Australian GDP while rangeland tourism represented 0.4% and rangeland mining 2.6% (CIE 1997; Holmes 2002). More recent figures revealed that mining production (AU$1.34 billion) and tourism (AU$172 million) were the two most valuable activities while agriculture (including a range of activities as well as pastoralism) had significantly less value at AU$62 million (Rangelands Australia 2008). While grazing is the most geographically widespread activity, its GDP contribution is comparatively small. To place this in perspective, at the beginning of the 20th century rangeland pastoralism contributed approximately 18% of national GDP, though its importance declined significantly thereafter. However, the considerable diversity of environments, landscapes and amenities means that production, consumption and conservation potentials can vary considerably across and even within rangeland regions, with grazing capacity, natural beauty and ready access from large regional centres being important variables in this regard (CIE 2000).

Carson and Taylor (2008) noted that rangeland areas with a diversity of natural and cultural experiences are more likely to attract tourists and to benefit from tourism. The benefits of successful tourism development for regional economies are well recognised (Dwyer et al. 2004). In terms of tourism, however, the success of any form of transition relies on specific characteristics that encourage and facilitate tourist visitation (Crouch and Ritchie 1999). A region seeking to encourage tourism, and to receive its apparent benefits, requires both a clearly defined point of entry and a selection of tourism focal points that people want to access (Leiper 1990). This is especially so in those more isolated regions of the Australian rangelands where access requires considerable effort and expense on the part
of the visitor. Establishing a tourism component in a local economy could be achieved through promotion of its existing assets as distinctive and unique or, through building or development of new places or experiences (Seaton 1999; Hsu et al. 2004). For example, the unique biodiversity evident in rangeland regions might function as a focal point for tourism (Woinarski and Fisher 2003) though in rangeland areas the unpredictable nature of their appearance (e.g. wildflowers after rain) may present a challenge. Although a rangeland area might have distinctive characteristics, remote regional locations frequently experience difficulties in marketing, development and/or in motivating tourists to visit owing to their limited resources, minimal tourism-related infrastructure and scant services (Hughes and Macbeth 2005a). Small resident and business populations often also limit the pool of skills and knowledge available for effective development of tourism. Ironically, these are the very factors that form the basis for social and economic depression and motivate communities to look to tourism as a saviour in the first place (Knowd 2001; Hughes and Macbeth 2005b).

Holmes’ (2006, p155) discussion of the multifunctional rural transition concept points to the potential for significant rural change in Australia’s rangelands. This is because of both a lack of “entrenched investment of human resources” and the leasehold nature of land tenure. However, the extent of this potential may need to be tempered by his observation regarding resistance to transition in the Gascoyne-Murchison rangelands owing to the determination of many local lease holders to continue their pastoralist way of life. There are also a range of other barriers to change relating to geography, infrastructure, management, politics and socio-cultural issues. This paper presents some findings from a one year project focussed on identifying the tourism potential of a group of Western Australian rangeland pastoral leases purchased by the state government for the purposes of biodiversity conservation combined with tourism (Smith et al. 2008). While the land was primarily purchased for biodiversity conservation, development of tourism was perceived as a means of adding value to the
acquisitions and contributing to the local economy. This paper details the dynamics of this transition process in terms of the issues and difficulties in transitioning land use from mono-functional productivist to multifunctional protection and consumption in remote rangeland areas.

Regional Background

The study area included the interior rangelands within the Gascoyne and Murchison regions of Western Australia (Fig. 1). This area is characterised by a combination of expansive, rugged isolated landscapes, distinctive geological formations and rich indigenous and colonial heritage. The climate is generally arid to semi-arid with, little rain and high average temperatures and the study area is characterised by scrubby vegetation. The Gascoyne region covers an area of 137,938 km² with a 2007 resident population of approximately 9,560 largely concentrated in the coastal areas. The interior is sparsely populated and experiences greater extremes of temperature. The Murchison Region covers an area of 472,366 km² with a resident population of approximately 51,000 close to three quarters of whom live in and around the coastal regional centre of Geraldton. The remainder of the residential population is located in various towns scattered along the coast and the better watered parts of the interior. The coastal areas of the Murchison experience a mild Mediterranean climate while the interior experiences semi-arid to arid conditions with extremes of temperature and little rainfall. The main economic activities of the region and their associated annual values are summarised in Fig. 2. Although pastoral leases occupy the greatest land area in these regions, grazing provides a relatively small contribution to the regional economies.
The GMS and pastoral lease purchases

A sustainability assessment of the Western Australian rangeland regions between 1998 and 2005 identified a range of issues relating to the dominance of mono-functional productivist land use. This assessment culminated in the Gascoyne-Murchison Strategy (GMS) that recognised the need for biodiversity conservation and an expansion of the economic base of the region among its other recommendations. This represents an official recognition of the need for a transition to multifunctional land use. One outcome of the strategy was the provision of funding for the state government conservation agency to purchase pastoral leases. The WA Department of Environment and Conservation (DEC) purchased selected land systems (18 whole properties and 19 part properties totalling 3,916,244 ha) across the interior Gascoyne-Murchison regions from 1999 to 2004 (shown by the grey shading on Fig. 1). The primary purpose of this exercise was to establish a more comprehensive, adequate and representative reserve system. In addition, tourism was viewed as a means of adding value to the resumed properties and of contributing to the economic and social wellbeing of local communities. A review of the Gascoyne-Murchison Strategy noted that, while the purchases added significantly to biodiversity conservation estate, most of the leases sold to DEC had poor land condition (URS 2004). The Gascoyne-Murchison pastoral lease purchases and the shift from grazing to conservation were followed by an exodus of resident pastoral lease managers and their families.

Tourism Activity

Tourism activity in the region grew with the sealing of the road from Geraldton to Carnarvon in the 1960s. Tourists travelled mainly to the coast and to certain towns while some pastoral
stations were granted special leases to run station stays (O'Grady 2004). Currently, tourism is still concentrated along the coast, particularly in the Kalbarri, Shark Bay and Ningaloo Reef areas (Fig. 3). Statistics for the coastal areas indicate visitation rates of approximately 110,000 tourists annually while the inland regions were estimated to host about 4,000 to 6,000 per year. These are mostly Western Australian self drive tourists with visitation to the inland regions being highly seasonal (Smith et al. 2008). Thus, the significance of tourism demonstrated by the dollar values in Fig. 2 relate mainly to coastal localities, and not to tourism to the inland regions. The concentration of visitors on the coast is a result of easier road and air access, significantly more tourism related development, the desirability of marine and coastal areas as tourism destinations and the presence of iconic focal points in coastal regions (including Kalbarri, Ningaloo Reef, Monkey Mia and Coral Bay).

Apart from the expansive arid landscapes and the isolation, the primary focal points for tourism in the Gascoyne interior consist of Mount Augustus (Burringurrah) and the Kennedy Range (Fig. 1). The pastoral leases purchased in the Gascoyne are mainly clustered around these two tourism focal points. Mount Augustus is 490 km east from the coastal regional centre of Carnarvon and 360 km northwest from the interior centre of Meekatharra. The vast majority of the access roads are unsealed and are subject to flooding and unpredictable closures during rain events. Mount Augustus is essentially a large limestone monolith abruptly projecting 717 m above a stony plain of arid shrub land. The rock is obscured somewhat by the presence of soil and vegetation, giving the impression of a conventional mountain. The Kennedy Range is a slightly more accessible attraction about 150 km east of Carnarvon, near the hamlet of Gascoyne Junction. It is an eroded plateau extending for
roughly 195 km in a north-south direction. The southern and eastern sides of the range have eroded to form cliffs, rising to 100 m. These are dissected by steep-sided canyons. The top of the range comprises an expansive plateau of dune fields sloping westward toward the coast.

The Murchison pastoral lease purchases were clustered around areas of ecological significance as a means of improving the representation of rangeland bioregions in the conservation estate. There are no large, distinctive geological landmarks as with the Gascoyne property clusters. The Murchison’s interior presents a relatively more agrarian landscape with year-round sealed road access and a number of small population centres.

While roads on the pastoral leases are unsealed, access for tourists is relatively easier. Primary points of tourism focus in the interior rangelands include seasonal wildflowers and numerous indigenous and colonial cultural heritage sites. The interior region also has geographical features of interest such as salt lakes, granite outcrops, ridges and breakaways. Much of the area is covered by mining leases that take precedence over pastoral lease status should mining prove to be feasible.

As part of the Gascoyne-Murchison Strategy, and in an effort to build on tourism in the interior, a number of self-drive touring routes were developed. These include recommended itineraries in published material as well as formally signposted and interpreted self-drive routes. The self-drive routes commence in regional coastal centres and were designed to encourage tourism to move away from the popular coastal areas and experience the interior rangeland regions. Recommended itineraries include routes marked on maps for viewing wildflowers. The Outback Pathways self-drive trails represent an example of a specifically marked and signposted drive trail network across the Gascoyne-Murchison regions (Fig. 3). They include a number of drive trails relating to different aspects of regional heritage including the ‘Miners Pathway’, ‘Wool Wagon Pathway’ and ‘Kingsford Smith Pathway’.

Despite the difficulties in evaluation and the absence of detailed data relating to their impacts
on tourism numbers, such drive trails seem to be a popular focus for development of tourism in regional areas (Hardy 2003).

Methods

This paper details the dynamics of the rural transition process in terms of the issues and difficulties in transitioning from mono-functional productivist to multifunctional protection and consumption land uses in remote rangeland areas. Information was gathered using various means including the examination of archival records, interviews with station managers and community workshops in the regions. Initial information was gathered from files in the DEC Perth central office archives relating to the purchase of the properties. Any information indicating infrastructure, biophysical characteristics and social or cultural values was photocopied and filed. The archived information provided a foundation for a tourism related asset inventory of the stations. Further information was sourced from a review of documents relating to the stations, including DEC reports, WA Museum records and Tourism WA visitor data. Information was also gathered through discussions with DEC headquarters and regional staff and a review of the tourism literature. Subsequently, a draft inventory table was constructed detailing the likely tourism assets on each property. A review of the probable market demand for tourism on the rangelands and the types of experiences that such tourists may seek was based on existing tourism data for Western Australia. This information formed the basis for the stakeholder workshop discussions.

Community workshops were held in the regional centres of Carnarvon and Geraldton between May and August 2005. The workshops focused on the pastoral properties, their management and potential for tourism. Two stakeholder meetings were conducted at each centre, one involving primarily non-Aboriginal representatives and a second exclusively for Aboriginal representatives. Attendees were invited through the Gascoyne and Murchison
Development Commissions and included local and state government representatives from various tourism and land management related agencies, tourism operators and pastoral lease holders. The mainly non-Aboriginal workshops had about 20 attendees at each of the Geraldton and Carnarvon meetings. Exclusively Aboriginal stakeholders’ meetings were conducted for cultural reasons, to ensure that the indigenous representatives felt able to express their opinions freely. Invitees were identified and invited with the assistance of the Yamatji Land and Sea Council. Native title claimants, traditional owners and spokespersons associated with purchased pastoral lease areas attended the meetings. About 10 people attended each of the Aboriginal meetings in Carnarvon and Geraldton. The meetings were not intended as a forum for discussion of specific details regarding tourism development opportunities. Rather, they were a forum for the various interested parties to gather and share general ideas in relation to tourism and the management of the purchased rangeland properties. Workshops were facilitated by the researchers.

The researchers visited the resumed property leases to interview a total of seven resident managers and to gain a first hand view of lease land condition and layout. New managers of DEC purchased properties and incumbent managers of pastoral properties were interviewed on a conversational basis regarding their opinions on the potential for tourism in the region and on current land management issues. Occupied leases purchased in full by DEC were characteristically supervised by managers engaged after resumption of the lease. Where fully purchased leases were clustered, the single manager engaged for the whole cluster was interviewed (for example the cluster of Lochada, Karara and Warriedar pastoral leases were managed by a single couple occupying Karara). Where part (and hence unoccupied) leases were purchased, the managers of the neighbouring unpurchased components of the leases were interviewed. These tended to be the incumbent pastoral lease managers, often from families resident on the land for several generations.
During trips to the regions, information was collected at the DEC offices in Carnarvon and Geraldton primarily relating to the location and layout of the stations. This included maps of geology, topography and vegetation as well as sites identified either by DEC officers or station managers that had particular scenic or other tourism related values. Properties in the Gascoyne region were visited in conjunction with the stakeholder workshops in Carnarvon. Properties in the Murchison were visited in conjunction with the workshops in Geraldton. A three day driving tour out of Carnarvon was undertaken during which Gascoyne region properties adjacent to the Kennedy Ranges and Mount Augustus were visited. On site interviews were held with the single person engaged to manage Cobra station near Mount Augustus as well as the then manager of the Mount Augustus ‘Resort’. Three current pastoral lease holders adjacent to part lease purchased near the Kennedy Range were interviewed during this trip. The Murchison Properties were visited on a drive trip over five days including the Lochada, Warriedar, Karara group and the Yuin, Pimbee, Narloo group. This included interviews with one manager engaged by DEC to manage the Lochada group and one incumbent pastoral lease holder adjacent to Narloo. Tours of the stations were conducted independently with managers providing some information and ‘mud maps’ as a guide to points of interest. The Lochada group managers offered a guided tour of the properties including points of interest and significant cultural sites. Doolgunna and Mooloogool, near Meekatharra, were visited separately with a guided tour of the points of interest being provided by the DEC officer responsible for management of these properties.

Extensive notes from workshops, discussions with managers and site visits were made together with a comprehensive digital image record. Site visits provided data that were not available in archival or current records or literature. All information was collated and manually analysed, extracting common themes and issues across the properties and regions. This paper focuses on the issues raised concerning the management of those remote and
dispersed purchased pastoral leases which were intended to undergo transition from a pastoral
occupation mode to a conservation occupance mode with tourism related activities.

Findings

As a means of driving multifunctional rural transition, the purchase of the Gascoyne–Murchison pastoral lease properties represents a top down approach. The purchased rangeland properties are ideally in the process of conversion from marginal pastoralism to a combination of mainly protection and tourism consumption centred land uses. This correlates with Holmes’ (2006) transition from ‘Marginalised Pastoral Occupance’ to the ‘Conservation Occupance’ mode. The primary drivers of the transition were the decline in the agricultural production value of the land and an increased awareness by regional and state governments of ecological protection values in need of better representation in the conservation estate. A consumption-based economic imperative was also present based on the development of tourism on the purchased properties as a means of economic diversification for the region. Interestingly, a survey of the Gascoyne-Murchison rangeland community indicated most attention was focussed on related GMS programs aimed at improving efficiency of production (URS 2004). There seemed to be relatively less local community attention paid to the protection and tourism consumption elements of the strategy. This contrasts with the description of driving forces for transition to this mode that include a growing awareness of the need for conservation and a demand for experiences in ‘pristine’ landscapes (Holmes 2006, p149). This suggests a gap between the objectives of the top down transition process and the bottom up community perceptions of issues in the region.

With this in mind, a major finding of this study was that this shift from production to a combination of protection and consumption has arguably exchanged one set of problems for another. Declining returns on pastoralism, combined with declining productivity of the land,
prompted the government sponsored transition in an attempt to alleviate the problems
associated with mono-functionality (Holmes and Knight 1994; Williams and Thomas 2005;
Holmes 2006; MacLeod and McIvor 2006). While mono-functional productivism on these
properties seemed to face insurmountable problems, the multifunctional rural transition has
seen new issues and problems arise and these will now need to be overcome if the
multifunctional transition is to succeed. The following sections describe and discuss the
main issues that emerged from the community workshops, the interviews with stakeholders
and the site visits.

Remoteness and management
Holmes (2006) noted that transition to the Conservation Occupancy Mode was driven by an
awareness of environmental stresses and endangered ecosystems that required management
for their remediation and protection respectively. With reference to the decline in land
condition, the Southern Rangelands Pastoral Advisory Group report (2009) noted a trend in
the rangelands toward a reduced pastoralists’ management presence on larger parcels of land.
They considered that this was contributing to problems with effective management in relation
to fences, fire, weeds and pests. Indeed, the primary purpose of the government land
acquisition was to improve the representation of rangelands in the conservation estate and to
protect significant bioregions (URS 2004; Smith et al. 2008). The subsequent pastoral lease
resumptions resulted in DEC assuming direct management responsibility for a large, remote
and fragmented area of land even though the department had limited budgets, staff and
resources. This issue of management was exacerbated by the departure of many of the
former lease holders who had previously been engaged in pastoralism on the properties. So,
while this mode of multi-functional rural transition may have been driven by a recognition of
the need for land protection, there appears to have been a gap between the resources required
and the resources assigned to facilitate the transition of the Gascoyne-Murchison rangelands. Thus there is an irony in the purchase intended to improve land condition resulting in a decline in management effectiveness due to the failure to replace the management capacity that was lost when the pastoralists sold back their leases and left.

Observations during visits to properties revealed some of the consequences of inadequate management presence such as asset theft, damage and degradation. Facilities and equipment abandoned on some properties were often stolen if not sold or relocated to homesteads with a DEC management presence. One manager commented that an entire machine shed had “disappeared” from one of the properties. Theft of this item would have required considerable time and effort. However, the size of the properties and their associated isolation, combined with minimal management presence, indirectly facilitated the theft. The harsh environmental conditions also took their toll. Some facilities, such as homesteads and exposed equipment rapidly deteriorated over several months simply through lack of tenants to conduct daily maintenance. Thus the purchase of the leases resulted in difficulties in managing the maintenance of assets and this was indicative of broader management issues.

The information gathered during this study complements a survey of neighbouring lessees conducted by DEC in 2006 (DEC 2007). Less than half of those who responded were satisfied overall with DEC as a neighbour. Those surveyed in the rangeland regions were significantly less positive than those in other regions such as the southwest (Pastoral Lands Board 2008). The responses indicated a range of management problems and concerns associated with the reduced management presence resulting from the acquisition of former pastoral leases by DEC. As revealed by the researchers’ site visits, the main issues included a lack of maintenance of infrastructure, but also fire management, fence upkeep, control of weeds and control of animal pests. As discussed later in this paper, the DEC
Thus, while the land acquisition was intended as part of a transition to a conservation occupancy mode of land use, the government purchase of these rangeland properties resulted in a decline in management capacity and in subsequent reduced capacity for effective land management. Remoteness and reduced management resources often meant that problems, such as wild dogs, weeds and fire management, were not restricted to DEC owned properties but spilled over into neighbouring pastoral leases. This appears to add support to the comments of Holmes (2002) and O’Grady (2004) in relation to the inefficiencies of state management where limited resources, large distances and isolation are in play. However, it counters Holmes’ (2006, p155) comment that the land acquisition and use transition approach in the Gascoyne-Murchison region represents a shift away from unsustainable productivism toward sustainable multifunctional outcomes. Rather, it demonstrates the difficulties in central management of rapid land use transition dispersed over large remote geographical areas with insufficient allocation of resources to replace the former mode of land use.

Community Engagement

From the DEC management perspective, the mix of interest groups connected with these rangeland properties presented considerable challenges. Communication of management issues or decisions to the relevant stakeholders proved to be a complex and time consuming task, which was further inhibited by the limited staff and resources locally available to DEC. Comments throughout the community workshops underlined the need for clear lines of communication between various government departments, representative organisations and individuals at both the informal and formal levels. Difficulties with communication were also evident in the ‘DEC Neighbour’ survey (2007). This perhaps is of particular importance to
the Aboriginal stakeholders who are primarily interested in access to traditional country and cultural involvement in many aspects of management decision making. Problems with communication between DEC as managers and the other stakeholders (indigenous, neighbouring property holders) have caused tensions. A significant example occurred in relation to mass bore closures. After purchasing the leases, DEC adopted a policy of closing most bores in order to control feral goat numbers. It was noted in one stakeholders’ meeting that some of the local inhabitants were unaware of DEC’s bore closure policy until they discovered that the nearest bore had been closed when they were attempting to access water after a vehicle breakdown in an isolated location on one of the purchased properties. This represents a significant safety issue where potentially vital resources for survival become no longer available without notice. This example illustrates the difficulties in managing land use changes in large and remote areas with limited resources and between multiple interest groups. It also demonstrates the importance of ensuring that the community is aware and supportive of any land use changes being made on such a large scale.

The resumption of these properties and their eventual conversion from Crown leasehold to conservation reserve significantly increases their public accessibility. Access to Crown leasehold land, beyond public roads, is at the pastoral lease holder’s discretion. As on privately owned land, permission is required to access the land for any reason. The purchase of the properties and their eventual shift to the conservation estate has placed the land in the public domain under the management of DEC. While this creates management challenges, it also has attracted the interest of traditional owners wanting access to the land for cultural practices and having an interest in joint management. This circumstance demonstrates a positive aspect of government driven multifunctional transition. Land once ‘locked up’ as mono-functional crown leasehold for the primary use of pastoralists has been moved into the public domain. Consequently, although there may be a socio-cultural cost in terms of the loss
of pastoralist lifestyles, the primary motivations of conservation and tourism also present opportunities for rekindled cultural practices and associated social benefits (Jones et al. 2007).

Tourism development

Holmes (2006, p149) noted that the transition to a Conservation Occupance mode of land use could tap into “increased demand” for “pristine” nature based and ecotourism experiences. The local combination of expansive landscapes, distinctive geological formations and indigenous and colonial heritage can combine to form a unique tourism product. The uniqueness of the outback and the distinctive experiences it can offer are seen as two factors that can function to create an attractive tourism package for adventure travellers (Carson and Taylor 2008). Tourism can tap into these resources and translate them into local economic and social benefits (Dwyer et al. 2004). That is, tourists visiting a region for its scenic and cultural values can potentially bring revenue to the region in the form of local expenditure on fuel, accommodation and food among other things. Follow-on benefits can also include employment opportunities and the strengthening of cultural and social identity (Hughes and Macbeth 2005b; Knowd 2001). However, given the difficulties experienced with basic land management in the Gascoyne Murchison region, any plans for the development of tourism add another layer of complexity.

Holmes (2006) noted that a core attribute associated with rangeland land use transition in relation to tourism is a lack of public and private infrastructure. This observation was in line with the researchers’ observation of the inland Gascoyne-Murchison area. Feedback from the community workshops and interviews also highlighted the lack of tourism oriented infrastructure and services. Perhaps of most significance is the lack of quality accommodation across most of these rangeland properties, coupled with their isolation and
the high expense of construction and development. While existing infrastructure may be adequate in terms of providing a rustic outback experience, provision of a range of accommodation options, including higher end, well appointed facilities is more likely to attract more mainstream tourists (Hughes and Macbeth 2005b). For the inland Gascoyne-Murchison region, this requires significant investment in planning, management and development. Development of tourism infrastructure and responsible management of campers and other visitors in often rough and arid environments is required both for the safety of visitors and the minimisation of environmental impacts (Hall 1995; Brown et al. 2006). Unfortunately, the remoteness of the region means that there is a high capital cost for improvement of any of the properties while the extreme environmental conditions result in high maintenance costs. Similarly, the isolation means that provision of services of all types will also come at a higher cost to the tourist relative to the quality of the service received. In addition, many of the properties are covered by mining exploration licenses. These licenses take precedence over all other tenures such that some properties (such as Kadji Kadji) are exposed to the possibility of mining activity. This generates an uncertainty of tenure that can discourage investment in tourism business and infrastructure. Without significant investment, it is unlikely that the region will be able to obtain significant economic and social benefits from tourism.

Coupled with this, some managers contracted by DEC to maintain properties were neither willing nor able to manage tourism activities in addition to their basic property management duties. This was a function of the amount of work required to maintain large lease areas as well as of the skill sets of the current on site managers. There is also a reported high turnover of caretakers meaning that the establishment and development of tourism services is made more difficult owing to a lack of consistency and corporate memory. Employment of designated tourism managers would help to ensure a quality experience for
visitors. However, DEC is primarily mandated to conserve ecological areas and to minimise any impacts thereupon. The agency is not a tourism development organisation and ultimately does not have the resources to function both as a tourism operator on the rangeland properties - beyond the provision of camping facilities, access and a limited management presence - and as an environmental conservation manager. This demonstrates the challenges inherent in a multifunctional land use transition where the different uses require both specialised skills and a considerable input of time, capital and effort. It also raises the question of the most appropriate scale at which different development trajectories (production/consumption/protection) can be operationalised in the rangelands. It would seem that a top down approach to multifunctional transition on a broad, regional scale presents significant challenges. Ideally, significant changes in land use in a regional community require ongoing community support to facilitate such a transition and to ensure the viability of the diversified land functions (Howell 1987; Blank 1989; Hall 1995). This appears difficult to achieve in the Gascoyne and Murchison regions where there is local resistance to government intervention (O’Grady 2004) combined with inadequate management input and a reported high turnover of caretakers on the purchased properties.

**Conclusion**

Holmes noted that the transition from marginalised pastoral occupancy to protection is impeded by financial, institutional, political and cultural barriers, and that this resistance is characteristically strengthened by the continuing identification of landholders with their present lifestyles. This study provides an example where pastoralists have willingly given up their lifestyle through selling their leases to the government thus actively facilitating a land use transition to protection. This voluntary resumption of land in return for remuneration demonstrates a lowering of the barriers to change in terms of finance, lifestyle, culture and
politics to which Holmes referred. However, this voluntary resumption of land has resulted in a failure of government to provide adequate management resources to replace those lost with the exit of the pastoralists. Consequently, some of the key characteristics of the land and the region (remoteness, poor land condition, lack of infrastructure and services, large distances) that resulted in a decline in the viability of pastoralism are equally problematic for the conservation occupance mode. The problems with land condition appeared to have been compounded by the exodus of the pastoral lease holders and the subsequent diminution of a management presence and experienced human resources on these properties in the absence of appropriate government action.

The isolation of the rangeland properties purchased by DEC has minimised the contested land use issues present in other more populated regions. This is due to the lack of large population centres in the interior regions, the low annual number of tourists and a sparse population dominated by pastoralists. The driving force for transition related primarily to the degradation of land condition, decline in market returns for pastoralists and the subsequent loss of the productive value of the land. These issues and the symptoms of social and economic decline have been the focus of much scientific and economic research, in relation to Australian rural areas (Holmes 2006). Ultimately, the Gascoyne and Murchison pastoralists accepted an offer of purchase from the government as a means of ‘escaping’ from this downward spiral of rural decline. In this sense, the transition was not instigated by a contestation over space but rather through mutual agreement.

As we noted above, the change to a conservation occupance mode of land use appears to have exchanged one set of problems for another. Both sets of problems have their origins in the core characteristics of the Western Australian rangelands but they have been exacerbated by the inadequate replacement of management resources that were lost when pastoralists left the land. These scattered and remote wilderness properties do present opportunities for the
conservation of unique land and ecosystem types and for tourism. However, they also present significant management problems due to lack of resources, infrastructure and difficulty of access. When the land was managed for pastoralist production, each property had a dedicated management presence and the pastoralists had a strong sense of ownership of their land. The removal of this management presence has resulted in a rapid degradation of existing infrastructure owing to vandalism, theft and the harsh environmental conditions. It seems that, at the time of purchase, this transition to multifunctional rural land use exchanged a lack of success in production with a decline in the essential component of management presence on the land, namely human occupancy. Currently, therefore, the symptom of land degradation continues but for very different reasons.

As is the case with protection, this rangeland example highlights issues relating to difficulties in transitioning from productivism to tourism as a consumptive use of land. In this instance, the purchase of the land by a government conservation agency with limited resources for tourism management and a primary focus on conservation of ecosystems is a further complicating factor. While a remote region can be promoted as a tourism destination, it is the management of tourists and their activities in those areas that is of primary importance from a protected area management perspective (Hall 1995). Given that DEC lacks the capacity to manage these large properties and tourists simultaneously, any increased visitation may bring value in terms of direct revenue from local expenditure and social awareness, but this could be at the expense of land conservation objectives.

Overall, the rangelands are now being valorised by a wider public and for a wider range of reasons, most notably by governments, specialists and environmental agencies for biodiversity conservation purposes (and possibly even for transactions in any future carbon economy) and by a wider public seeking a wilderness experience. But, just as inappropriate pastoral practices formerly had the potential to damage these fragile rangeland environments
and landscapes, so too do inappropriate or inadequate conservation measures and tourism
development today. Both these activities require long term investment and active human
involvement to prevent environmental degradation on the one hand and possible harm to
tourists themselves on the other. This study has demonstrated that the diminution of the
productivist human presence is only part of the process of a multifunctional rural transition.
For this process to reach a successful and sustainable end point, the partial abandonment of
the inland Gascoyne and Murchison resulting from the transition to Conservation Occupance
must now be complemented by adequate human and infrastructural strategies to capitalise on
the new and different values which the government and, it is to be hoped, sections of the
wider community now perceive that it possesses.

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Captions for Figs

Fig. 1. Gascoyne – Murchison Region showing purchased leases in grey (adapted from Dept. of Environment and Conservation 2007).

Fig. 2. Gross values of main economic activities in the Gascoyne and Murchison regions in 2008 (Adapted from Dept. of Local Government and Regional Development 2008).

Fig. 3. Outback Pathways map with approximate locations of pastoral leases purchased by DEC (adapted from Midwest Development Commission 2005).