

An innovative approach to managing competing land use on unproductive soils in the north eastern wheatbelt of Western Australia

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Abstract: Declining rainfall and increasing input costs have rendered 10% of soils in the NE wheat belt of WA, unprofitable for agriculture. The advent of a carbon price and the emerging opportunity of carbon farming have seen an increasing number of farms being bought and planted to trees. Local governments, worried about this trend, are amending planning policies to prevent good agricultural land from being converted to trees.

This project is developing a blueprint which will allow farmers to subdivide their unproductive soils from the rest of the farm for sale to emerging markets such as carbon farming. This will enable the opportunities associated with a new industry to be integrated with the agricultural landscape without displacing it. State planning policies are currently geared towards preventing agricultural land from being subdivided.

Farmers wanting to exit the industry are finding it hard to sell properties because of their large size. If the unproductive soils are sold from the rest of the property, the remaining smaller property is a more attractive business proposition. Neighbours who wish to expand can then do so with less risk and farmers who want to exit can do so quicker and with dignity.

In addition, subdivision could provide nature conservation outcomes by selling remnant vegetation to other emerging markets, such as environmental offsets for mining companies. It is hoped a streamlined process can be developed for land subdivision and allow new industries such as tree farming to expand without impacting on productive cropping land, while providing biodiversity benefits for the region.

Background

Many farm businesses in the North Eastern Wheatbelt of Western Australia (WA) are under pressure due to the increasing frequency of below average seasons. Following the extreme drought years of 2006 and 2007 the Department of Agriculture and Food Western Australia (DAFWA) worked with the rural communities of the North Eastern Agricultural Region (NEAR) to develop a strategy, following a request by then Minister for Agriculture and Food in 2008 (figure 1).

This strategy was designed through extensive community consultation to provide a “long term strategy for the management of issues farmers face in the event of consecutive poor seasons. From this NEAR strategy, a number of projects were developed by DAFWA, aiming to tackle economic, social and environmental issues caused by seasonal variability. One of these projects is examining current and alternative land uses on consistently unproductive soils and is entitled “Changing land use on unproductive soils”. (Blake et al., 2012). This paper summarises some of the major findings of the study so far and outlines future work that will assist with facilitating alternative land uses for these soils.



Figure 1: Map showing the boundary and towns of the NEAR

Unproductive soils

Grain cropping and in particular wheat, remains an important economic driver for the farming systems of the NEAR. The combination of increasing farm input costs and declining growing season rainfall however, has resulted in certain soil types in the NEAR becoming unprofitable for cropping. The project found that approximately 10 % of agricultural soils in the NEAR are consistently unproductive. These unproductive soils have physical and chemical limitations

such as shallow depth, acidic subsoils, salinity or poor water holding capacity. Many of the long term rainfall recording sites (100 years of data) for the Bureau of Meteorology throughout the NEAR have experienced May to August rainfall declines of between 15 and 45%. This time period was chosen because the rainfall received in the NEAR during these months is predominately from cold fronts and not west coast troughs. The southerly shift of weather systems pole ward has resulted in rainfall dumped over the southern ocean rather than continental Australia. (Isaac and Turton 2009)

The resulting inconsistent crop yields have had a negative impact on farm businesses. Planfarm Bankwest Benchmark reports (Planfarm Bankwest 05/06-11/12) showed a decrease in farm equity following the drought years of 2006 and 2007 from 81% in 05/06 to 65% in 06/07. In the years since equity levels have returned to be 73% as at February 2012. Beyond this financial impact, communities are affected in many ways including farmers being forced to seek off farm work and the decline of local industries supporting the agricultural industry. The natural resource base has also suffered with severe wind erosion occurring in some areas and livestock feed shortages resulting in the heavy grazing of remnant vegetation and drainage lines that historically were grazed very infrequently.

The same study found that profitable alternate land uses are limited and that 75% of farmers were willing to permanently revegetate these soils. At the same time carbon companies have revealed the potential demand for properties for tree farming in the NEAR with some having already purchased properties in the region and would like to purchase more.

These recent land acquisitions by carbon brokering firms within the NEAR are generating some concern from local shires and has prompted many of them to develop local planning policies for agro forestry and plantations. This is to ensure the emerging land use is adequately managed to avoid any environmental or land use conflicts and to optimise the potential benefits to the community. Land use change appears inevitable given the apparent trend towards a drier climate and social and economic factors. These changes provide a unique opportunity to plan and implement changes in agricultural areas to achieve positive environmental social and economic outcomes. High production cropping land needs to be identified and retained for this purpose as cropping remains the dominant economic driver within the NEAR. Fostering a change of land use to more sustainable options, such as tree plantings, on poorer performing agricultural land may provide economic development opportunities for the NEAR.

The market demand for land for the purposes of revegetation is also likely to be driven by the increasing requirement for environmental offsets in industries such as mining. At least two mining companies are requiring land to replant local native vegetation as an offset for clearing on mine sites or along rail infrastructure in the NEAR. Approvals for clearing remnant vegetation under various state government acts, such as Mining Act, Planning and Development Act or State Agreement Acts are increasingly requiring that an equivalent or larger area of native vegetation be planted or protected.

Farmers are also experiencing difficulty selling their properties to exit the industry, possibly due to the inability of neighbouring farms to finance large land purchases. One of the characteristics of farming properties in the NEAR is their large size with an average size of 5400 ha. Policies designed to limit the fragmentation of agricultural land have made subdividing large lots into smaller parcels for ease of sale difficult. This makes it difficult for carbon brokering firms to acquire areas of consistently unproductive, less expensive cropping lands for carbon planting. As a result they need to buy larger areas of mixed land capability (including high value agricultural land) rather than smaller parcels of appropriate soil types. A program developed in Victoria in 1998 demonstrated a mechanism for restructuring properties to address land use issues following drought and floods. (Sinclair Knight Merz, 2005) A similar framework could be developed in W.A to address similar issues.

The Victorian Example

Following a period of drought, low commodity prices, livestock disease, and floods, the agricultural businesses and rural communities in the Upper Tambo Valley in Victoria were under pressure. The Victorian Government initiated the “Restoring the Balance” Program in 1998 (Carroll 2001) to address these issues. The program focussed on restoring the natural resource base and restructuring property sizes. It attempted landscape scale land use change in a way that fostered business resilience, supported communities and provided environmental outcomes. A call for expressions of interest to farmers willing to sell their farm resulted in the purchase of 17 farms. Key outcomes were:

- 17 properties amalgamated and then subdivided in a way that better matched land use to land capability whilst providing maximum benefits to the environment, agricultural industries and the local communities.
- High value agricultural land sold back to farmers most of whom were from within the district. Interest rate subsidies were offered to buyers (2.5% reduction for 5 years).
- Twenty percent of the area was returned to the Crown due to its conservation value and risk of further degradation (timbered hill country).

Significant land improvements were conducted through land rehabilitation, new fencing and control of weeds and vermin.

- An 11% reduction in the total number of farm enterprises in the area.
- 920 hectares considered fragile was also sold to private landholders under covenant requiring controlled grazing to minimise degradation.
- Where farmers wanted to exit the industry but remain living in the district, allowances were made to permit the house to be retained by the current owners.

Whilst this program required significant investment by the Victorian State Government, much of the money invested was recouped through the sale of the majority of the land back to farm businesses. The Restoring the Balance Program cost a total of \$21.25 million, \$5.6 million of which was for land acquisition, \$2.5 million for land rehabilitation, \$7.5 million for reforestation and \$0.25 million for sustainability plantings. The net cost to the Victorian Government of the land aggregation component of the program including land purchases and improvements, exit grants, interest rate subsidies and the return of 1511ha of land to the Crown was \$3 million (Advanced Choice Economics Pty Ltd et al., 2006). Federal Government funding through Landcare type programs was also utilised to complete on-ground works rehabilitating degraded areas.

Western Australian Wheatbelt

This concept of restructuring properties for sustainable development has potential in the WA wheat belt where seasonal variability has left many farm businesses, at times, extremely vulnerable and dependent on government support such as exceptional circumstances schemes, drought pilots or social security. In particular restructuring and subdividing properties could facilitate land use change for the soils that are now uneconomic to crop. By subdividing the areas of unproductive soils from the remaining farm, alternative industries such as tree farming, revegetation for environmental offsets or saltbush grazing systems can be integrated with agriculture rather than displacing it.

The range of benefits may include:

- Allow new industries such as carbon farming to expand without impacting on productive cropping land
- Matching the capability of the land to an appropriate land use
- Allowing farmers who wish to exit the industry to do so quicker and with dignity
- Allow farming families who wish to expand their business to do so with less risk
- Reduce red tape associated with land subdivision

- Provide nature conservation benefits

Early in 2012 DAFWA engaged the services of an experienced land use planning consultancy to work closely with local governments and state agencies responsible for land use planning and subdivision decisions in the NEAR. The purpose of this phase of the project is to develop a blueprint that will allow landholders to subdivide areas of unproductive soil from their farms in order to improve farming efficiencies and to allow emerging economic opportunities to be integrated into the rural agricultural landscape.

Developing a blueprint for change

Subdivision applications in WA are the responsibility of the WA Planning Commission (WAPC) and are guided by their policy positions. Current policies are aimed at protecting agricultural land from subdivision. State Planning Policy SPP 2.5 deals with agricultural and rural in the State. The objectives of the policy are to protect agricultural land resources wherever possible and plan and provide for rural settlement. This is in order to minimise the potential for land use conflict and carefully manage natural resources. There are also Development Control policies that set out the guiding principles which the WAPC use to determine subdivision applications for rural land.

SPP 2.5 is currently under review by the WAPC and while specific details of the new policy are yet to be determined, it is anticipated that it will allow the subdivision of rural land under certain circumstances. Local Governments have the responsibility to assess development applications including those for tree farms and other agricultural land uses. The blueprint or planning framework that is developed by this project will draw together the policies and principles that guide the subdivision decisions associated with agricultural land.

Conclusion

If the planning framework developed from this project is adopted it could be another tool available to governments and communities to facilitate land use change and economic development in a drying climate, not only in the NEAR, but elsewhere in Australia. By developing this blueprint in consultation with stakeholders, potential issues should emerge and shed light on the potential benefits and risks of this approach. It is hoped a streamlined process can be developed for land subdivision that allows new industries to expand without impacting on productive cropping land and provide biodiversity benefits for the region.

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