



Southern Tasmania Regional Land Use Strategy

Background Report No.7: Productive Resources

March 2011



This document is detailed supporting information for the Regional Land Use Strategy for Southern Tasmania.

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1. Agriculture

1.1 Background

Tasmania has a long history of agricultural production, varying from beef, sheep, wool and dairying, through to cropping and fruit and vegetable production. Extensive dryland farming dominates the Southern region in terms of area, with grain and fine wool common commodities in the expansive Midlands and Derwent River Valley areas. Discrete areas of intensive agriculture exist in those local areas where access to water combine with reasonable soils. In recent years there has been an increase in the number of tree plantations as forestry moves further away from a reliance on old growth tree resources to plantations. This is considered in a separate section below.

Maintaining and increasing this agricultural productivity is becoming increasingly important at a political level, whilst pressures on agricultural land from competing uses continue to rise. Some current planning schemes do not adequately distinguish significant agricultural land from land more generally described as 'rural'. Current planning scheme zoning, combined with ordinances that do not afford adequate protection to significant agricultural land is causing considerable fettering of the agricultural resource both directly and indirectly through allowing the creation of land use conflict between the agricultural and non agricultural uses.

Whilst Southern Tasmania is not as significant as the other two regions in terms of overall agricultural production, agriculture is still a significant contributor to the region whilst the relative scarcity of highly productive land only serves to increase the importance of such areas at the regional level.

1.2 Legislative and Governance Context

The State Policy for the Protection of Agricultural Land 2009 (PAL) seeks to protect prime agricultural land from conversion to non-agricultural uses. PAL further states that the protection of non-prime agricultural land from conversion to non-agricultural use will be determined through consideration of the local and regional significance of that land for agricultural use. In order to determine 'local significance' it is necessary to understand the region, and in order to determine 'regional significance' it is necessary to understand the State.

Agricultural Land as defined under the PAL Policy 2009 is;

- All land currently in agricultural use; and
- All land with the potential to be used for agriculture.

But excludes;

- Agricultural land that has been zoned for another use;
- Agricultural land that has been developed for another use; or
- Agricultural land unduly restricted for agricultural use by its size, shape and proximity to adjoining non-agricultural use.

Prime Agricultural Land is recognized within PAL as being land classified as Class 1, 2 or 3 under the Tasmanian Land Capability Classification System (TLCCS). It is capable of supporting a wide range of intensive cropping and grazing activities.

However all land identified as Class 1 to 5 under the TLCCS is considered suitable for a range of both cropping and/or grazing pursuits. Class 6 is considered marginally suitable for grazing but unsuitable for cultivation with Class 7 being considered unsuitable for agriculture.

An analysis of the ABS Agricultural data from the 2006 Census provides a snapshot of the variety of agricultural pursuits across the state. The three regions are quite varied in the types of agriculture each region specializes in. This is reflective of the quality of the soil as the growth medium, the variation in climatic conditions across the state (including rainfall, frequency of frosts, seasonal winds etc) and access to irrigation infrastructure.

Currently in Tasmania many agricultural uses are exempt from requiring permits under the *Land Use Planning and Approvals Act 1993*. This is dependent on zoning of the land and the ordinance provisions under the particular planning scheme. In the majority of the rural areas, which are zoned Rural Resource or similar, agricultural activities are exempt from the need for a planning permit. It is often only when significant infrastructure is involved (such as machinery sheds, or processing infrastructure) that applications are required under a local Planning Scheme. This is considered an appropriate level of regulation. There will be occasions where the inclusion of a machinery shed or processing plant will have other impacts, such as increases in traffic, increased water requirements and wastewater issues, impacts on nearby sensitive uses such as dwellings and so forth. Nevertheless the majorities of agricultural uses, if within rural areas, have minimal impact and should not be required to have a permit.

1.3 Agriculture in Southern Tasmania

All data in this section is sourced from the ABS Census. Details on the definition of spatial local areas (SLAs) and Local Government Areas (LGAs) are provided in the Regional Profile report

The issues facing the Southern region are quite different to those issues faced in the North and North West.

The southern region has negligible prime agricultural land, some of which has already been lost through conversion to non-agricultural land uses. The majority of the agricultural land in the south is Class 4, 5 or 6. Whilst these classes of land are not afforded the highest level of protection under PAL, significant areas of agricultural land are still strategically significant to both the region, and local municipalities. The Southern Region has 33% of the total agricultural land in the state, but due to the quality of that land (and also the crops that are most commonly grown in the south), produces only 9% of the overall tonnage of the state's agricultural production (not including livestock). The Southern region, however contributes 19% of the annual agricultural value for the state.

Furthermore the Southern Region also experiences, less consistent rainfall than the remainder of the State, with the Huon Valley, D'entrecasteaux Channel and upper Derwent Valley being the exception to this rule. For the East Coast, Coal River Valley (although consistent and controlled water supply is available through the irrigation scheme) and Midlands areas, rainfall is considerably less than that of the North West Coast and much of the North. This further contributes significantly to the region's differences in agricultural production.

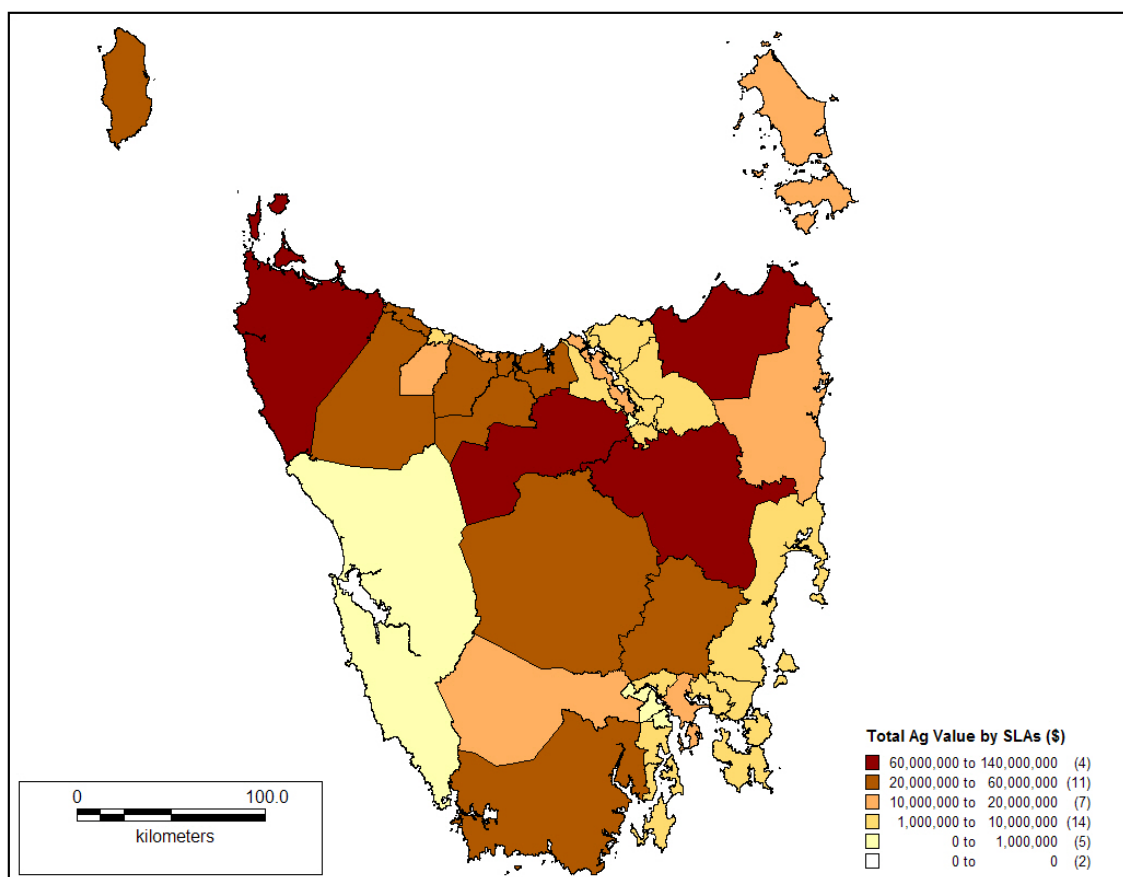


Figure 1: Total value of agricultural production by SLA in Tasmania (Source: ABS Census 2006)

1.3.1 Fruit Production

The Southern Region is one of the most significant areas for fruit production with 74% of the State's Orchard Fruit production area constituting 68% of the State's annual fruit production revenue (\$59.6 million). The Huon Valley produces by far the most fruit at 25,618 tonnes, with Clarence (1,029 tonnes), Southern Midlands (985 tonnes), Derwent Valley (865 tonnes) and Kingborough (833 tonnes) also contributing notable amounts (ABS Data 2006).

Table 1: Comparison of total fruit production volume against gross value by SLA in Tasmania
(Source ABS Census 2006)

SLA	Production (tonnes)	SLA	Gross Value of Production (\$)
Huon Valley	25,618	Huon Valley	25,038,954
West Tamar– Pt A	3,094	West Tamar– Pt A	4,661,765
Latrobe – Pt B	2,685	Latrobe – Pt B	4,399,418
George Town – Pt B	1,403	George Town – Pt B	3,583,905
Devonport	1,253	Clarence	3,264,903

Clarence	1,029		Southern Midlands	3,045,166
Southern Midlands	985		Latrobe – Pt B	2,175,654
George Town – Pt A	965		Launceston – Pt B	1,767,665
Derwent Valley – Pt B	865		Latrobe – Pt A	1,363,304
Latrobe	843		Launceston – Pt C	1,266,957
Kingborough – Pt B	833		George Town – Pt A	1,105,032
Launceston – Pt B	666		Devonport	1,084,229
Tasman	493		Tasman	987,643
Kentish	393		Glamorgan Spring Bay	841,420
Glamorgan Spring Bay	322		Kingborough – Pt B	748,860
Launceston – Pt C	211		Sorell – Pt A	658,138
Glenorchy	198		Glenorchy	546,141
Sorell – Pt A	195		Burnie – Pt B	439,929
Brighton	132		Brighton	391,668
Central Highlands	95		Kingborough – Pt A	382,360
West Tamar – Pt B	95		Kentish	343,623
Derwent Valley – Pt A	84		Meander Valley – Pt B	302,202
Burnie – Pt B	75		Central Highlands	247,257
Sorell – Pt B	64		Sorell – Pt B	243,766
Kingborough – Pt A	57		West Tamar – Pt B	176,371
Meander Valley – Pt B	34		Central Coast – Pt A	131,382
Central Coast – Pt A	25		Derwent Valley – Pt A	124,334
Northern Midlands – Pt B	16		Dorset	103,675
Break O'Day	12		Waratah Wynyard – Pt A	88,789
Waratah Wynyard	11		Northern Midlands – Pt B	72,870
Dorset	10		Break O'Day	55,967
Central Coast – Pt B	6		Central Coast – Pt B	19,424
Northern Midlands – Pt A	4		Northern Midlands – Pt A	11,242
King Island	3		Burnie – Pt A	9,747
Flinders	2		King Island	7,818
Burnie	1		Flinders	4,040
Meander Valley – Pt A	1		Meander Valley – Pt A	1,506
Hobart - Remainder	1		Hobart - Remainder	1,278
TOTAL	42,777			59,698,399

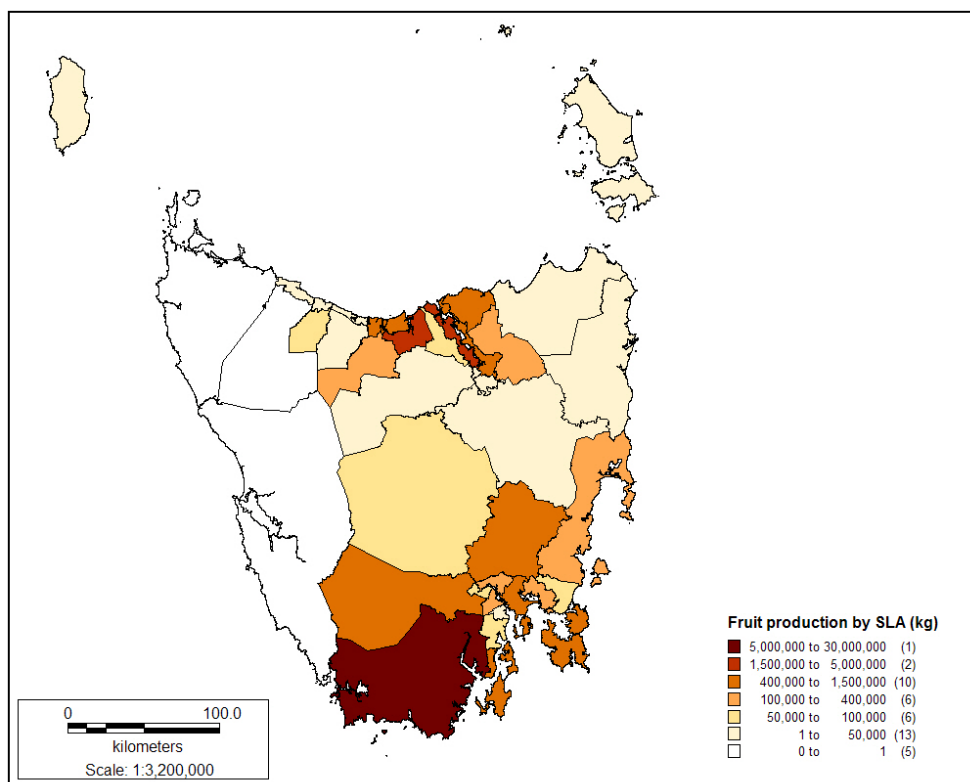


Figure 2: Total Fruit Production Volume by SLA for Tasmania

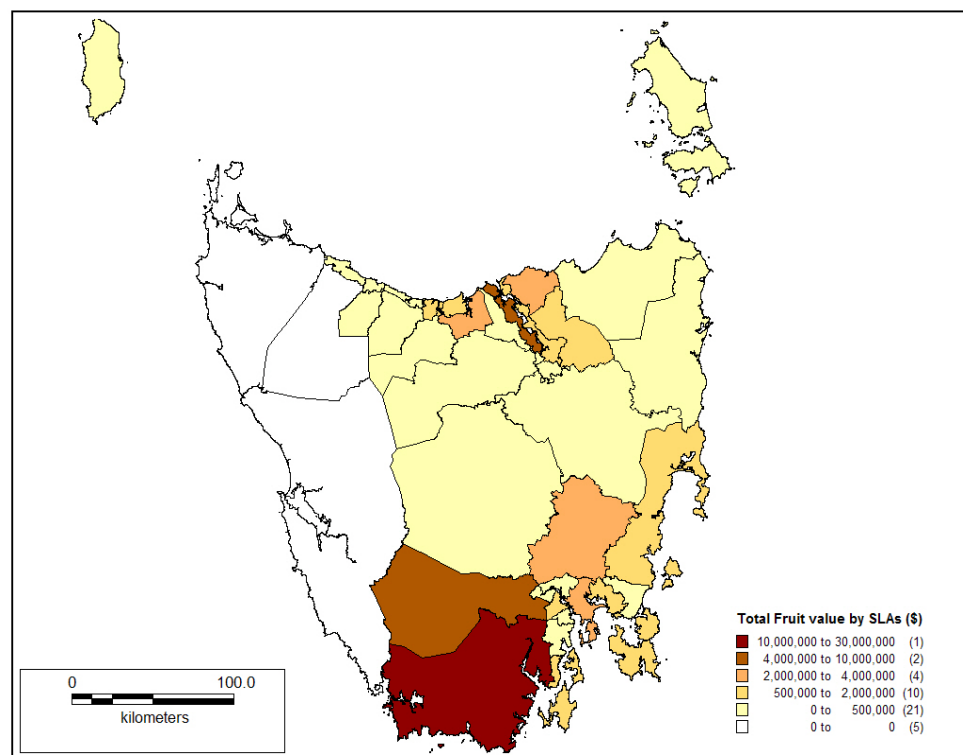


Figure 3: Total Fruit Production Value by SLA in Tasmania (Source: ABS Census 2006)

The type of fruit grown is also quite varied in the region. The Huon Valley produces the majority of the State's pome and stone fruit with 73% of the State's apple tonnage. Overall the Southern Region produces 76% of the State's apples.

The Huon Valley is also notable for its berry production, however the Derwent Valley is the most significant berry producer in terms of area. The Southern Region accounts for 70% of the State's berry fruit production area. Parts of the Coal River Valley, Huon Valley, and Channel region produce grapes for viticulture, which is considered separately below. Production area for the different fruit production is shown in Figures 3 to 5 below.

Fruit production is the second most significant agricultural product for the region in terms of value, after livestock.

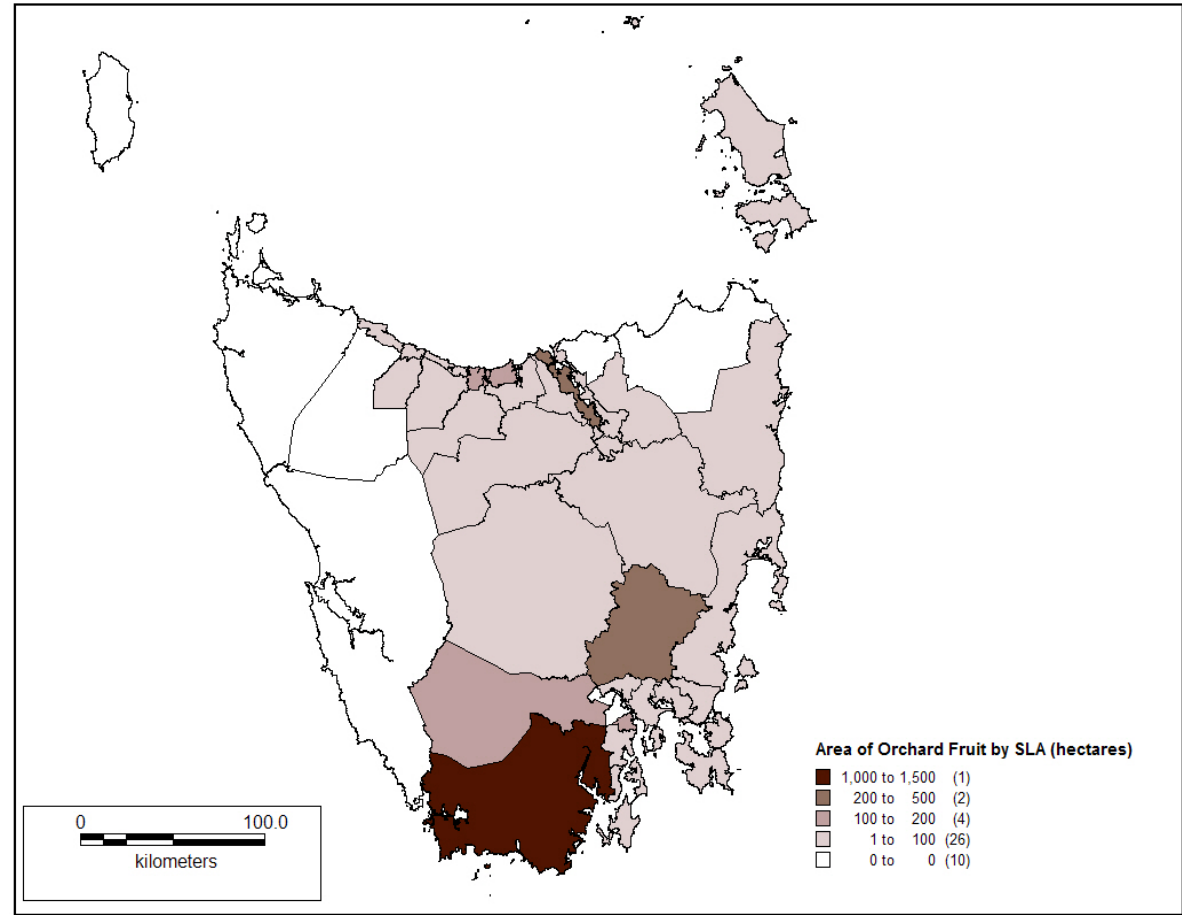


Figure 4: Orchard (Pome & Stone) Fruit Production Area by SLA (Source: ABS Census 2006)

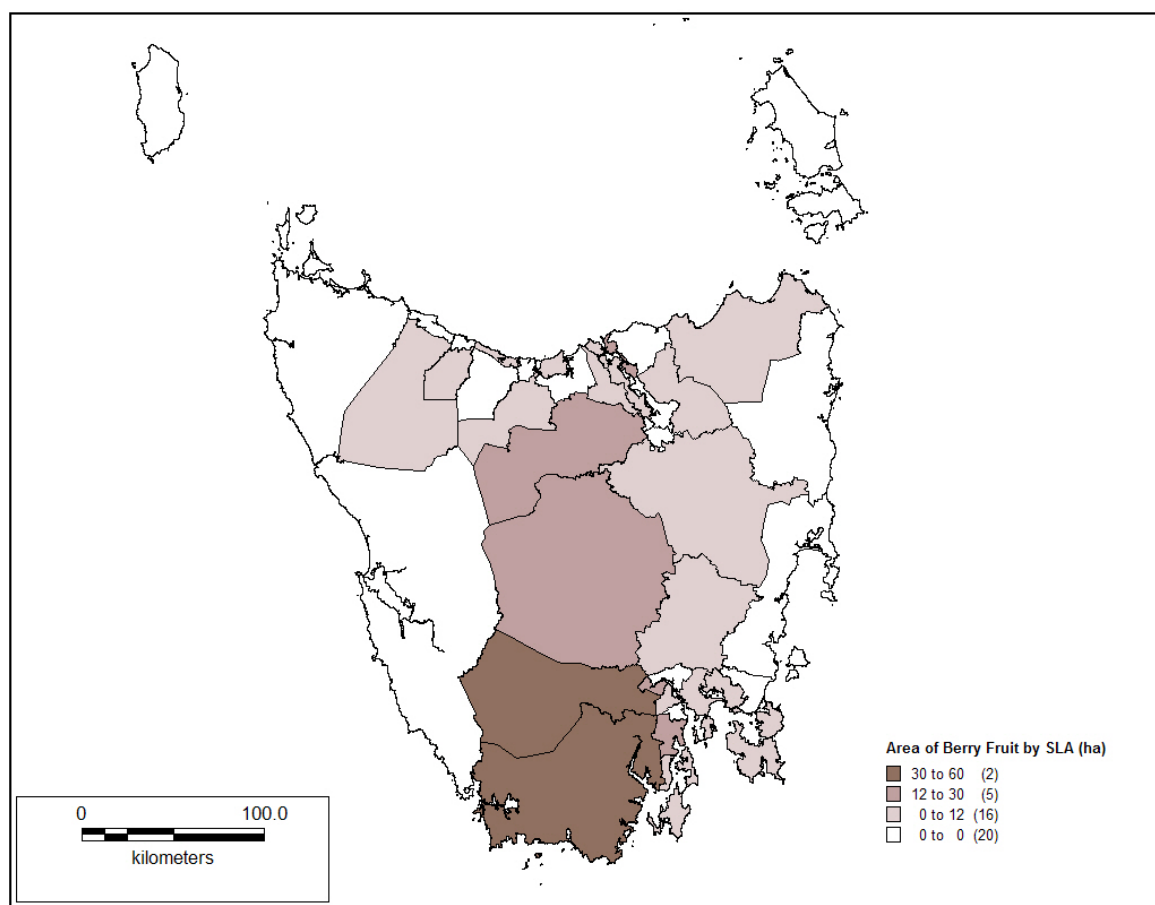


Figure 5: Berry Fruit Production Area by SLA (Source: ABS Census 2006)

1.3.2 Vegetable Production

Tasmania produces an extensive range of fresh and processed vegetables with the backbone of the vegetable industry being the potato, making up approximately 70% of vegetable production in the State. Following potatoes, the next most significant vegetable product is onions. Tasmania's contribution to national production on these two vegetables crops is notable, being the 3rd greatest producer behind Victoria and Southern Australia. This is followed by a range of smaller value crops, beans, peas, carrots, broccoli and other vegetables in decreasing order.

The Southern Region produces no onions at any commercial export level however Clarence (20,844 tonnes) and Huon Valley (7,679 tonnes) both contribute to 'other' vegetable production. Whilst the Southern region's tonnages are modest when compared to some of the more productive areas of the State (Central Coast at 96,012 tonnes, Latrobe at 78,804 tonnes and Northern Midlands at 76,728 tonnes) vegetable production in the Southern region is nevertheless a significant contributor to local economies and also important to improved sustainability through self-sufficiency.

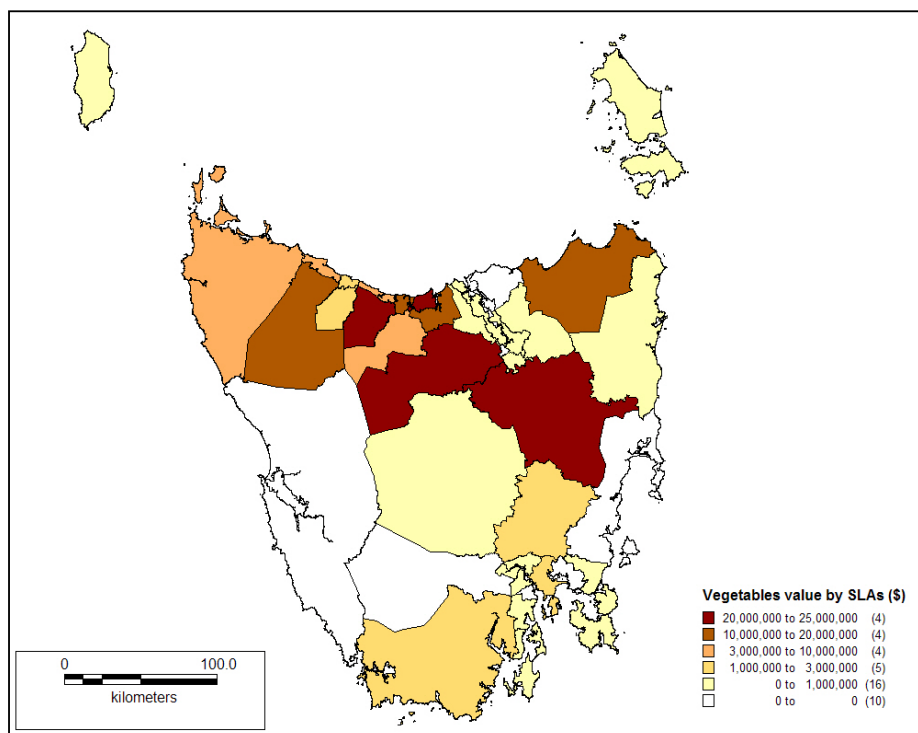


Figure 6: Vegetable Production in value by SLA (Source: ABS Census 2006)

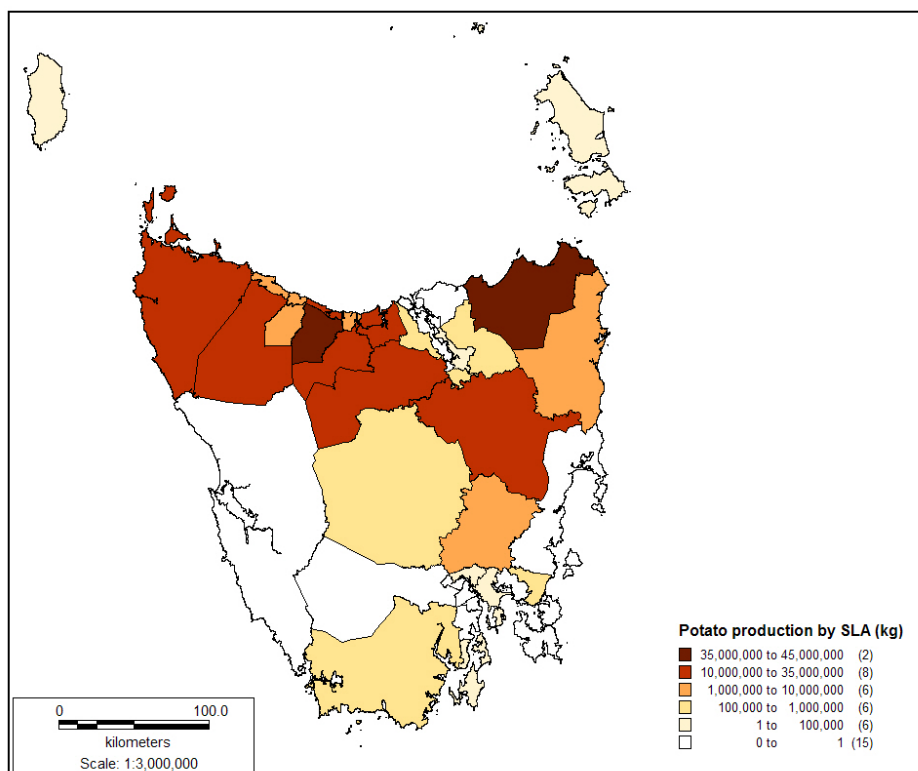


Figure 7: Potato production volumes by SLA (Source: ABS Census 2006)

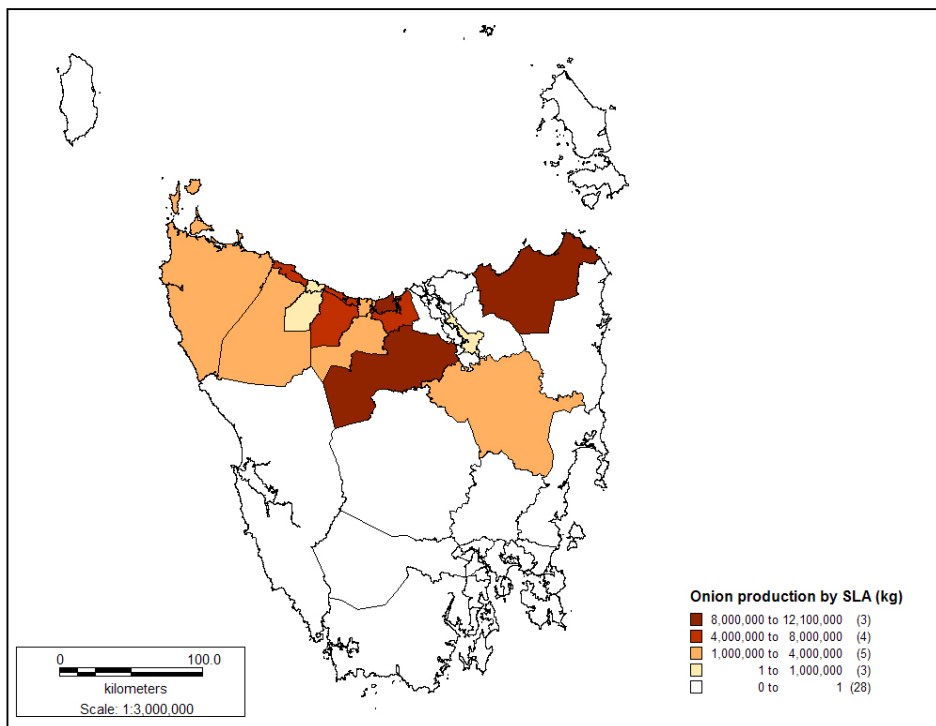


Figure 8: Onion production volumes by SLA (Source: ABS Census 2006)

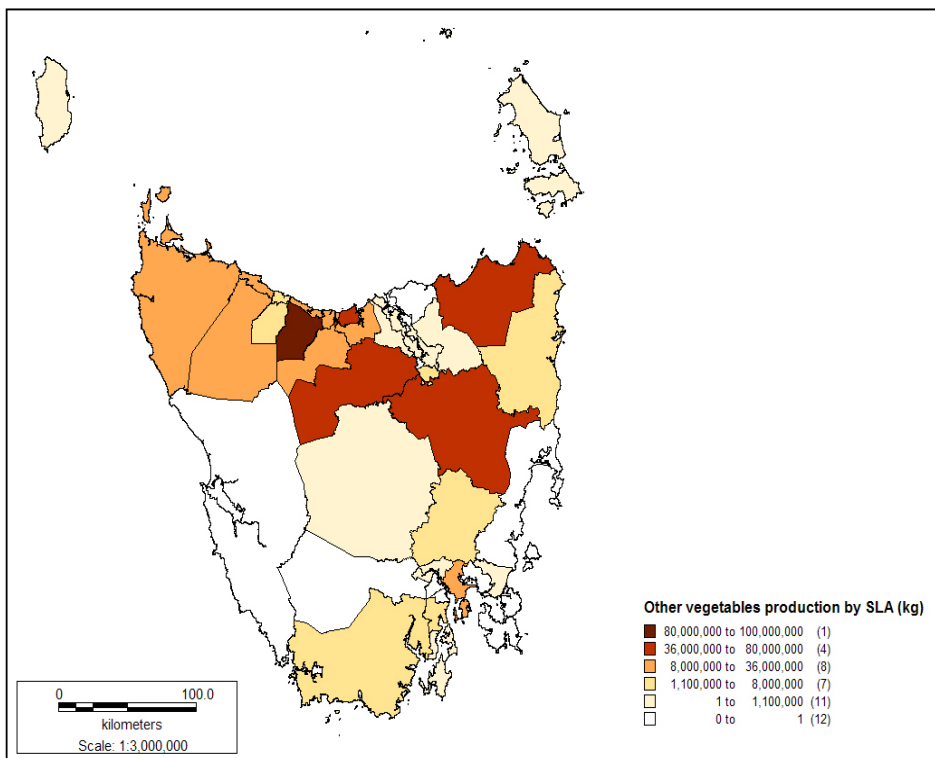


Figure 9: Other vegetable production volumes by SLA (Source: ABS Census 2006)

1.3.3 Cereal and Grain Production

The Southern region includes a number of local government areas that contribute significant amounts of cereals for grain production, including Southern Midlands (9,153 tonnes) Clarence (2,095 tonnes) and Brighton (1,784 tonnes). Southern Midlands is the biggest producer in terms of tonnage and value in the southern region and second in the State after Northern Midlands (Pt B). Interestingly while there is a considerable gap in terms of production volume between Southern and Northern Midlands (Pt B) (Northern Midlands Pt B produces 41,121 tonnes in comparison to Southern Midlands 9,153 tonnes), the value difference is not proportionally the same with Northern Midlands Pt B producing \$8.6 million per year compared to Southern Midlands' \$2.08 million.

On a value per hectare (ha) comparison, Northern Midlands is \$209 per ha while Southern Midlands is \$227 per ha. Central Highlands and Clarence are next both with comparisons of \$209 per hectare. Outside of the southern region the only other area approaching the value per hectare comparison is Meander Valley Pt B with \$208. This data indicates that the produce being produced in Southern Tasmania is generally higher quality with a high farm gate value.

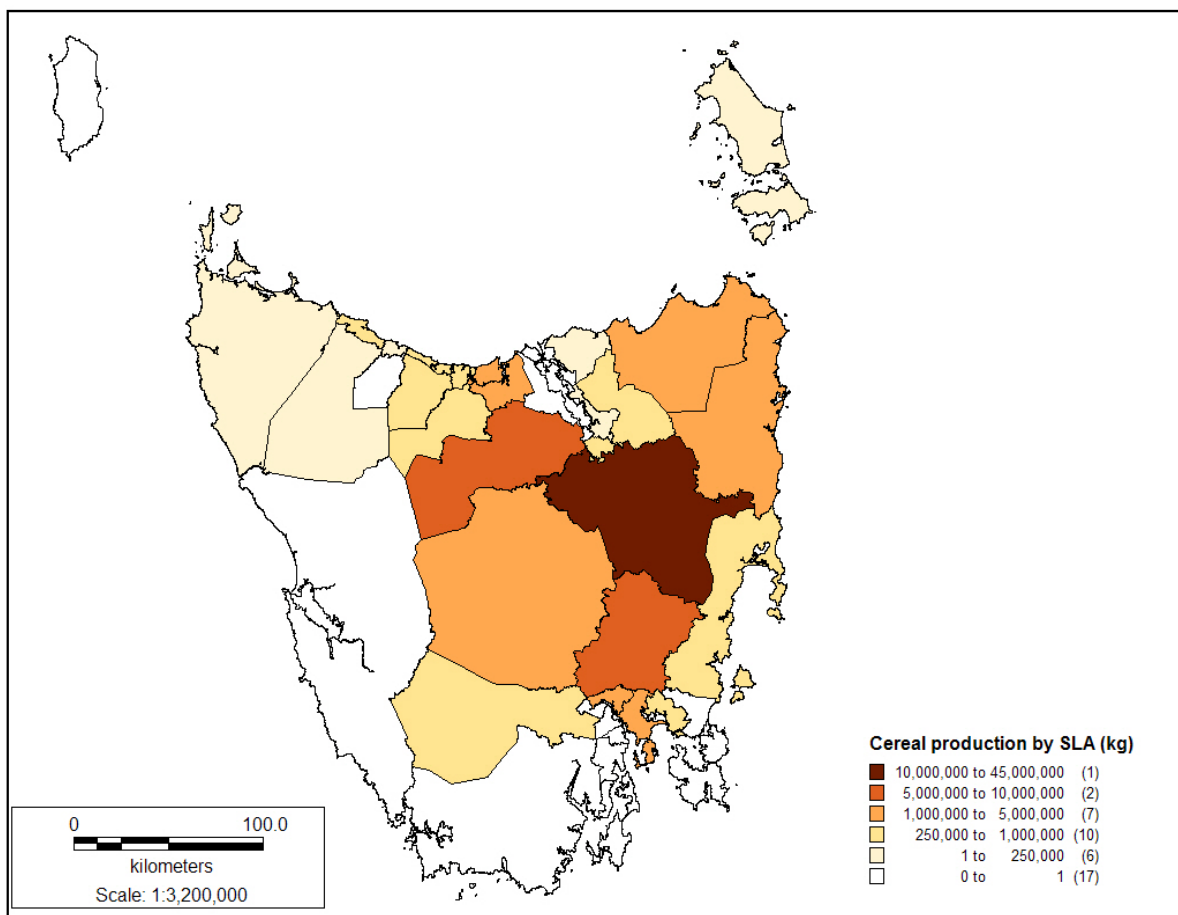


Figure 10: Cereals for grain production volumes by SLA (Source: ABS Census 2006)

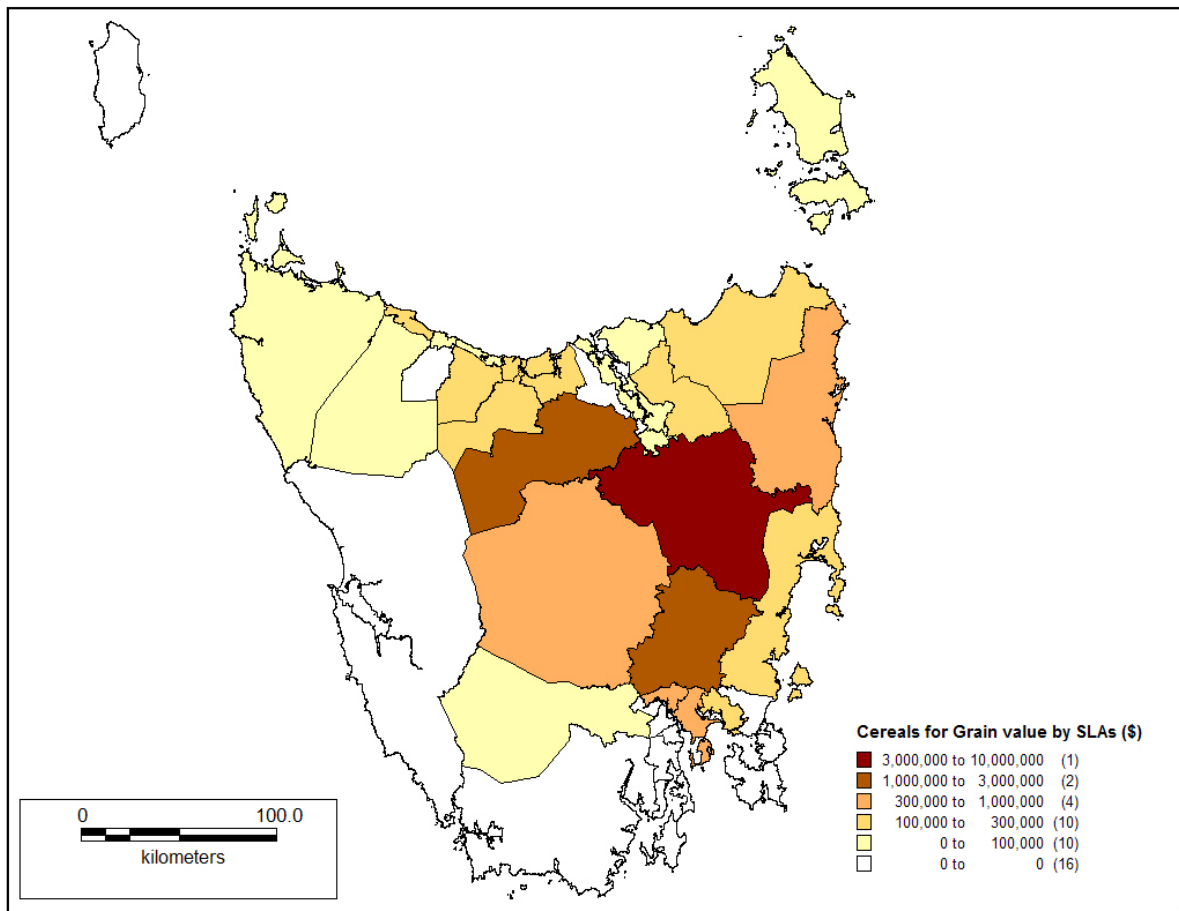


Figure 11: Cereals for grain production Values by SLA (Source: ABS Census 2006)

1.3.4 Hay Production

Pasture and cereal crops for hay production is not a significant product within the region. Of the total gross value of production for the State of \$67.2 million, Southern Tasmania only produces \$8.7 million. Figure 12 below shows the comparison of crop for hay production in value across the State. It is however important to note that this production value does not include hay produced and utilised on site for livestock feed.

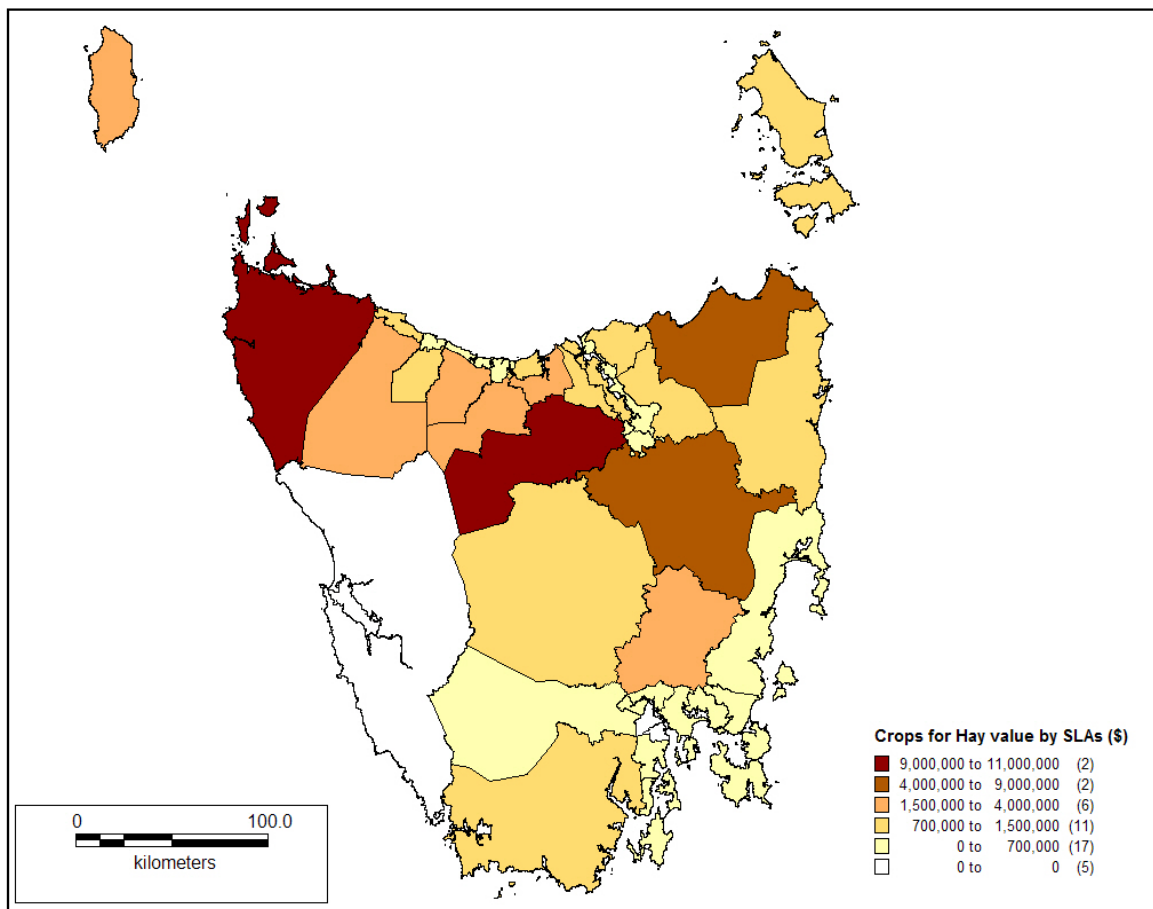


Figure 12: Crops (pasture and cereal for hay production in Value by SLA (Source: ABS Census 2006)

1.3.5 Grazing

The region includes significant areas of land used for grazing purposes. This includes the Central Highlands (162,555 ha), Southern Midlands (159,890 ha) and Glamorgan Spring Bay (71,296 ha) as major contributors. The region has close to 500,000ha of grazing land in total making up 38% of the total grazing land in the State. Grazing land in the region is utilised both for livestock and wool production.

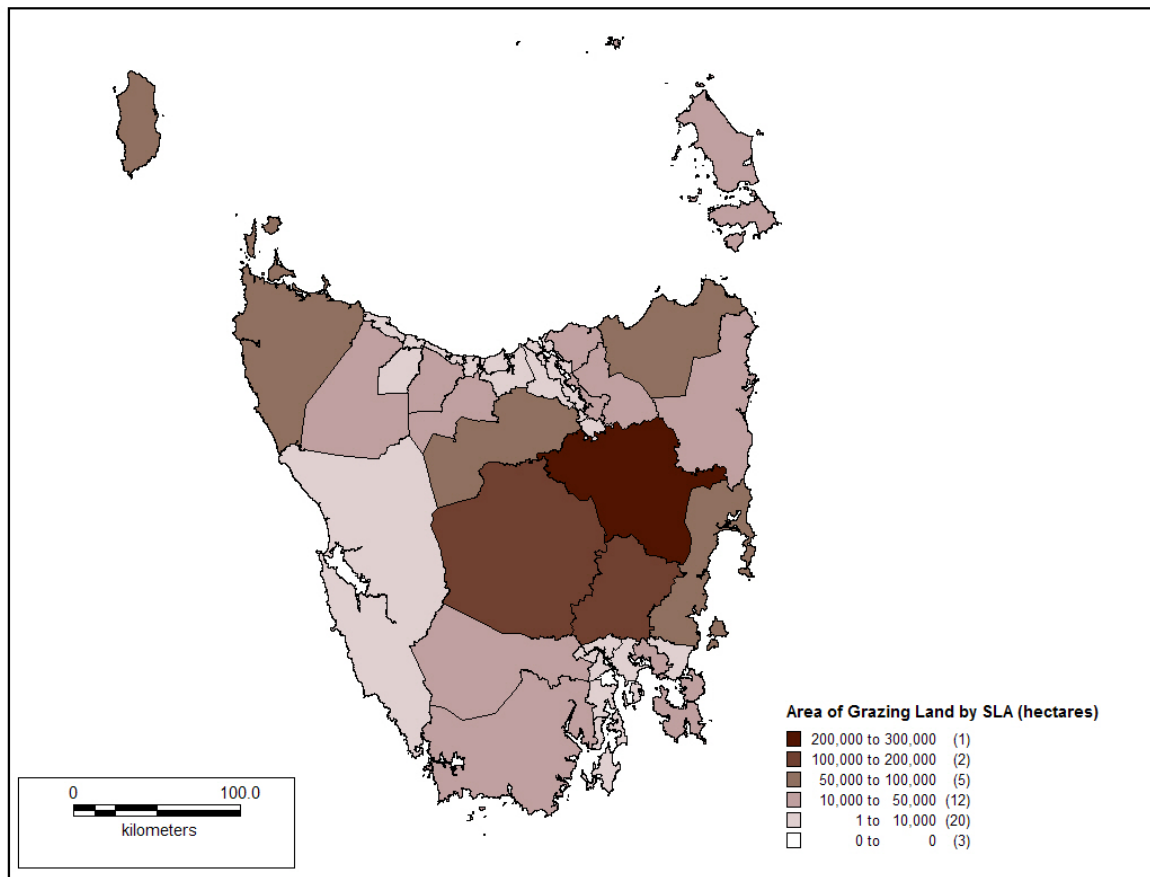


Figure 13: Grazing production area by SLA (Source: ABS Census 2006)

1.3.6 Meat Production

The farm gate value of the red meat industry in Tasmania was \$212 million for 2006-07, which represents 22% of the States total agricultural production (Department of Primary Industries, Parks, Water and Environment, 2010). Of this, beef dominates the industry accounting for \$172 million with lamb and mutton sales accounting for \$39 millions or one quarter of the industry's value.

Approximately 65% of Tasmania's beef is exported overseas with Japan being the biggest market, and a further 10% is exported to mainland destinations for finishing and processing. Approximately 35% of Tasmanian sheep meat is exported overseas mainly to the United States and the Middle East. Some live sheep are also exported to the Middle East.

One of the main constraints on expansion of this industry is access to appropriate land as dairy cattle and tree farming industries expand.

The southern region contributes to beef production most prominently in the Central Highlands area (\$6,574,332), followed by Southern Midlands (\$4,413,829) and Huon Valley (\$3,253,913).

The region also contributes to lamb production, with the Southern Midlands having the State's second highest production value at \$8,415,426. Glamorgan Spring Bay (\$1,470,967) and Clarence (\$915,141) also contribute significantly. The Southern Region contributes 21% of the overall value of livestock in the state (this includes sheep, lambs and cattle, pigs, chickens etc. sent for slaughter).

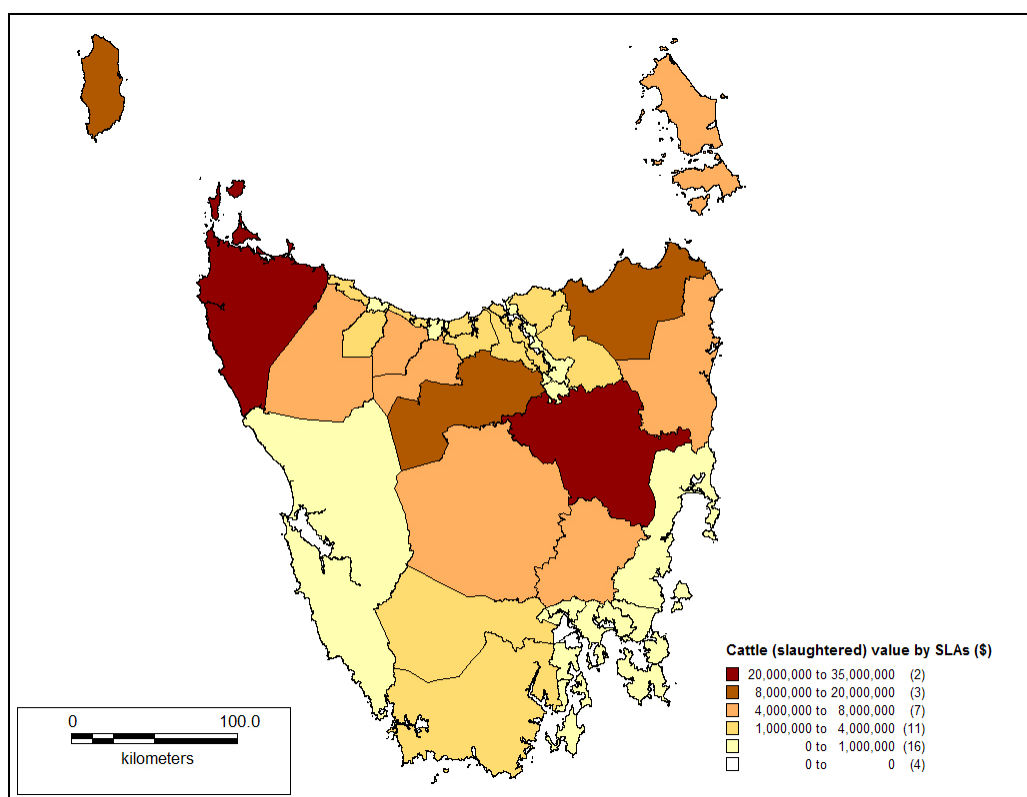


Figure 14: Value of slaughtered cattle by SLA (Source: ABS Census 2006)

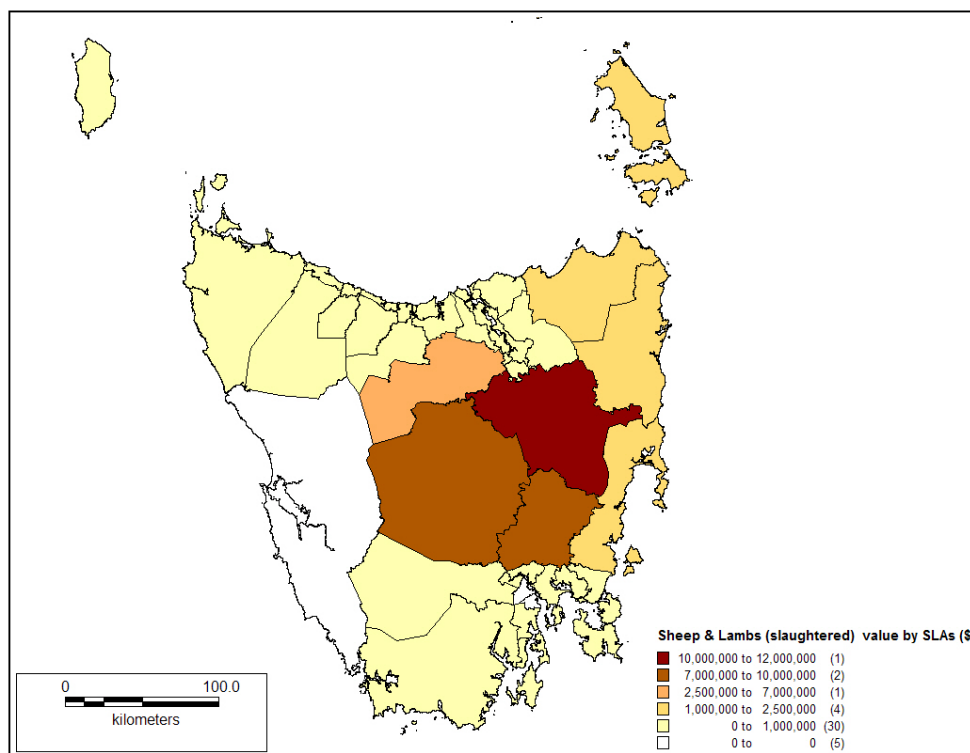


Figure 15: Value of Sheep & Lambs slaughtered by SLA (Source: ABS Census 2006)

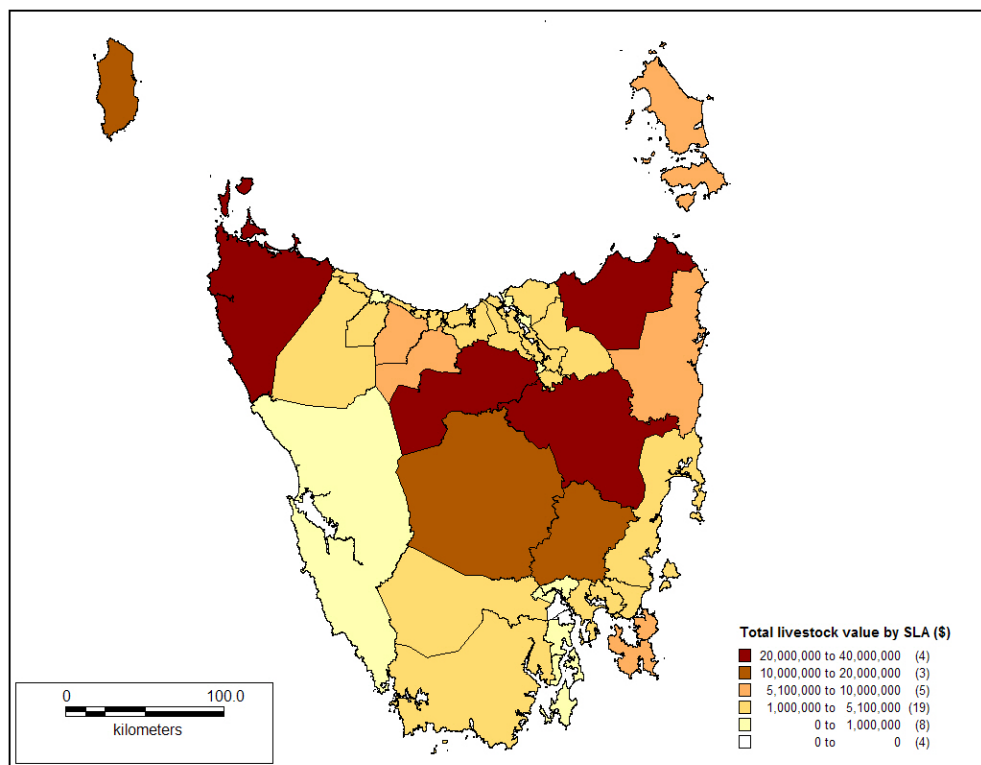


Figure 16: Total value of all livestock slaughtered by SLA (Source: ABS Census 2006)

1.3.7 Dairy Industry

Dairying represents 24% of the State's agricultural income. The majority of dairy production occurs on the North West Coast with Southern Tasmania a minor player. The Central Highlands (\$2,343,377 million) and Derwent Valley (\$1,644,086 million) contributions are sizeable but the region's overall contribution to the State's dairying industry is only 2%.

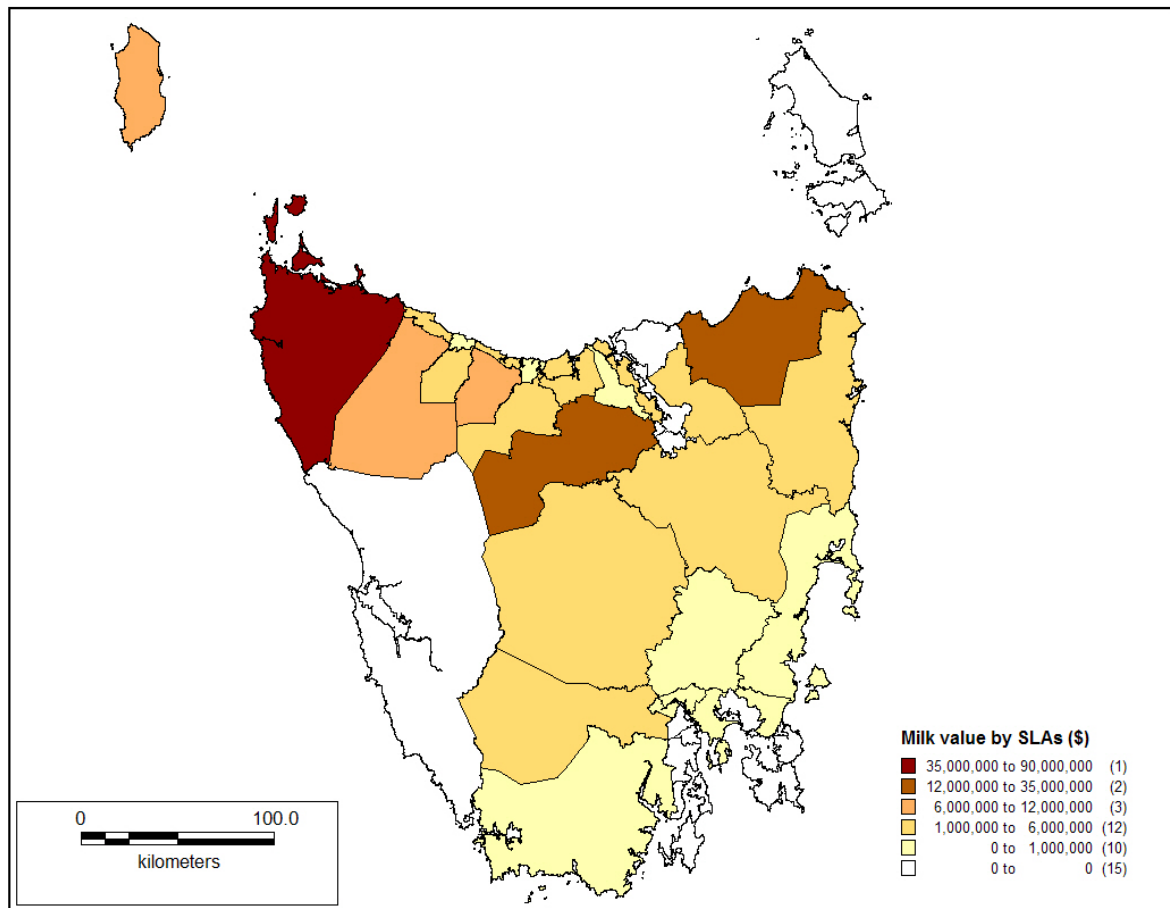


Figure 17: Value of milk production by SLA (Source: ABS Census 2006)

1.3.8 Wool Industry

Sheep production for wool accounts for 8% of the total value of agricultural production in Tasmania, with over 95% exported to China, Italy, Czech Republic, India, and Japan and Korea. In the Southern Region, the Southern Midlands (\$14,258,309), Central Highlands (\$11,327,782) and Glamorgan/Spring Bay (\$4,666,769) are three of the top four producers of wool in the State. The Southern Region accounts for 46% of the overall production value of wool to the State.

Tasmania produces some of the world's highest quality superfine wool, notably in the extensive dry-land farming areas where there are poorer quality soils with low rainfall.

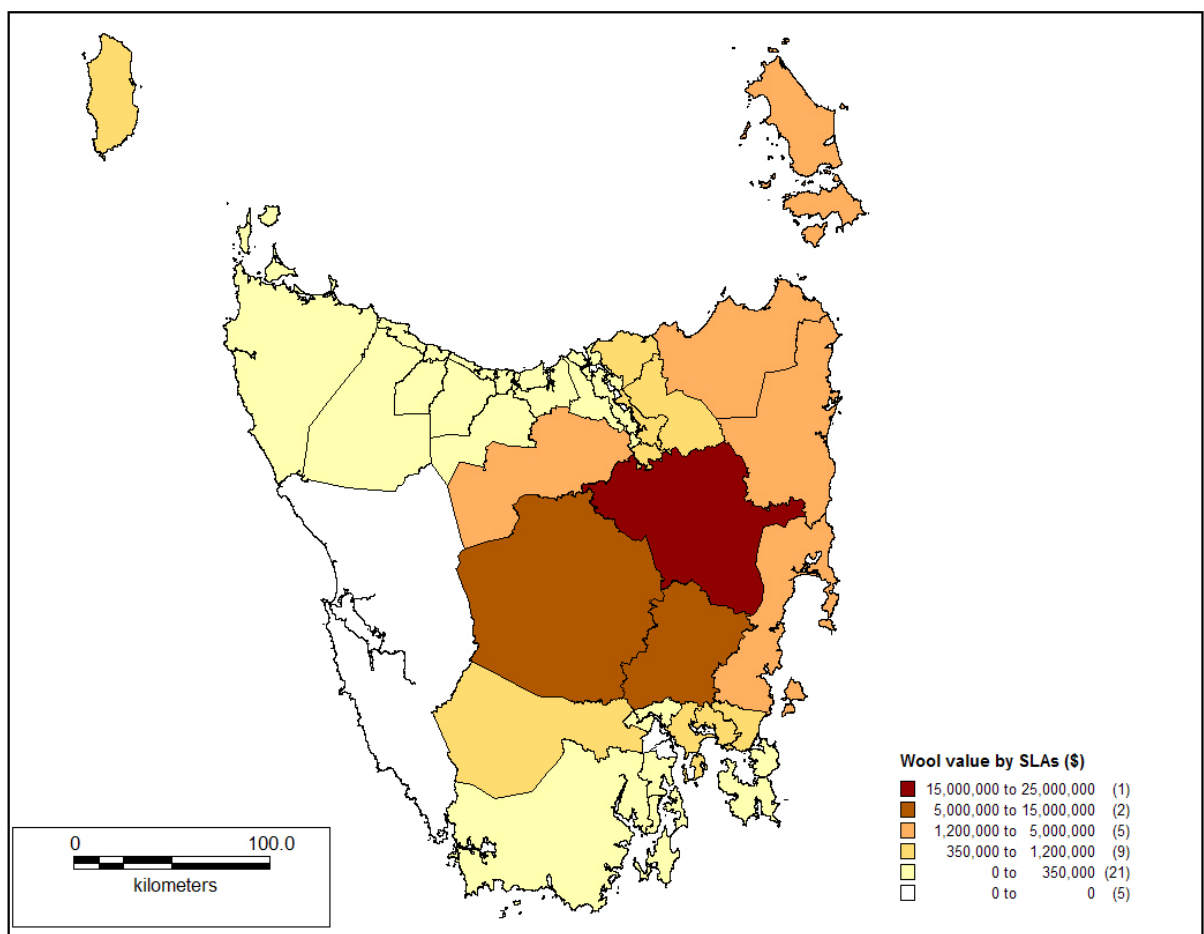


Figure 18: Value of wool production by SLA (Source: ABS Census 2006)

1.3.9 Poultry and Egg Production

Data on poultry production in Tasmania is contained within 'other livestock' as there are limited producers in the State (2 main producer) and data is therefore not publicly available due to commercial in confidence reasons. Data on commercial egg production is however available and is shown in Figure 19 below. Kingborough Pt A (\$2.56 million) was identified in 2006 as being the second most valuable production area of eggs in Tasmania behind Northern Midlands Pt B (\$3.19 million). It is however important to note that since the 2006 census, one of the two major egg producers in Kingborough (Pitts Poultry at Snug) has since closed (Sun Valley at Margate remains) and therefore the value of production in Kingborough Pt A and the southern region in general will likely be less significant following the next census.

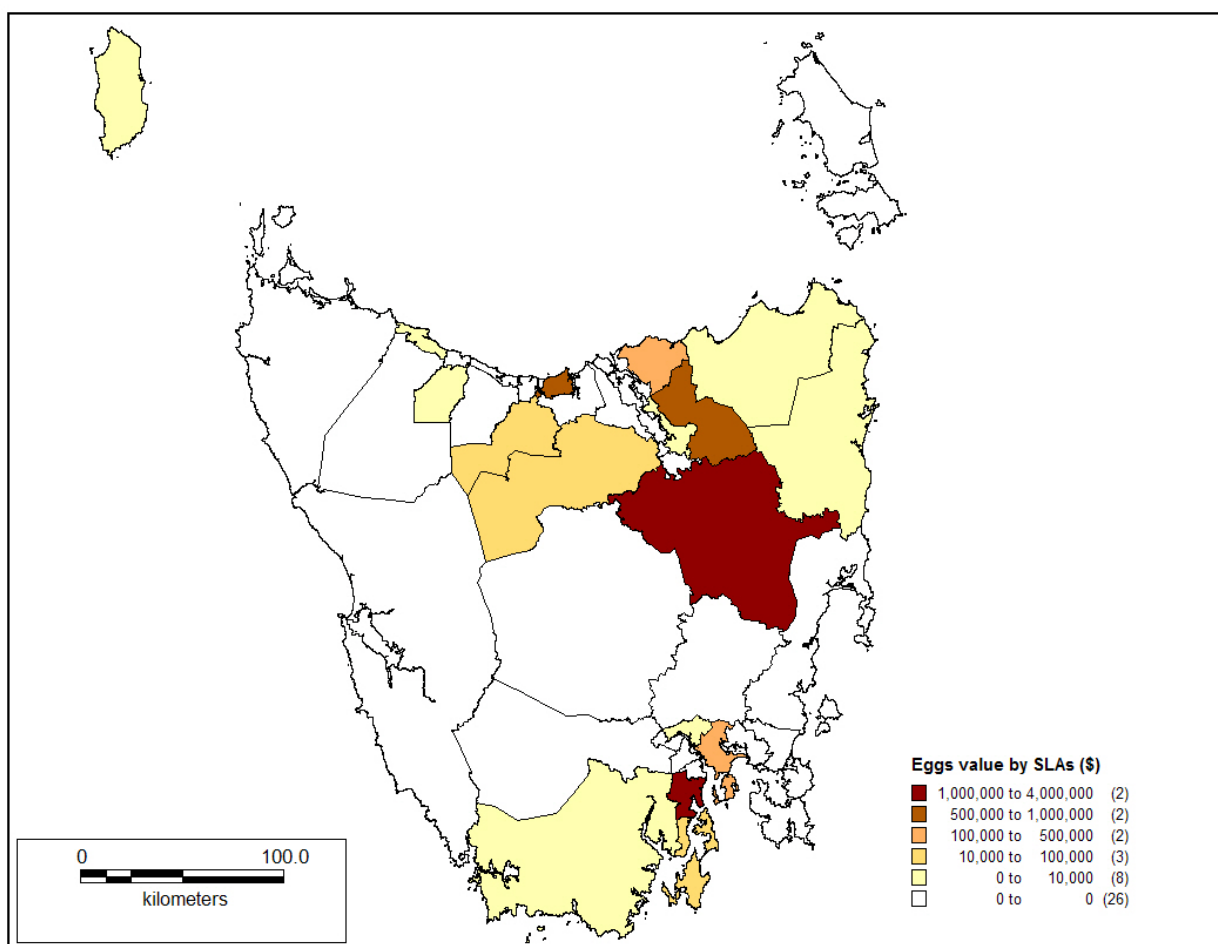


Figure 19: Value of Egg Production by SLA (Source: ABS Census 2006)

1.3.10 Hops, Canola, Olives and Nuts

The region contributes 32% of the State's tonnage in hops, canola, olives and nuts where Southern Midlands produces the most at 848 tonnes, (significantly less than the State's top producer Northern Midlands at 3,281 tonnes). Central Highlands produces 638 tonnes and parts of the Derwent Valley 337 tonnes. The tonnage of these products is considerably less than other food based products, reflecting the nature of the goods in question.

Whilst accurate data is not available regarding the value of these products to the overall state economy, the value of "Other Crops", as determined by the ABS, shows that the Southern Region contributes 34% of the value of these products, which include hops, canola, olives and nuts.

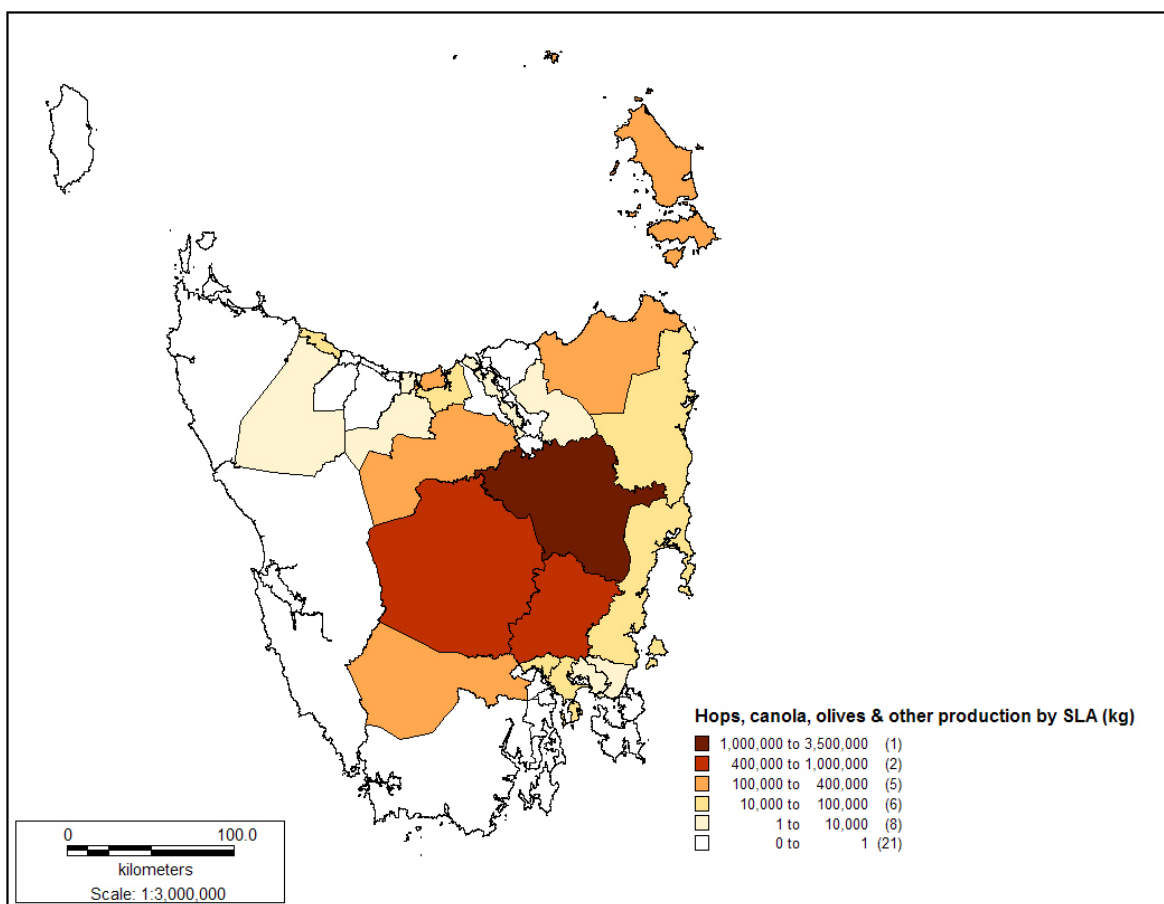


Figure 20: Hops, Canola, Olives and other production volumes by SLA (Source: ABS Census 2006)

1.3.11 Poppies

There is limited data on poppy production due to confidentiality and security reasons. However there is data on the amount of area devoted to poppies, which shows that the Southern Region accounts for 15% of the State's poppy production area. Furthermore poppies are included in the ABS other crops data set which also includes lavender, fennel, peppermint and others. Whilst the overall value of these crops is not significant at just over \$10 million, the Southern Region does make up 34% of this value.

1.3.12 Nurseries, Flowers and Turf

The State has a robust nursery, flowers and turf industry with a value of over \$45 million a year in production value. In the Southern Region, the areas which produce the most of these products include, the Huon Valley (Almost \$7 million) and Clarence (Almost \$4 million). Overall the Southern Region produces 39% of the value of nurseries, flowers and turf to the State's economy.

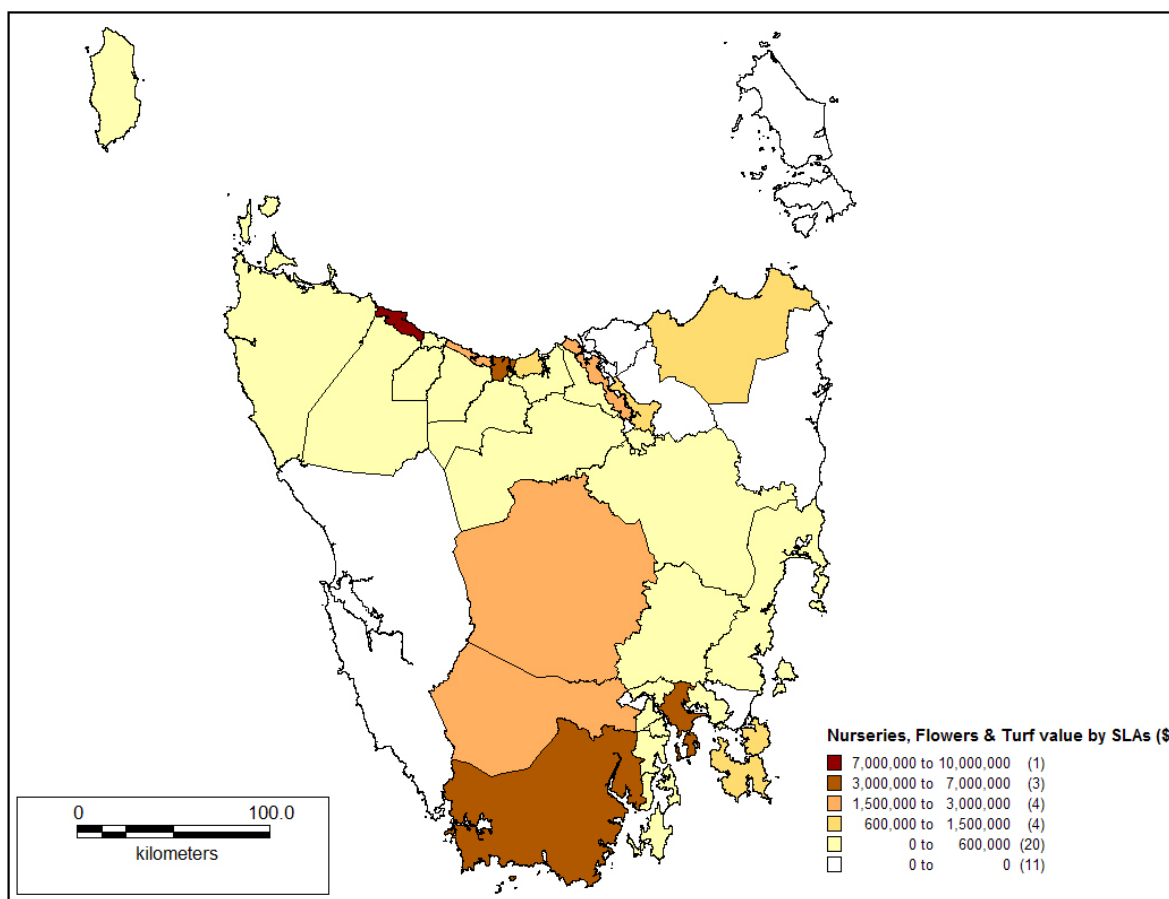


Figure 21: Value of Nurseries, Flowers and Turf production by SLA (Source: ABS Census 2006)

1.3.13 Wine

Tasmania is becoming a nationally and internationally recognised wine producing region. Since 1986 the industry has increased significantly, going from 47ha in area across the state to 1549ha in 2009. The majority of vintages are in Pinot Noir and Chardonnay grapes, and to a lesser extent Riesling, Cabernet Sauvignon and Sauvignon Blanc (2010, Wine Tasmania). In the 2006-07 financial year, the value of wine, after packing and processing was \$21 million and farm gate value was \$13 million. However it must be noted that the success of vineyards is very dependent on yearly grape growing conditions, with a bad year rendering much of the crop worthless. The financial year of 2006/07 can be considered a slightly below average year with a yield of 5571 tonnes from 999ha at the end of 2006. The years of 2003 (6390 tonnes), 2004 (7861 tonnes), and 2008 (9628 tonnes) can be considered good years with the year 2009 a bad year with a yield of 5045 tonnes from 1549ha (Department of Primary Industries, Parks, Water and Environment, Wine Industry Fact Sheet 2009).

The Southern Region has close to 800ha of vineyards, slightly short of the main wine growing area in the northern Region, which has close to 850ha. Despite this significant acreage, the Southern Region only produces 29% of the overall state's wine yield (DPIPWE, Wine Industry Fact Sheet 2009). This is reflective of the quality of land in the southern region as compared to the northern region, as well as the climatic variations between the regions.

The success of Tasmanian wines is dependent on the weather conditions from year to year, but also informed by the overall climate. The excellent quality of various grape varieties for sparkling wine is due to the long, mild growing season created by Tasmania's latitude and maritime climate. The main wine growing regions, (Tamar Valley, Derwent Valley, Coal Valley and East Coast) generally receive lesser rainfall than other parts of the State which can also contributes to quality grape production.

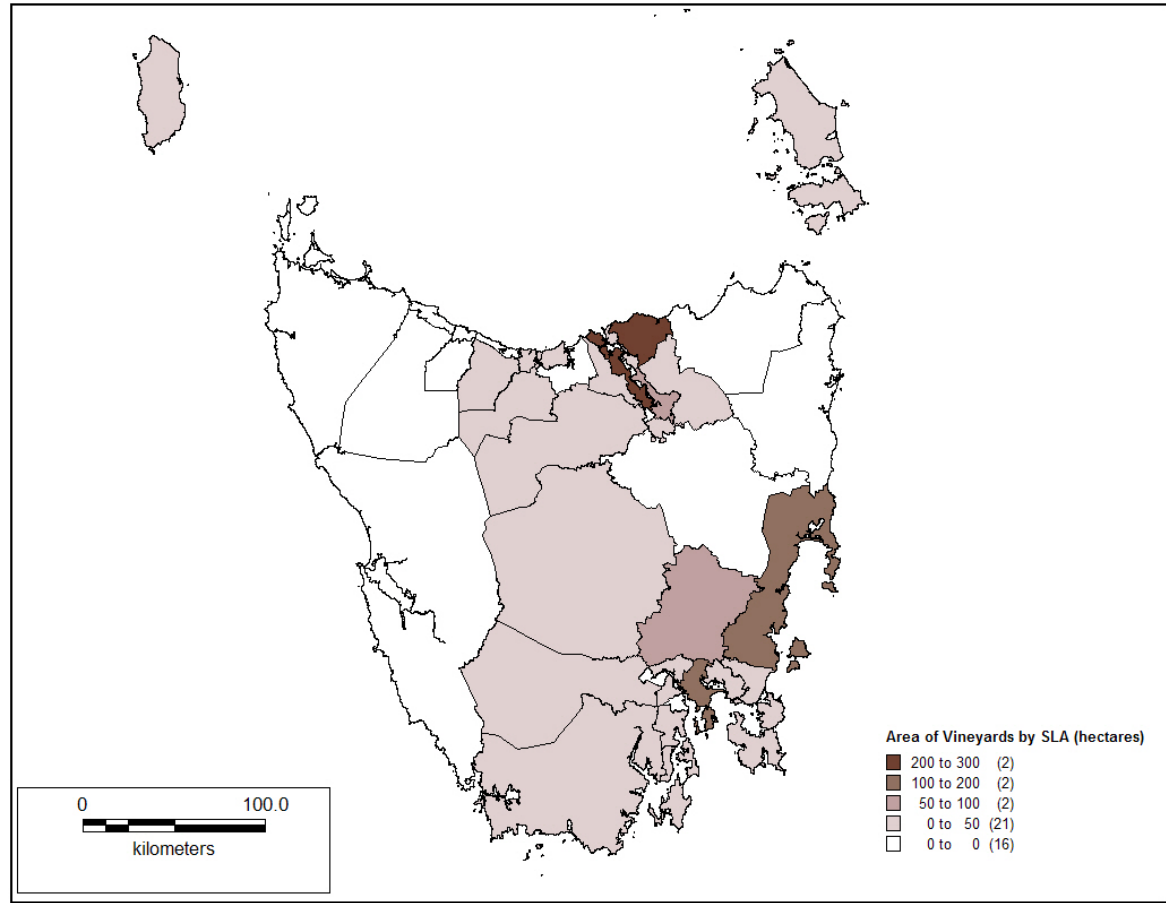


Figure 22: Area of land dedicated to vineyards by SLA (Source: ABS Census 2006)

1.3.14 New Crops

As an example of the changing nature of agricultural production in the Southern Region, in recent years, walnut production has become a new player with an orchard of 540ha boasting 180,000 trees being established in the Glamorgan Spring Bay area (Department of Primary Industries, Parks, Water and the Environment, 2010). When the 2006 Census data was collected this orchard was not at maturity and as such would not have been producing or contributing to the agricultural value in the area. In 2009 the first crop of walnuts was maturing with two thirds of the crop exported overseas to Turkey and Germany. The timing of the crop in Tasmania means the walnuts will be mature and ready for export just prior to Christmas, a crucial time for the German market. The cooler climate also produces a nut with a softer shell which is more attractive for consumers.

This is an emerging agricultural business that is likely to have a significant impact on Tasmania's exports. This orchard, (and one in NSW also owned by Websters), is poised to grow 2,500 tonnes by 2012 which is equal to 50% of the Australian walnut consumption market. In the last harvest 800 tonnes of Walnuts were produced, doubling the tonnage from the previous year.

1.3.15 Organics

There is limited information on the organics industry within Tasmania. However data from 2005 indicate that the industry contributes \$9 million to the Tasmanian economy. Approximately 65% of produce is for the Tasmanian market, with the remaining 35% for the Australian market. Southern Tasmania accommodates organic farms for apples, cherries, wine grapes and some livestock.

1.3.16 Honey Production

Annual honey production remained relatively constant at 1,000 tonnes. Leatherwood honey, from Leatherwood trees in rainforests in the South and West of the state, make up 65% of the Tasmanian honey industry. Twenty percent of these sales are local, 50% are interstate and a further 30% are overseas. Due to the location of the Leatherwood forest, Leatherwood honey production is an important although specialised industry within the region (Department of Primary Industries, Parks, Water and Environment, 2010).

1.3.17 Irrigation

Tasmania has over 50,000ha of areas of irrigated land with data from 1996/07 indicating the southern region had over 10,000ha of irrigated land. The areas within Southern Tasmania that are irrigated include parts of the East Coast, Coal River, Derwent River area, Kingston coastal areas, Huon River area and parts of the South West Coast.

The total consumption of water for irrigation in Tasmania represents 59% of the total water use for the state (Australian Natural Resources Atlas, 2010). Pasture accounts for 48% of this irrigation area, vegetables 30%, Fruit 5%, Cereals 4% and other crops 13%. As indicated, fruit production is one of the main agricultural pursuits in the Region. Fruit production accounts for a very small percentage of the irrigated land in the State, whereas Vegetable production accounts for 30% of the irrigated area – of which the Southern Region has minimal contribution.

Industry analysis indicates that by 2015 an additional 250,000ML of irrigated water will be required per year which is a 50% increase on existing irrigation supplies (Department of Primary Industries, Parks, Water and Environment, 2010). Whilst this is likely to see an increase in irrigation in the South of the State – particularly in areas such as the Coal River Valley - as a percentage of the state as a whole, this is likely to be considerably less than the irrigated areas in the north and north west.

1.4 Agricultural Production Trends

Agricultural production value has been increasing across all three regions in the past 12 years, although both the North and North-West have seen greater proportionally increases in value than that in the South. See Figure 23 below.

The value of individual agricultural commodities has not however seen a steady rise. Some agricultural commodities have been decreasing in value of production while others have been increasing. For example in the South:

- The value of livestock production has increase from approx \$20.5 million to just over \$50 million. Information on volume is not available, however this increase in production value would also be resulting from changes in farm gate value. A good example of this is the significant increases in the price of lamb across the same period;
- The value of wool, and cereal for grain production has remained relatively steady, although with fluctuations between periods. The slight increases in value can be attributed to inflationary pressures;
- The value of fruit production has decreased. This correlates with the decrease in volume of fruit production, particularly decreases in pome fruit production;
- The value of vegetable production has increased, while the total volume has decreased. This indicates that the South is producing high value vegetables products (i.e. speciality lettuces from the Coal River Valley); and
- The value of nurseries, cut flowers and turf has increased beyond inflationary pressures.

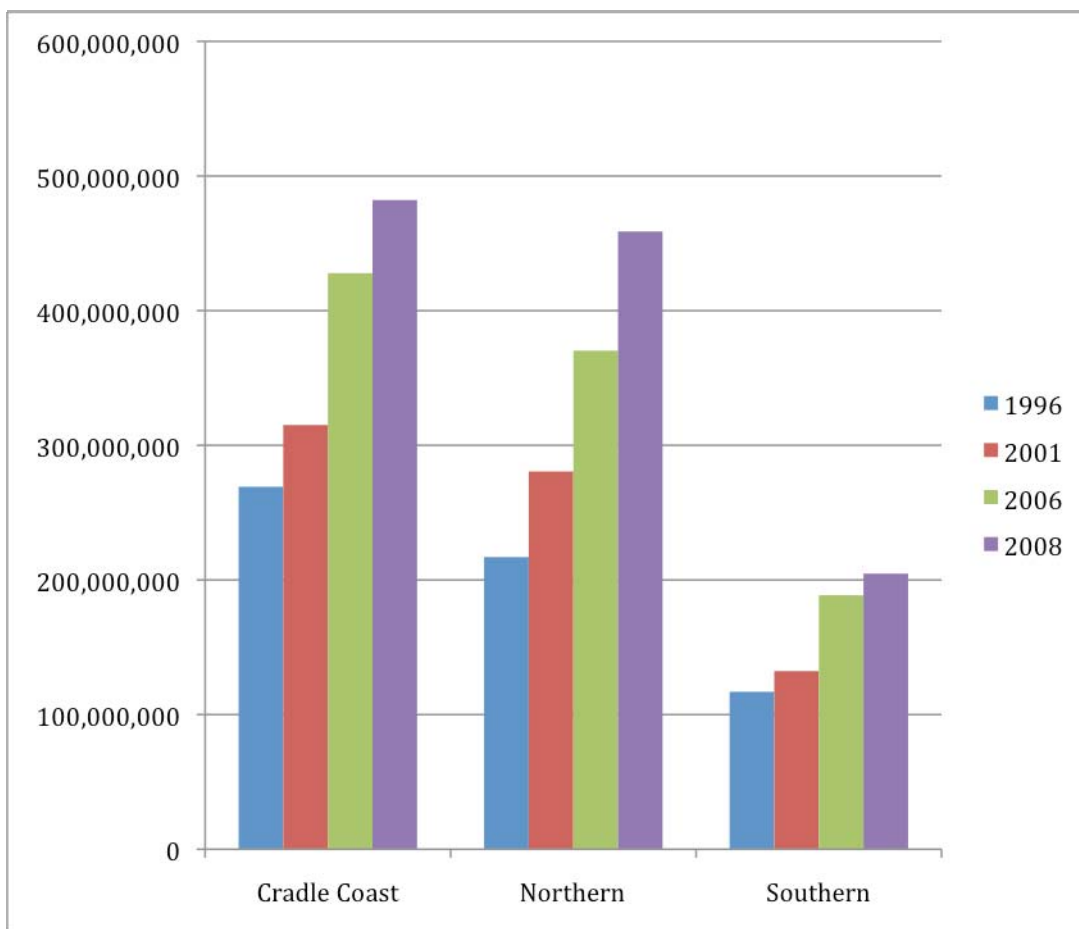


Figure 23: Comparison between time periods of Agricultural Value by Region (Source: ABS Census & Value of Agricultural Commodities 2008)

Table 2: Comparison against time periods for value of Agricultural Production by region of selected products (Source: ABS Census & Value of Agricultural Commodities Produced 2008)

	1996 Production (\$)			2001 Production (\$)			2006 Production (\$)			2008 Production (\$)		
	South	North	N-W	South	North	N-W	South	North	N-W	South	North	N-W
Livestock	20,672,234	42,488,074	37,804,326	20,174,788	63,148,441	68,195,199	53,196,881	114,323,531	84,814,641	50,057,947	96,730,715	82,624,376
Wool	27,568,727	35,077,573	3,031,785	34,404,246	45,009,701	4,170,777	34,697,170	36,650,948	1,962,553	32,408,646	35,958,992	2,836,479
Milk	4,098,570	49,707,654	84,998,798	3,782,012	55,97,648	88,059,428	5,721,061	68,825,533	133,530,994	8,581,129	133,995,987	189,781,786
Vegetables	4,559,895	32,453,603	96,063,712	5,720,298	44,292,072	95,007,092	6,652,822	61,849,500	130,301,778	17,767,100	76,523,337	141,986,699
Hay	3,227,335	12,592,841	11,910,705	6,588,427	16,809,371	14,253,336	8,754,747	32,604,710	25,835,571	8,369,106	32,045,523	2,1738,125
Cereals for grain	2,871,564	10,285,269	1,288,079	2,252,297	10,064,458	875,768	4,081,341	10,890,273	1,351,915	3,860,511	13,542,348	3,498,315
Fruit	38,389,362	7,570,791	7,414,106	40,074,232	13,413,204	8,796,180	40,921,306	13,113,195	5,663,874	55,762,621	30,075,193	8,870,929
Hops	3,944,770	4,115,756	2,550,886	3,354,980	2,582,760	3,149,020	1,931,400	12,61,231	nd	nd	nd	nd
Eggs	183,971	3,376,152	1,244,314	1,302,211	2,419,981	915,165	2,752,359	3,963,314	796,014	3,310,295	5,063,039	1,466,992
Nurseries, cut flowers & turf	3,384,571	1,946,626	2,901,589	4,520,692	2,026,818	5,541,404	13,406,857	5,521,510	21,810,539	15,813,074	10,020,835	13,356,994
Other	8,038,380	17,382,404	20,038,732	10,147,921	25,244,998	26,113,693	16,523,252	20,270,881	21,814,787	8,773,667	24,865,393	133,569,934
Total Agriculture	116,989,376	216,996,740	269,220,032	132,322,104	280,609,452	315,077,062	188,639,196	370,274,626	427,882,669	204,704,096	458,821,362	482,186,334

Table 3: Comparison against time periods for volume of Agricultural Production by region of selected products (Source: ABS Census)

	1996 Production (tonnes)			2001 Production (tonnes)			2006 Production (tonnes)		
	South	North	North-West	South	North	North-West	South	North	North-West
Potatoes	4,811	79,066	218,156	8,819	166,028	206,170	3,553	105,269	179,733
Onions	2,254	18,611	70,204	0.9	13,364	28,849	nd	21,811	47,020
Green Peas	6,494	30,992	28,184	3,485	32,726	16,653	27	30,123	6,295
Other Vegetables	3,024	9,724	47,013	4,939	12,886	57,708	2,695	19,869	74,069
Apples	41,031	4,149	7,217	38,328	3,839	10,079	25,090	2,850	4,822
Grapes	158	1,587	33	nd	nd	nd	2,179	3,354	37
Other Fruit	1,652	379	363	1668	262	259	3,717	325	588
Cereals (wheat, oat, barley)	15,117	47,078	5,348	14,807	53,302	4,432	18,726	52,317	6,570
Legumes for Grain	186	455	nd	151	370	99	1,284	2,477	289
Canola	115	64	nd	84	349	5	256	1,094	8
Wool	nd	nd	nd	4,938	7,141	702	nd	nd	nd

N.B: volume data on livestock and other animal based products such as milk and eggs is not available

1.5 Agricultural Production Analysis

The data highlights a number of issues. The type of agricultural production is quite different in the southern region to the two northern regions, which are major producers of a variety of vegetable crops. The better quality agricultural land in the North West, reliable rainfall, local climate and suitable elevation is conducive to large scale high frequency vegetable cropping.

Whilst the Southern Region has the least amount of prime agricultural land, the land is suitable for certain agricultural endeavours. There is a considerable area of extensive agriculture focused on grazing (cattle and wool) and grain production in the Southern Midlands, Central Highlands, Derwent Valley and to a lesser degree Glamorgan Spring Bay. Intensive agriculture also thrives in the region, but in relatively small pockets, and includes high value crops such as berries, stone fruits, pome fruits, walnuts, poppies and wine grapes. Intensive agriculture generally thrives in the more valley based agricultural areas where controlled water supply is more certain: The Huon, Derwent and Coal River valleys.

Table 4: Comparison of the Regional differences between Volume, Area and Value of State Totals

	North West	North	South
Volume	51%	38%	9%
Area	17%	44%	38%
Value (\$)	43%	37%	19%

As indicated in Table 4, the Southern region produces a much smaller volume of product compared to the North West and North in proportion to value. That product is nevertheless a significant contribution to the Tasmanian economy. A number of low volume high value crops do well in the Southern region positively skewing the statistics in the above table. Even superfine wool falls into this category, although the area of land required is proportionally much greater to produce a given weight.

The Southern Midlands (\$45,803,188 gross value for 2006), Huon Valley (\$39,157,605) and Central Highlands (\$ 34,958,783) all contribute significant amounts to the state-wide economy. Although, to put these figures into a state-wide perspective, it is noted that the top contributor, Circular Head, contributes more than these three LGSs combined at \$139,360,262. The Glenorchy municipal area is notable as having the highest value production per hectare of agricultural land which is reflective of the high value of the Moorilla winery, in that municipality. The value of production per hectare is shown for each SLA in Table 5 and Figure 24 below. What is interesting to note, this value per hectare analysis, is not necessarily indicative of the 'significant agricultural land'. For example land within the midlands area would generally be considered significant because of its importance in wool, livestock and to a lesser degree grain production, however the land required to produce these products is considerable more in ha than some of the more intensive agricultural production associated with such things as fruit production. Understanding the distinct characteristics (physical and production) of individual agricultural districts therefore becomes important.

Table 5: Value of agricultural production per area of agricultural land by SLA in Tasmania (Source: ABS Census 2006)

SLA	Value of agricultural product (\$)	Total Agricultural Area (ha)	Production value per area (\$/ha)
Glenorchy	902,624	48	18,746
Devonport	22,605,276	3,226	7,007
Latrobe – Pt A	35,777,283	8,130	4,401
Latrobe – Pt B	32,681,224	8,664	3,772
Central Coast – Pt A	17,417,022	4,775	3,648
Waratah Wynyard – Pt A	25,542,175	7,116	3,590
Waratah Wynyard – Pt B	31,744,876	11,040	2,785
Central Coast	50,430,725	18,882	2,671
Huon Valley	39,157,505	19,771	2,032
Burnie	4,434,895	2,261	1,959
Clarence	14,966,033	7,705	1,941
Hobart – Remainder	60,334	33	1,828
Circular Head	139,360,252	76,763	1,815
Burnie – Pt B	10,455,665	5,817	1,797
Kentish	2,643,964	19,945	1,326
Derwent Valley – Pt B	13,548,643	10,841	1,250
West Tamar – Pt A	11,600,267	9,291	1,249
Meander Valley – Pt B	101,757,532	83,456	1,219
Dorset	86,096,971	81,160	1,060
Kingborough Pt A	4,225,471	4,126	1,024
Northern Midlands – Pt A	4,330,479	5,270	822
West Tamar – Pt B	4,889,019	6,099	802
Tasman	5,686,485	12,777	758
Derwent Valley – Pt A	860,010	1,140	754
Sorell – Pt B	578,966	8,156	696
George Town – Pt B	9,022,523	13,912	649
George Town – Pt A	1,855,412	2,887	643
Kingborough – Pt B	2,215,551	3,469	639
King Island	30,732,024	59,747	514
Launceston – Pt C	7,796,233	15986	459

Brighton	2,130,298	5,030	424
Northern Midlands – Pt B	109,006,179	281,640	387
Launceston - Pt B	5,353,738	14,772	262
Break O'Day	14,473,152	40,212	260
Sorell – Pt A	5,450,126	15,328	334
Flinders	13,568,885	45,196	302
Southern Midlands	45,803,188	167,536	273
Central Highlands	34,558,783	166,365	210
West Coast	261,663	1,342	195
Meander Valley – Pt A	184,274	1,179	156
Glamorgan Spring Bay	8,995,679	72,425	124
Hobart - Inner	0	0	0
Launceston - Inner	0	0	0
Southern Region	188,639,196	213,000	381
Northern Region	370,274,626	560,000	614
North-West Region	427,882,669	477,000	1,879

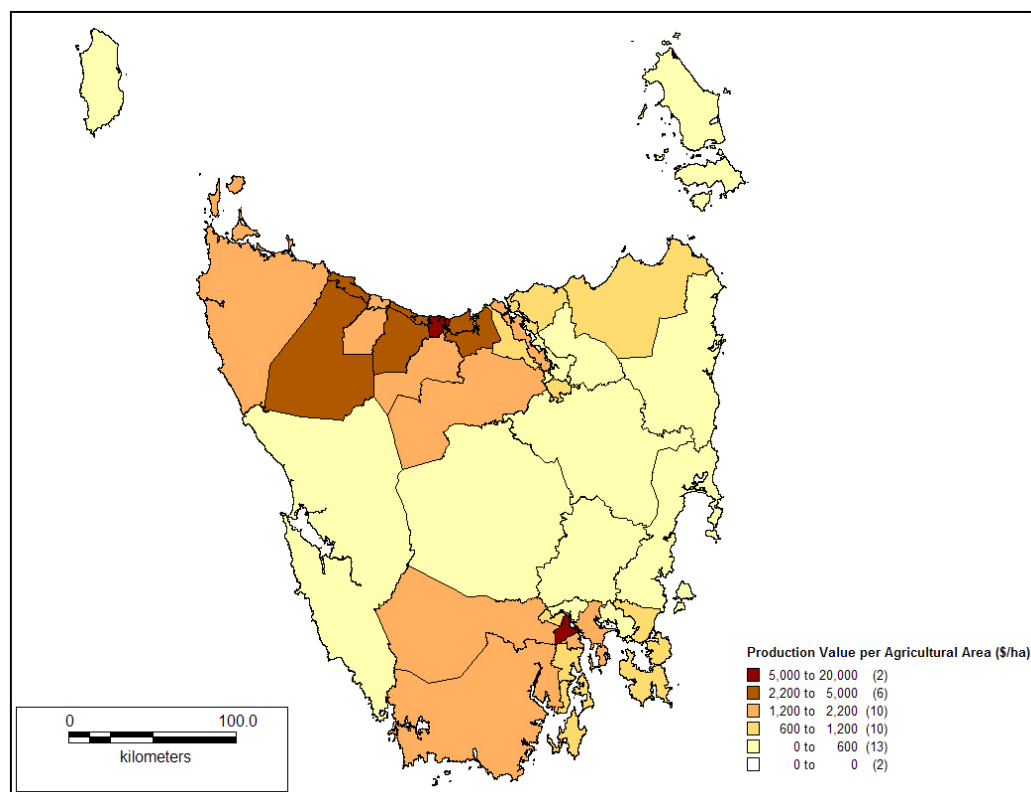


Figure 24: Value of agricultural production per area (ha) of agricultural land

At a regional level, the analysis of the value of agriculture to the region shows that livestock (\$53,196,881) is still the greatest earner in the region, followed by fruit production (\$40,921,306), wool (\$34,697,170) then nurseries, flowers and turf (\$18,193,081).

It should be noted that wine grapes are included in the fruit total in this instance by the ABS. Further more full details on poppies cannot be provided for confidentiality reasons, and some emerging crops such as walnuts were not at maturity when this Census data was collected in 2006, so their current (2010) contribution to the economy has not been able to be taken into account.

1.6 Climatic affects on Agricultural Production

There are likely to be significant impacts of a changing climate on agriculture in Tasmania. Generally, increases in temperature are likely to reduce time to crop maturity, leading to changes in crop species and cultivars. This may require relocation of some cropping enterprises and provide a warmer climate for new crops. The Climate Futures Project for Tasmania will be releasing a study on the impact of climate change on agriculture in Tasmania sometime in mid 2010. When available this information should be taken into account in planning for future agricultural production. In the meantime however a precautionary approach should be adopted in protecting agricultural land. This would mean a more conservative approach in allowing subdivision and uses which impact upon agricultural potential.

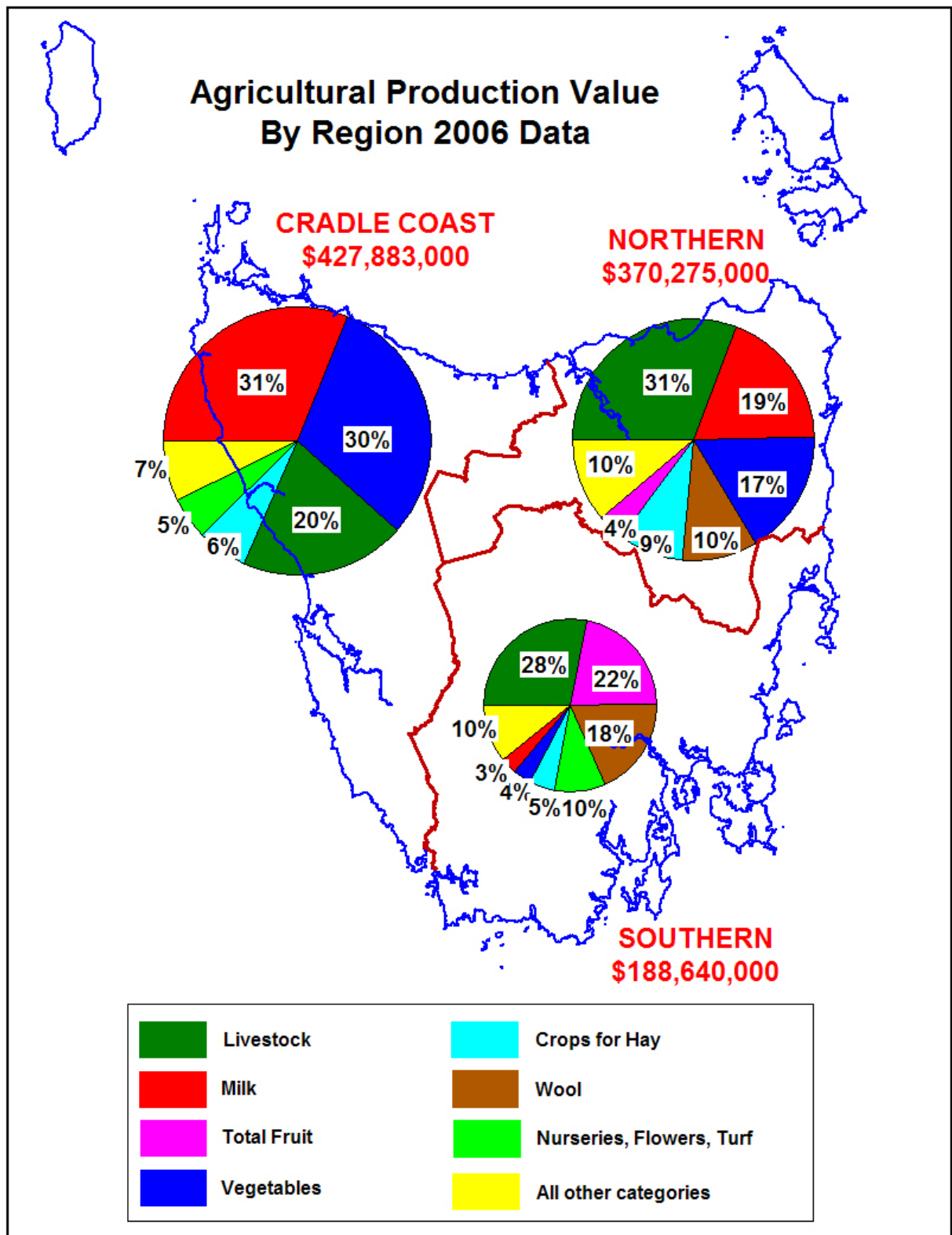


Figure 25: Value of Agricultural Production by Region (Source: ABS Census 2006)

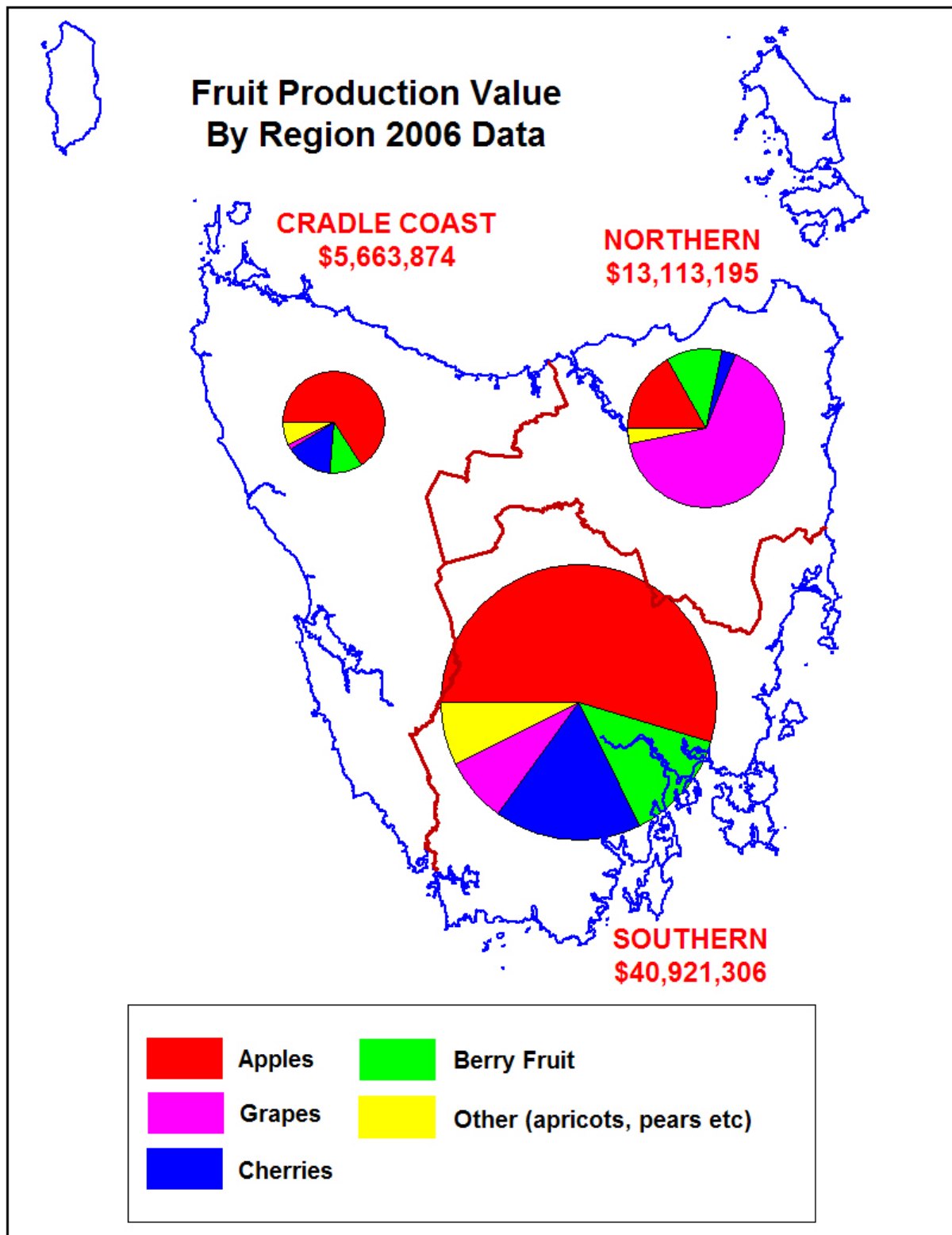


Figure 26: Value of Fruit Production by Region (Source: ABS Census 2006)

Annual agricultural production (tonnes) by region

Compiled from 2006 Census Data

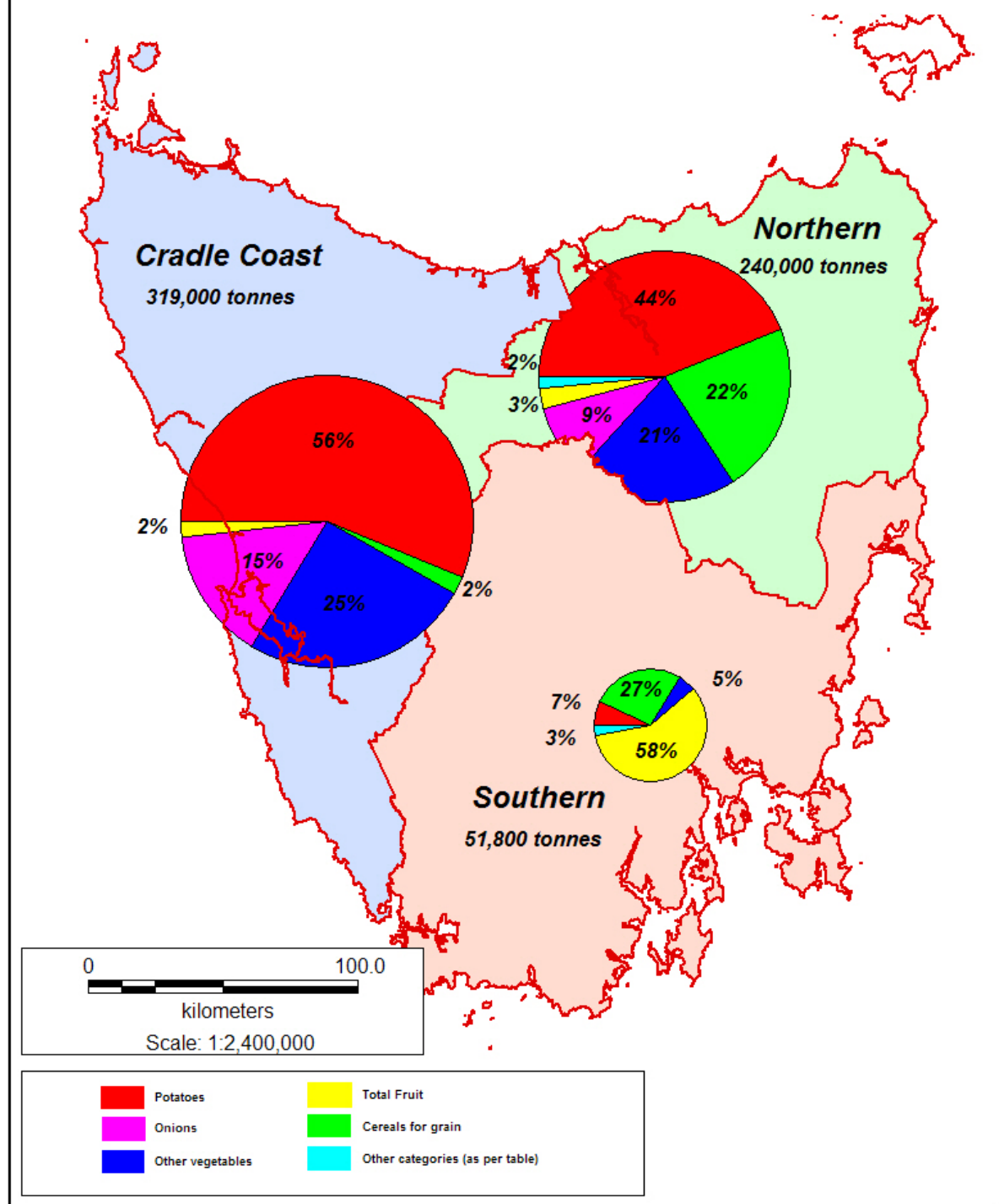


Figure 27: Volume of Agricultural Production by region (Source: ABS Census 2006)

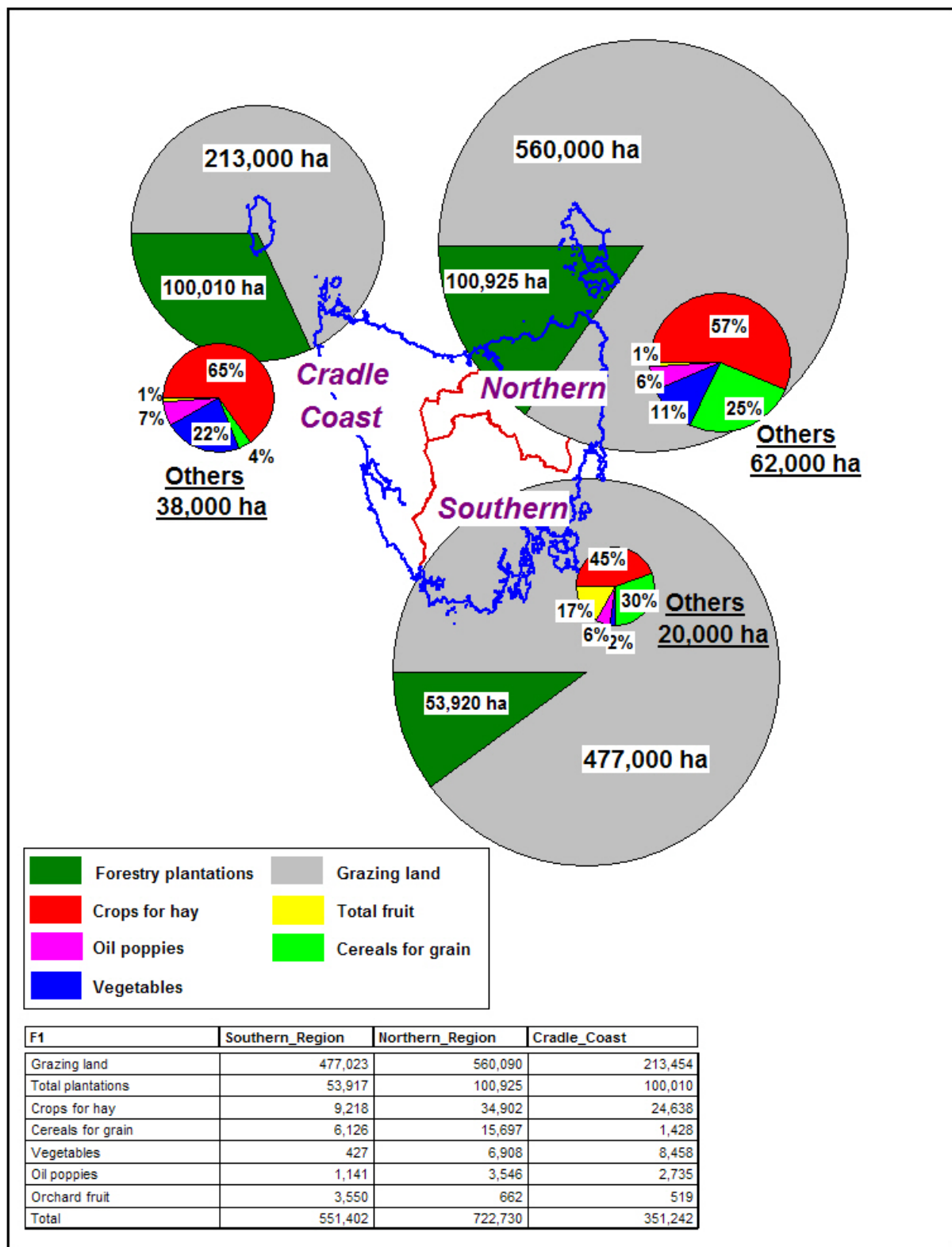


Figure 28: Land utilised for Agricultural Production by region (Source: ABS Census 2006)

1.7 Planning Implications

1.7.1 Zoning

The Protection of Agricultural Land State Policy (PAL) protects all 'Prime Agricultural Land' from conversion to non-agricultural uses and other uses that do not rely on the soil as a growth medium.

In regard to non-prime agricultural land, PAL (Principle 7) states that *the protection of non-prime agricultural land from conversion to non-agricultural use will be determined through consideration of the local and regional significance of that land for agricultural use.*

In order to determine 'local significance' it is necessary to understand the region, and in order to determine 'regional significance' it is necessary to understand the State.

In the South, the concept of splitting agricultural land into prime, and 'non-prime' has no real relevance within the region, as there is no prime agricultural land (with the exception of a handful of minute patches). Nevertheless there are discrete local areas wherein intensive agriculture not only exists, but also thrives.

However the majority of agricultural land in the south is used for extensive (dry-land) agriculture and has a significantly lower production value per hectare in comparison to these intensive local areas, and even greater discrepancy exists when compared to the prime agricultural land found in the other regions of the State.

In order to comply with the State Policy in regard to non-prime agricultural land it is necessary to understand:

- The relative significance of various local areas within the region
- The relative significance of these local areas within the state
- The relative significance of the Southern region within the State and in comparison to the other two regions.

Preliminary documents from the north west of the State indicate that many farming units contain swathes of both prime and non-prime agricultural land. The intention is to treat all agricultural land the same, as the high level of intermixed land makes separation or subdivision difficult.

It would also appear that in the north-west of the State there is a more even graduation through the classes of land from prime to non-prime, with a significant proportion of the non-prime land being at the higher end of the scale. This contrasts with the sharp graduation in the south of the State, from relatively high value non-prime land, located in discrete pockets, to relatively low value non-prime land located over broader areas.

In other words, the non-prime agricultural land in the North West would generally be of greater value (per hectare) to the State than the non-prime agricultural land in the South. In fact, the value of the non-prime agricultural land in the North West is generally likely to approximate the high value non-prime land in the South.

Whilst the Southern Region does not have significant swathes of prime agricultural land, the intensively farmed land it does have is still significant enough at a local, regional and state level, and still warrants a high level of protection from conversion to non-agricultural uses. An Intensive/Significant Agriculture zone should be applied to these areas:

- Land currently zoned as Intensive/Significant Agriculture in existing schemes. These areas correlate to established irrigation and other areas in which intensive agriculture is common. Production value per hectare is to be a key data set used to define these regions, along with soil classification.
- Land subject to a proposed planned irrigation scheme under the Tasmanian Irrigation Development Board. The determination of zone boundaries should be undertaken in conjunction with Phase 3 of the Board's four-phase scheme development process. Any irrigation schemes completing this phase prior to the introduction of the new Planning Schemes should be thus incorporated into them. Subsequent irrigation schemes should be recognised through the planning scheme amendment process.

Other agricultural land in the South should be zoned Rural Resource, which accommodates both agricultural and non-agricultural rural uses. It is however important to note that although rural land is not identified as 'Significant' and not afforded the highest level of protection through specific zoning, the remaining rural land should not be available for open slather subdivision and residential development for a number of reasons:

- Maintaining an overarching residential settlement strategy and ensuring good integration between land use and infrastructure, which in turn minimises the cost to the community both socially and economically;
- Agricultural production on 'non significant' agricultural land may still be important for local economies and communities. It also provides for agricultural production that does not require 'significant' land to occur without taking up precious land resources (i.e. egg production, poultry farms, feedlots, hydroponic based greenhouse production);
- Protecting agricultural land for the future. With potential climate change effects, land that is not 'significant' now, may be in the future;
- Protecting the visual values associated with the rural landscape;
- Minimising the exposure of sensitive residential uses to land hazards and impacts from agricultural production; and
- Protecting environmental values.

Zoning areas of agricultural land appropriately with adequate constraints, not only recognises the most appropriate use of the land, and provides Planning Authorities the tools to limit fettering of agricultural land. This will also reduce conflicts between land uses in the future.

Consideration must also be given to the zoning of land adjacent to agricultural land. The expanding tree change movement, represents a significant threat to our agricultural land and its use, generating increasing numbers of conflicts arising between agricultural uses, and adjoining or nearby residential or rural residential uses. Whilst there are limited solutions available to ameliorate existing situations, appropriate zoning would ensure this conflict is minimised in the future and farmers can continue to farm unfettered. A Rural Living zoning between the Rural Resource or Intensive Agriculture zoning and more intensive residential zonings, which coupled with appropriate attenuation distances would allow for systematic staggering of the uses in the area.

1.7.2 Lot Size

Ideally, minimum lot size should be tailored to the particular agricultural area and the size of a typical financially self-sustaining agricultural enterprise. As discussed in section 1.8, existing patterns of lot sizes in the region's rural areas is varied and in some locations, such as the Huon Valley, as lead to significant land fragmentation.

Small lot sizes do not in themselves do not directly result in loss of agricultural potential. Many productive farming properties across the region comprise of multiple title holding and trading of land between farm holdings does occur. Smaller rural lots (generally between the 12 to 20 hectare size) can also sustain a single agricultural enterprise particularly where soils and water supply lend themselves to intensive agricultural practices.

Smaller rural lots or allowing further subdivision in rural areas indirectly fetter agricultural potential by the subsequent development expectations. Across many Council areas within the region, there is a long standing expectation of a dwelling per lot that has been supported by existing or previous planning schemes.

The result has been in some areas, particularly those that have desirable 'lifestyle' characteristics a noticeable loss of productive rural land to effectively rural residential development. The presence of rural and residential land uses in proximity to each other can also generate land use conflict, because of inherent incompatibilities. Land use conflict may arise because of such things as noise, odour, farm chemicals, light, visual amenity, dogs, stock damage and weed infestation.

These land use conflicts are exacerbated where there are small rural lots, as these lots are not large enough to incorporate appropriate buffer distances around dwellings creating insufficient physical separation to ameliorate impacts. In addition where rural and residential land uses are intermixed there is often misunderstanding of the purpose and character of the district which further contributes to land use conflict, disharmony within the community and a reduction in productive activity which contributes local and regional economies.

1.7.3 Irrigation areas

Many parts of the Southern Region have constricted water resources in comparison with the North West and parts of the Northern Region. Accordingly irrigation is of paramount importance to enable agricultural areas to thrive. Some irrigation schemes have already been established in areas such as the Coal River Valley, which have proven to be of significant benefit to those areas. As indicated above the Intensive Agriculture zone should apply to existing and planned irrigated areas.

Major irrigation schemes are currently being investigated for the main agricultural resource districts in the Southern Region. Those are the Midlands Scheme, South East Scheme, Shannon Clyde Scheme and the Swan River Scheme. These irrigation schemes, currently being developed by the Tasmanian Irrigation Development Board (TIDB), will significantly change agricultural practices in the Southern region, especially in regard to broad acre cropping and perennial horticulture.

1.7.4 Intensification and Diversification

The diverse topography, soils and microclimates of the Southern Region, have resulted in a wide range of agricultural enterprises – including perennial broad acre cropping, vine enterprises, tree and stone fruit enterprises, and in some instances intensive annual cropping.

A recent agricultural study (*Identification of Agricultural Land Potentially Suitable for Diversification and/or intensification*, Agricultural Resource Management Pty Ltd, 2011) has identified a large portion of rural land in the Southern Region for potential agricultural diversification and/ or intensification. The study revealed that approximately 82,417 Ha across the region is suitable for intensification and/ or diversification in regard to two potential rural land uses:

- Land suitable for broad acre cropping commonly irrigated by pivots and travelling irrigators; and
- Land suitable for perennial horticulture, such as vines and stone fruits.

Constraints to the diversity and viability of agricultural crops include the following:

- Soil limitations – such as slope, aspect, water logging, salinity hazard and erosion hazard;
- Climatic limitations – such as the risk of frost or drought;
- Water resource limitations – including a lack of proximity to existing or proposed irrigation infrastructure/schemes and a lack of farm dam development potential; and
- Residential or other non-resource development that has the potential to fetter adjoining agricultural land.

Agricultural diversification/ intensification is detailed further in '1.8 Towards an Agricultural Land Strategy'.

1.7.5 Growth boundaries

Whilst in the past we have seen a reduction in agricultural land through the expansion of rural residential use, the problems with this pattern of development are now well documented. This is an opportunity to rectify these issues and begin to prioritise agricultural land for its worth and value.

The Regional Planning Project will be establishing Urban Growth Boundaries as part of its settlement strategies, in conjunction with Local Councils. It is through these settlement strategies that new residential growth areas will be identified. The community and landowners in particular, need to recognise that an apparent failure of a parcel of land to accommodate a viable farm does not automatically mean it is appropriate for residential or rural-residential development.

Generally, new residential development (including rural-residential) should be located in existing settlements in order to take advantage of existing infrastructure, improve the viability of existing services and avoid further fettering of the agricultural resources.

1.7.6 Attenuation distances

Closely linked to the issue of zoning, is appropriate attenuation and buffer areas around agricultural uses. Most agricultural uses will inevitably see the use of chemicals such as pesticides and fertilisers, they will often involve heavy vehicle traffic and/or noise and are subject to periods of operation running well beyond normal hours, that in some instances, are long 24 hour periods during peak activity. Such uses introduce conflicts when located near to residential land users. Accordingly appropriate attenuation distance between the agricultural industry and the residential use should be established through the spatial arrangement of zones. For particular uses such as processing plants or cattle feedlots, an attenuation buffer arranged through a Planning Scheme overlay is appropriate, in accordance with DPIPW standard distances.

1.7.7 Labour Needs

Throughout Australia there has been significant labour shortages in the agricultural industry. This has come about most recently through a combination of drought and alternative employment opportunities (particularly in mining). Since the severe drought event of 2002-03, the number of people working in the agriculture industry across Australia reduced from 412,000 to 308,000, in 2007 (AgriFood Skills Australia, 2010). Now that the industry begins to experience an upward trend, in response to more favourable weather conditions, it faces a significant shortage in skilled workers.

In Tasmania this shortage has been felt most significantly in the dairying, station hands, shearers and shed staff areas (2009, Tasmanian Farmers Graziers Association). This has in part contributed to a corporatisation approach where farm hands are contracted to an agricultural company to work for different properties. The sector must consider ways of attracting people back to work in the industry to ensure the viability of these rural communities is maintained.

Whilst this is not specifically a planning issue, when planning for regional communities it is important to be mindful of the pressures and constraints facing that community.

1.7.8 Processing

There are a number of sites in the Southern Region that process agricultural products within rural areas, including fish processing, fruit packaging, abattoirs, wineries and timber mills. It is important that Planning Scheme provisions accommodate downstream processing of the regions products. This encourages wealth to stay within the region, and supports local producers by minimising transport and other costs.

1.7.9 Value Adding – On-farm Tourism

There has been a move in recent years to establish on-farm tourist ventures, not only in Australia, but around the world, leveraging off the ‘rural life’ experience. These operations vary in scope from offering a Bed & Breakfast, to working farm holidays. The Southern Region also has the added ingredient in the guise of its many grand Georgian homesteads still at the heart of many agricultural enterprises.

These enterprises are small scale and have minimal impacts on adjoining land uses, and provide another stream of income to the farmer, which is increasingly important as farmers operate in a more competitive global economy. Providing some level of tourism venture on the farm can help the farmers remain viable and Planning Schemes should make provision for these types of activities where appropriate.

1.8 Towards an agricultural land strategy

The Southern Region can be broken down into five distinct ‘agricultural sub-regions’. These ‘sub-regions’ are distinguished by their climatic and topographic conditions and have historically determined the type of production now endemic to the area. The data compiled and analysed above strongly reflects this. Table 6 lists these sub-regions and provides a summary of land identified as potentially suited to intensification and/or diversification. Those area identified for intensification are considered to be land that merits recognition as ‘significant agricultural land’ to the Southern region.

It is important to note however that land outside of these ‘agricultural sub-regions’ still has some relevance to agriculture in the region, albeit not at the same level of significance. For example land in

the central highlands is often used for summer grazing of livestock or parts of the Channel are utilised for more intensive forms of agriculture such as egg production.

The TIDB irrigation scheme, currently being investigated, will also help to intensify and diversify production across these 'agricultural sub-regions'.

Table 6: Summary of Agricultural Sub Regions and Potential for Intensification/Diversification)
(Agricultural Resource Management Pty Ltd 2011)

Sub-region	Area (ha) suited to broad acre cropping	Area (ha) suited to perennial horticulture	Area (ha) potentially suited to intensification and/or diversification	Proportion (%) of total area identified across the Region.
SE Irrigation	17,263	7,824	25,087	30.4
Midlands/Highlands	28,041	0	28,041	34.0
Derwent Valley	9,171	1,406	10,577	12.8
East Coast	8,938	5,497	14,435	17.5
Southern Region	0	4,277	4,277	5.2
Total	64,413	19,004	82,417	100.0

1.8.1 The Midlands Sub-Region

A large extensive dry-land agricultural area extending across most of the Southern Midlands and parts of Central Highlands and Glamorgan-Spring Bay local government areas. This is a significant agricultural landmass, making up around 34.0% of land suitable for intensification in the Southern Region. Agricultural production in this sub-region is primarily associated with livestock for slaughter, wool, cereal and grain production (highly dependent on water availability). Some areas around Oatlands, Bothwell and Kempton have relatively good agricultural land with significant tracts of Class 4 land, although notably the fine grade wool of international standard produced in the Midlands generally occurs on the more marginal Class 5 and 6 land.

Fragmentation of land is not an issue as land holdings are generally large broad-acre farms. Some areas in the midlands have significant soil erosion and salinity issues (see Natural and Cultural Values Background report) that need to be managed through whole farm management practices to protect its long term potential.

These are also important considerations in the irrigability of the land, noting that TIDB are investigating the establishment of irrigation districts in parts of the Midlands. The availability of water through irrigation has the potential to alter the type and volume of production in the midlands.

Notwithstanding this, with or without irrigation, much of the Midlands should still be considered 'Significant'. The expanses of land not in proximity to towns or residential uses make it suitable for agricultural and non-agricultural uses that require large attenuation distances (i.e. major composting

facilities, cattle feedlot). These uses would be less appropriate in the agricultural areas such as the Coal River, Derwent Valley and Huon Valley where there are considerably more residential users scattered throughout.

The inland location and higher elevations in the midlands/highlands sub-region, has meant a very high level of frost and other weather variables; and despite higher classes of soil types, the climatic conditions greatly reduce the scope of cropping to mostly perennial broad acre cropping. However recent studies indicate that, given the TIDB interest in the area, there is still approximately 29,041 ha of land suitable to broad acre cropping (mostly around Tunbridge, Pawtella, Tunnack, Bothwell and Kempton) (Agricultural Resource Management Pty Ltd 2011)

1.8.2 The Derwent Valley Sub-Region

Defined by the Derwent River and its main tributaries (i.e. Tyenna), this district includes part of the Derwent Valley and Central Highlands local government areas. The higher quality agricultural land (Class 4 or 4/5) is generally in close proximity to the river(s) due to the presence of alluvial soils. In addition many of the larger farm holdings along the river have access to water rights which provide for irrigation on site. There is some fragmentation of land particularly in traditional hop production areas due to historical patterns in viable lot sizes for this type of production, and there are some major productive farm holdings in the district as well. Agricultural production is more varied in the Derwent Valley. The climate is moderated by the Derwent Estuary, which helps to reduce the risk of frost, and has given way to the diverse agricultural enterprises. The larger holdings are generally used for livestock, cereal production and large-scale orcharding (i.e. Reid's Fruit), while production on smaller holdings is generally for fruit and hop production.

The Derwent Valley Sub-Region makes up around 10,577 Ha of land, or 12.8% of land in the Southern Region potentially suited to intensification. Of this, 9,171 Ha is considered suitable for broad acre cropping, with the remaining land suitable for perennial horticulture. The main areas with cropping potential extend from New Norfolk to Bushy Park and also from Hamilton to north of Ouse.) (Agricultural Resource Management Pty Ltd 2011)

1.8.3 South East Irrigation Sub-Region

The Coal River Valley, makes up a large portion of this region, it is primarily an intensive agricultural district producing a variety of crops including grapes for wine production, stone fruit, lettuce, vegetable seed crops, walnuts and peas. It is located not only in the Clarence and Sorell local government area but also part of the Southern Midlands Council area, around the Campania and Colebrook and a large proportion of Brighton.

While its natural climate sees low rainfall, access to the Coal River valley irrigation schemes provides certainty and control in water to allow such a variety of production. Data in volume and value across the last 12 years indicates that the trends in production in the Coal River valley are increasingly towards lower volumes but higher values. The proposed TIDB South East irrigation scheme, is set to intensify and broaden agricultural production in this sub-region, with approximately 25,087 ha having been identified as suitable for intensification/ diversification. Though a smaller sub-region, it still makes up a significant 30.4% of the total area identified across the Southern Region.) (Agricultural Resource Management Pty Ltd 2011)

The land does show some fragmentation, although many farms are managed across multiple title holdings and with its intensive agriculture nature, the lack of broad-acre titles is not as significant as it would in other agricultural districts.

Its moderate climate (low risk of frost), its agricultural production trends and the presence of a declared irrigation district, mean the South East Irrigation Sub-Region should be identified as 'Significant' and afforded the highest level of protection.

1.8.4 Southern Sub-Region

The Huon Valley was traditionally known as one of the major producer of apples in Australia. With the changing market condition, apple production in the Huon Valley has significantly decreased over the past 30 years. Although today agricultural production in the Huon Valley is still dominated by fruit production the type of fruit commodity is more varied with pome, stone and berry fruit production. Its role in national production has also decreased. Importantly the Huon Valley economy is still strongly driven by agricultural activity (along with Forestry).

Notwithstanding changes in production, land in the Huon Valley particularly along the main river valleys is considered good agricultural land (Class 4). In addition to its southerly latitude and surrounding topography, the Huon Valley does have relatively good rainfall, which along with water extraction from the river systems provides opportunity for irrigation.

The Southern Sub-Region, due to a host of constraints has the smallest proportion of land suitable for intensification at only 4,277 Ha or 5.2% of the total Southern Region. There are some small areas of land suitable for broad acre cropping located along river flats, but given the risk of flooding, frost and cold air drainage, the Southern Sub-Region is mostly suited to the abovementioned orchards, stone fruits and some viticulture.) (Agricultural Resource Management Pty Ltd 2011)

The agricultural potential of the area is however affected by its significant extent of land fragmentation. This is largely a result of the historical development of the area. Small 10ha lots were once considered to be very viable lot sizes for apple production. Recent market trends and demands have exacerbated the problem. With the decline of the apple industry, and the lessening attraction of farming to younger generations, there has been subdivision pressure and the resultant conversion of higher value residential uses on already small land titles. Notably this market pressure is generally occurring in the high value agricultural areas in the north of the municipality. The extent of land fragmentation in the Huon Valley is not seen in any other major agricultural production area in Tasmania, and is an important issue to manage and protect the productivity of the significant agricultural areas in the Huon Valley.

1.8.5 The East Coast Sub-Region

The East Coast district includes, land in the Tasman, Sorell and Glamorgan Spring Bay local government areas. It supports diverse agricultural production including grazing, dairying, cropping, viticulture and fruit production. With the significant areas confined to specific pockets of land in the flatter valleys and coastal areas (for example the Cranbrook vicinity). This district contains some of the only prime agricultural land in the Southern Region, with small extents of Class 3 land around Marion Bay and Runnymede. It should be noted that land capability mapping is not available for most of the Tasman local government area.

Agricultural potential is constrained by water availability, and while overall this district is not as significant to agricultural production in the region as other districts, there are some key commodities produced that

will remain important into the future. These include walnuts, olives and other nuts and grapes for wine. All these products are generally high value and low volume products. The district also has significant potential for agri-tourism given its high value as a tourism destination in general.

Land potentially suitable for some or all of the above mentioned enterprises, comprises of approximately 14,435 Ha, or 17.5% of land in the Southern Region potentially suited to intensification. Farmland in the Lower Swan River has some good opportunities for diversification, coupled with the possibility that an irrigation scheme will be developed by the TIDB in the near future..) (Agricultural Resource Management Pty Ltd 2011)

Some of the key drivers associated with rural land planning in this district are not related to agricultural production such as protection of scenic qualities (which underpins its tourism industry).

2. Mineral Resources

2.1 Background

Tasmania is rich in a wide variety of mineral resources and the extraction and processing of its resources has historically been large part of its economy. The mineral extraction industry continues to be Tasmania's largest export industry. There are five substantial operating mines in Tasmania, including long-term producers Mount Lyell (copper, gold, silver), Rosebery (zinc, lead, gold, copper, silver) and Savage River (magnetite, which is converted into iron ore) and the Henty and Beaconsfield gold mines (Mineral Resources Tasmania 2009).

There are essentially three categories of extractive commodities within Tasmania: Metallic minerals; Non-metallic, Industries & Fuel Minerals; and construction materials. The major metallic mineral commodities across the State include copper, gold, iron ore, lead, scheelite, silver, tin and zinc. Iron Ore, copper and zinc are the highest extracted materials with 2 423 240 tonnes of Iron ore extracted in 2008, 95 541 tonnes of zinc and 30 483 tonnes of copper (Mineral Resources Tasmania 2009). The total value of metallic minerals extraction for the period June 30 2007 to June 30 2008 was \$803 316 729 (Mineral Resources Tasmania 2009).

For Non-metallic, Industrial and Fuel Minerals, the highest extracted materials include limestone, coal, silica and clay. From the period 30 June 2007 to 30 June 2008, 1 856 125 tonnes of limestone for cement use was extracted, 132 825 tonnes of limestone for agricultural use, 725 228 tonnes of coal, 205 190 tonnes of silica and 29 323 tonnes of clay for brick work (Mineral Resources Tasmania 2009). The total value of Non-metallic, Industrial and Fuel Minerals for the period 30 June 2007 to 30 June 2008 was \$55 429 254 (Mineral Resources Tasmania 2009).

In relation to construction materials, the major extraction materials are dolerite, sand, basalt, gravel and sandstone. From 30 June 2007 to 30 June 2008, 1 271 318 tonnes of dolerite were mined, 904 250 tonnes of basalt, 626 889 tonnes of sand, 36 420 tonnes of gravel and 927 tonnes of sandstone (Mineral Resources Tasmania 2009). The total value of construction materials for the period 30 June 2007 to 30 June 2008 was \$71 889 846 (Mineral Resources Tasmania 2009).

Unlike the North-West region of Tasmania, Southern Tasmania does not have particularly extensive resources and consequently major extractive industries operating within the region are limited, although numerous, to small scale quarrying type operations across the region.

The major extractive businesses in the Southern Tasmania include the following:

Boral Resources (Tasmania) Limited- Blue Metal:

Boral Resources operates a hard-rock quarry at Brighton and a sand mining operation at South Arm. During 2007/2008, the Company employed a total of 25 personnel and production for the period 30 June 2007 to 30 June 2008 exceeded one million tonnes of material. One third of which was concrete aggregates, asphalt and spray seal material, 8% sand, and the remainder road based products (Mineral Resources Tasmania 2009). Boral experienced strong demand for concretes sand and aggregate, although the market within the region has remained relatively slow. All quarries have extensive reserves based on current demand levels.

Duggans Pty Ltd- Concrete:

Duggans Pty Ltd operates a quarry and a precast concrete production factory at Cradoc in the Huon Valley (as well as Launceston). Approximately sixty staff are employed across the state. Production of raw materials for the year totaled 93 500 tonnes, consisting of 64 000 tonnes of road materials, 27 000 tonnes of construction materials and 2500 tonnes of construction sand (Mineral Resources Tasmania 2009).

FR & CM Lazenby and Son- Sand:

The Lazenby extraction operation exists at South Arm and employs four full-time people and one part-time person (Mineral Resources Tasmania 2009). Production in the annual period 30 June 2007 to 30 June 2008 totaled 12 600 tonnes (Mineral Resources Tasmania, Annual Review 2007/2008). Considerable reserves are estimated within their two mining leases (Mineral Resources Tasmania 2009).

GL & DH Males Pty Ltd- Sand:

The Males Sand mining pit operates at South Arm. The company employs three full-time staff and seven casual staff (Mineral Resources Tasmania 2009). Production from the South Arm mining lease consisted of 88 000 tonnes of coarse sand, 3000 tonnes of horticultural sand, 2000 tonnes of bedding sand and 1000 tonnes of sandy loam during the period 30 June 2007 to 30 June 2008 (Mineral Resources Tasmania 2009).). Future sources of dune sand will include re-working of old areas. Because of lower demand and processing rates, the resource on site (within their lease) is projected to last for five to seven years. Rehabilitation works on site are occurring in line with the sites Environmental Management Plan.

Hanson Construction Materials Pty Ltd- Construction materials:

Hanson Construction Materials operates out of Hobart (Flagstaff Gully Road), Calder and Potato Hill. Fifteen people are employed full time and one part-time. During the period 30 June 2007 to 30 June 2008, 150 000 tonnes of aggregates, 152 000 tonnes of road materials and 73 000 tonnes of sand were produced across three operations (Mineral Resources Tasmania 2009). A Development Proposal and Environmental Management Plan has been drafted for an extension to the Hobart quarry (Mineral Resources Tasmania 2009). This project is of high priority in given the finite resources of the existing quarry.

Hobart Blue Metal Industries Pty Ltd- Blue Metal:

Hobart Blue Metal Industries Pty Ltd operates a dolerite quarry at Leslie Vale. The company has 14 permanent employees in production and a further 30 people are employed as subcontractors for material deliveries, drill and blast activities and maintenance (Mineral Resources Tasmania, Annual Review 2007/2008). Production for the period 30 June 2007 to 30 June 2008 was 740 000 tonnes, comprising 680 000 tonnes of road based material, 50 000 tonnes of concrete and asphalt aggregate and 10 000 tonnes for landscaping (Mineral Resources Tasmania, Annual Review 2007/2008). Major projects include the Cambridge Park commercial precinct development, Esperance Drive and Holyman Drive.

2.2 Legislative & Governance Context

The *Mineral Resources Development Act 1995* provides for the State to grant titles for the extraction of minerals from mines and quarries (www.mrt.tas.gov.au accessed 27 November 2009). Titles are issued for larger scale operations generally with appropriate rehabilitation bonds and conditions. Shorter terms

are preferred for small-scale remote operations to provide for regular environmental review. Mineral Resources Tasmania is responsible for the collection of mineral royalties from Crown land tenements. Royalty is not a tax but a payment to the community for the purchase of their non-renewable resources.

Exploration can be undertaken without any need for planning approvals under the RMPS. The actual extraction of mineral resources is however still subject to planning approvals. Most extractive industries are dealt with as Level 2 activities under *Environmental Management and Pollution Control Act 1994*. This means that the normal assessment processes under the *Land Use Planning and Approvals Act 1993* are altered to those specified under Section 25 of the *Environmental Management and Pollution Control Act 1994*, whereby the Environmental Protection Authority has statutory responsibility for the assessment of all environmental related matters and the local planning authority jurisdiction over non-environmental planning matters.

2.3 Planning Implications

Growth in mineral exploration and extraction is essential for the future development of the mineral sector and for the economic well-being of Tasmania. The main issues from a regional perspective are protecting those major resources which contribute to the economy from land use conflicts. Conflict between resource extraction and the pressure to preserve natural areas is commonplace within the Tasmanian community. In Southern Tasmania however, it is recognised that resources are limited and therefore providing planning frameworks (such as overlay protections) to support future extraction of regionally significant resource deposits has limited value, unlike in North-West region.

The main planning issue from a regional perspective is protection of resources and extractive operations (particularly those of regional significance) from encroachment uses, which create land use conflicts. Such encroachment can make ongoing management of operations difficult and costly in terms of managing noise, pollution and traffic and can also place limits on expansion. The Regional Land Use Strategy will therefore need to consider the location of existing operations in development of its settlement strategies.

3. Native and Plantation Forestry

3.1 Background

Of Tasmania's total land mass (6.8 million hectares) 49% or 3.39 million hectares is forested. The forest estate can be broadly divided into two categories: native forest and plantation forest. Native forest accounts for the majority of Tasmania's forested area with 3.18 million hectares, although approximately 47% of native forests are reserved and protected through a variety of formal and informal reservations. Plantation forest accounts for a mere 7% of the total forested area or 254,000 hectares. The following table provides a summary:

Table 7: Tasmania's Forest Estate

Forest Category	Total area (ha)	% of total forest cover	% of total landmass
Publicly owned multiple use ¹ forests	1,128,000	33.3	16.5
Publicly owned native forests in reserves	1,122,000	33.1	16.4
Privately owned native forest	885,000	26.1	12.9
Privately owned native forest in reserves	48,000	1.4	0.7
Plantation forests in State Forests	102,000	3.0	1.5
Plantations on other public land	1,800	0.1	0.0
Plantations on private land	150,407	4.4	2.2
TOTAL	3,389,207	100	49.5

Source: *Private Forests Tasmania* (http://www.privateforests.tas.gov.au/forestry_facts/forest_cover, accessed 16 November 2009) & *Forest Practices Authority* 2006.

Forestry is one of the four largest industries in Tasmania directly employing 6,300 people, of which 2,085 of these are within Southern Tasmania, 2,620 in Northern Tasmania, 1520 in the North West and a further 45 people employed in the industry and located outside of Tasmania (Schirmer 2008). Within the region the local government areas with the highest proportion of their workforce employed in the forest industry are Derwent Valley (23%), Central Highlands (13%) and Huon Valley (9%) (Schirmer 2008).

Table 13 below provides an outline on the employment and spending statistics for the forest industry across 2005 – 2006.

¹ Includes commercial wood production, conservation, tourism and recreation

Table 8: Statistics of employment and spending by the Tasmanian forest Industry in 2005-2006
(Source: Schrimmer, J 2008)

Employment/spending characteristic	Findings	
Employment in the Tasmanian Forest Industry 2005-2006	People:	6300
	Full Time Equivalent	5870
Proportion of employment in different forest industry sectors	Industrial forest growers:	11.7%
	Combined growers/processors:	10.9%
	Processors:	38.7%
	Contractors, consultants and nurseries:	38.7%
Proportion employed in native forest, hardwood plantation and softwood plantation sector	Native forest	68.3%
	Hardwood plantation:	7.7%
	Softwood plantation:	24%
Proportion of forest industry employees working full-time, part-time and casual	Full Time:	74%
	Part Time:	12%
	Casual:	14%
Proportion of male and female workers:	Forest Industry workforce - male	88.4%
	Tasmanian workforce - male	53.1%
	Forest Industry workforce - female	11.6%
	Tasmanian workforce - female	46.9%
Total expenditure by the forest industry (range is given rather than a single figure to reflect uncertainty in estimates)	Growers & processors:	\$940-\$1020 M
	Contractors, consultants and nurseries:	\$480 - \$580 M
	Total:	\$1420 - \$1600 M
Location of expenditure (Local LGAs refer to where the business is located)	Growers & processors:	34% in local LGA 43% in non-local LGAs 23% outside Tas
	Contractors, consultants and nurseries:	73% in local LGA 22% in non-local LGAs 5% outside Tas

Tasmanian forests are highly productive in terms of wood production. In 1999 they produced 70% of Australia's decorative veneers, as well as 40% of Australian produced printing and writing paper, and 57% of newsprint production. Other products harvested from Tasmania's native forests include: firewood, raw seed, nectar, honey, cut flowers, treeferns, and sphagnum moss. Harvesting statistics for 2000-01 include: 468,500 m³ of native eucalypt sawlogs; 27,400 m³ of other native sawlogs; and 1,712 kg of raw seed. The most currently available statistics for pulpwood production were for 1999-00 when 4,735,000 tonnes of pulpwood was harvested from native forests. Between 1996-00, the volume of woodchips harvested from native forest increased by 73%.

Within the region forest harvesting operations occurs in all Local Government Areas with the exception of Hobart and Clarence (with only limited activity in Glenorchy). The Huon and Derwent Valleys are the location for the most intensive forestry activity due to the large areas of State Forest contained within their Local Government areas, followed by the Central Highlands. This correlates with the percentage of the population in those areas employed by the forest industry (as discussed above)

Within the region there are:

- 381,000 ha of State native forests, of which 360,400 hectares if available for multiple use;
- 18,500 of State forest plantations
- 20,400 ha of Private Timber Reserve plantations; and
- 432,600 ha of forest on private land (potentially available for logging, although not necessarily commercial viable or available for harvesting).

The conversion of native forests to plantations by Forestry Tasmania in State forest has ceased as part of the Australian Forestry Standards Certification requirements. In addition, as part of the Permanent Native Forest Estate Policy, there will be a reduced rate of clearing on private land for agricultural and forestry purposes in the lead up to a 2015 cut off date (Department of Infrastructure, Energy and Resources 2009c). While it has been predicted that private investment in plantations will increase over the next 5 to 10 year period, thereby driving further plantation expansion. The recent collapse of two of the largest companies involved in the Managed Investment Schemes (MISs), Great Southern and Timbercorp in the global financial crisis, may impact upon the physical expansion of private timber plantations in Tasmania.

Notwithstanding this both the Commonwealth and State Governments remain strong supporters of expanded plantation development on private land as a means of effectively implementing the Regional Forest Agreement between the State and Commonwealth (GHD Pty Ltd 2007: 84). Anecdotally there is evidence to suggest that the harvesting of native timber and/or conducting of plantations on private land has expanded. Nonetheless in comparison to the level of forestry activity generated in the Region in State Forests, the contribution of private plantations to the overall forestry activity in the region is currently low but will increase as the plantations mature.

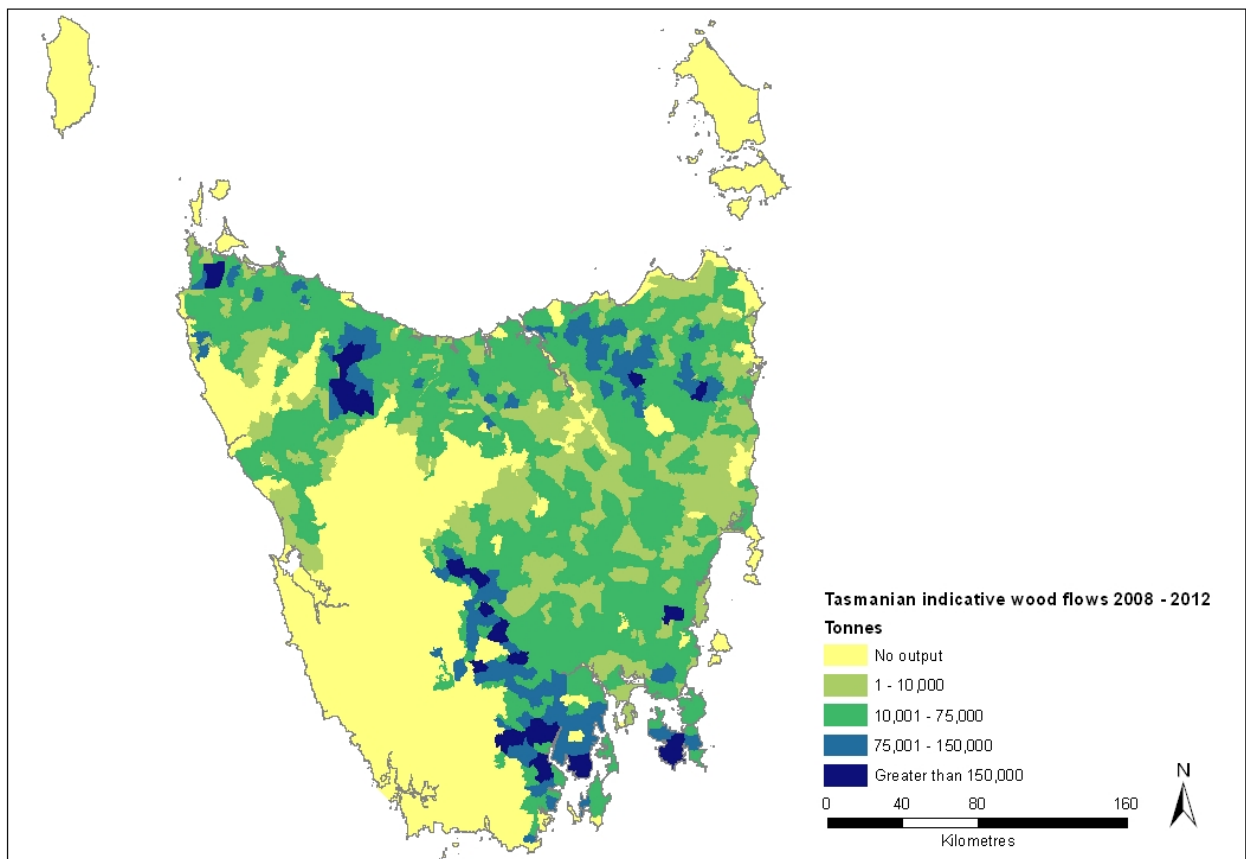


Figure 7: Tasmanian indicative wood flows 2008 – 2012 (Source: *Forestry Tasmania*)

The total area of private plantations within the region is 29,154 hectares or 1.1% of the total land area of the region. This compares to 71,821ha in the North-West and 49,974 ha in the North. In terms of percentage, Southern Tasmania only contains approximately 19.5% of all land under private plantation in Tasmania, compared to 33.2% for the North and 47.4% in the North-West (Private Forests Tasmania 2007).

Within the Region, Central Highlands has 6,963 ha or 4.6% of the total private plantation area in the State, followed by the Derwent Valley with 6,301ha or 4.2%, Huon Valley with 4,602ha or 3.1% and Southern Midlands with 4,425 or 2.9%. Glamorgan Spring Bay, Sorell & Tasman all have around 1.5% each of the total plantation activity with negligible activity in the other Local Government Areas.

In general, the minimum size for plantation forestry to be economically viable is approximately 20 hectares, although an underlying single ownership or title is not required, a relative proximity to minimise transfers between harvesting operations is optimal. For harvesting of timber from native forests on private land a minimum viable area of 30 to 40 hectares is required, although again single ownership or title is not required (GHD Pty Ltd 2007).

With harvesting from native forests, landowners may choose to have the area regenerated, converted to plantations forestry (if suitable based upon slope, rainfall and other constraints) or converted to agricultural use. In the latter options, however given that much remnant or regenerative native forest on private land demarcates the boundary of marginal land for agricultural purposes, plantation forestry often

proves to be the most productive land use from an economic viewpoint (GHD Pty Ltd 2007). Conversion to agricultural use is not possible where the long term use of the land for forestry purposes has been protected through the declaration of Private Timber Reserve status.

In terms of harvested timber volumes, wood sourced from state forests is predominantly transported to the Triabunna woodchip mill which exports around 800,000 tonnes of semi-processed wood products per year (90% of which is produced on site from logs, with the remainder coming from sawmill residue). There are however other major value-adding operations in the region, which include:

- Norske-Skog, Boyer - annual production is around 290,000 tonnes of newsprint, representing around 40% of Australia's domestic supply. The mill uses softwood feedstock. Over 75% of wood used is sourced from within a 100km radius.
- Gunns Southwood Sawmill
- Ta An veneer mill, Southwood (Huon Valley) – processes timber from both the Huon and Derwent State forests
- Gunns sawmill, Austins Ferry – producing around 15,000 m³ per annum;
- Kellys Timbers, Dunalloy – sawmill
- Musketts Sawmill, Richmond
- Torenus Timber, Forcett – sawmill
- McKays Timber Yard and processing mills at Brighton and Glenorchy

In addition to the sawmill veneer mill at Southwood, the facility is also proposed to include a wood powered power station, for which development approval has been obtained. Recent media coverage indicates that the power station is still likely to proceed. Beyond this facility, there are also approximately 20 sawmills operating in the region (including those listed above). Whilst these sawmills are important to their local economy, they are generally not of regional significance. When compared to sawmill operations in the North of the State and at Triabunna, the output and associated tasks (such as transport) are not significant. It is important to note however that the larger sawmills in the north source logs, in part, from Southern Tasmania.

3.2 Legislative & Governance Context

The majority of Forestry activities (excluding processing opportunities) exist outside planning controls, established under the *Land Use Planning and Approvals Act 1993*, with all forestry operations in State Forests and within Private Timber Reserves being exempt from planning approval.

In 1992 the Australian, State, and Territory Governments determined to enact a National Forest policy Statement (NFPS) that outlined the jointly agreed manner in which they would co-operate in ensuring the sustainability and economic viability of Australia's forests, both native forest and plantation. The NFPS was ultimately signed by the Tasmanian Government in April 1995. The NFPS indicates that *"there is a need for State and Local Governments to simplify planning procedures and to ensure that land use planning controls and land rating systems do not discriminate against plantation development."*

In Tasmania this goal could be achieved through recognition of the role of Private Timber Reserves, and the *Forest Practices Act 1985* and consistent application of the State Policy for the Protection of Agricultural Land 2009 across all Local Government areas.

Local government planning schemes play no direct role in defining where timber harvesting may occur in state forest as forest practices on state forest are excluded from the *Land Use Planning and Approvals Act 1993*. On private land, forestry as a permitted land use is determined by local planning schemes. Private land is subject to the *Land Use Planning and Approvals Act 1993*. Local government determines where forestry can take place on private land, according to individual councils' planning schemes. In some local government planning schemes, zones are determined where forestry is an 'as of right' permitted use and so no permit is necessary.

In addition, private land is subject to the Forest Practices Act 1985 and most forest practices will require a certified Forest Practices Plan. In November 2009, changes to the Forest Practices Regulations 2007 saw some additional exemptions which included: clearing, carried out for the purposes of constructing building(s) or associated developments, but only where they have been authorised under a permit issued under the Land Use Planning and Approvals Act. In other words clearing related to the construction of buildings or associated development is now a matter for Planning Authorities to assess.

Some immediate issues have arisen from the changes to the regulations. Some planning schemes have adequate provisions within them to assess applications involving such issues, where others have very limited provisions or none at all. Until standardized planning schemes are brought into place, most likely with a vegetation management schedule as part of that, there exists a considerable risk to Local Government and the broader community, that vegetation (including Threatened Vegetation Communities) can be cleared with limited controls. Furthermore it remains unclear how clearance related to subdivision will be assessed.

Forestry practices on land not within a Private Timber Reserve does require planning approval under the *Land Use Planning and Approvals Act 1993*, although in accordance with the State Policy on Protection of Agricultural Land 2009, nothing in a planning scheme can prohibit forestry practices within land zoned for rural purposes, except on prime agricultural land, as the definition of 'Agricultural Use' under the policy includes forestry practices.

3.3 Planning Implications

As indicated above, the majority of Forestry activities are outside Local Government planning controls, with all forestry operations in State Forests and within Private Timber Reserves being exempt from Local Government planning approval. Specific operations that are exempt include forest establishment, growing of timber, harvesting, all associated clearing, burning off, roading and quarries. Forestry on land not within a State Forest or Private Timber Reserve does require planning approval by Local Government.

However, in instance where clearing is occurring ancillary to a separate development, the recent changes to the legislation have brought Forestry back into the control of Local Government. Whilst this may be a logical change, the lack of consideration of vegetation management issues by many planning schemes means, in some circumstances, there are limited controls on vegetation management. It is hoped this will be ameliorated through the implementation of standard planning schemes with associated vegetation management Schedules and more specific zoning. However until these planning schemes are in place there is a significant gap in the legislation with regard to the control of vegetation clearance around the state.

In accordance with the State Policy on Protection of Agricultural Land 2009, new plantation forestry cannot be established on Prime Agricultural Land unless specifically allowed under a planning scheme.

As the amount of Prime Agricultural Land in the Southern region is very small, this specific provision under the Policy has negligible impact. Notwithstanding this, it is essential that the policy is implemented consistently and correctly in all planning schemes.

However, the Policy also provides that a planning scheme may require a discretionary permit for plantation forestry on any agricultural land where it is necessary to protect existing agricultural uses that are recognised as fundamental and critical components of the economy of the entire municipal area. Again, it would appear that such circumstances do not apply to any Southern Tasmanian municipal area wherein the various types of agriculture are merely partial contributors to municipal economies, not dominant components.

It can therefore be concluded that much of the forestry activity in the region is not under the jurisdiction of the planning system, being either in State Forest or Private Timber Reserves. In terms of forestry activities that can be controlled through the planning system, there are a number of key issues which require consideration;

- Forestry activity on private land, which has a pattern of occurring in short periods of high activity interspersed by many years of apparent inactivity, has the potential to conflict with the expectations of newer residents and some other forms of agriculture on adjoining land. The uncontrolled trend of rural residential development in rural areas is likely to increase conflict with the forest industry;
- Forestry activities have the potential to displace traditional agricultural activities resulting in social and economic effects on local communities where the labour and infrastructure needs of a 12 to 20 year rotational crop is entirely different from more seasonal or yearly activity. This issue, however, is not as pronounced in southern Tasmania as it appears to be elsewhere in the State. Changes to traditional farming will still impact on settlements that were established under entirely different agricultural economies. Many farm types need to grow in size in order to provide an economy of scale. Though it is also acknowledged that forestry plays an important complementary role in some farming operations;
- Forestry activities can also conflict with the landscape and aesthetic values of the community. While there is accepted industry practice in terms of assessing visual impact (through the Visual Management System: Manual for Forest Landscape Management), the appearance in the first years after harvesting particularly on upper slopes and ridgelines as well as the visual edges to plantations has the potential to alter the familiar rural or bushland landscape.
- Another major issue associated with forestry activity is the issue of transportation, particularly as it relates to the potential conflict between large trucks (carrying logs or processed timber products) and local traffic on public roads some of which are at an inadequate standard of construction. This matter is discussed in greater detail in the Infrastructure Topic Paper.

Relevant to the role of the forest industry in Southern Tasmania is the potential construction of the pulp mill in the north (at Longreach in the Tamar Valley). If constructed the pulp mill would use some timber from Forestry Tasmania and private sources in this region. The principal impact would be through redirection of transport routes as the material would have most likely have been destined for another port (such as Triabunna).

4. Fisheries

4.1 Background

Part of Tasmania's unique advantage is the waters that surround the State and our abundance of inland waters. Consequently the fishing industry is one of the major industries in the State. While the industry only employs a small percentage of the population its contribution to the economy not only regionally, but also on a national level, is significant. Tasmania accounted for the largest share of gross value production in Australia with 22% or just over \$480 million of total fish production (Australian Bureau of Agricultural and Resource Economics 2009).²

The Salmon industry is now one of the most important fisheries for the State both in terms of employment and contribution to the economy. Accounting for 57% of the total seafood production in Tasmania in 2006-07 (Department of Primary Industries & Water 2009a). Farmed salmonoids have overtaken tuna as Australia's most valuable commercial finfish species, and in the 2006-07 financial year ranked second in the nation by volume and value accounting for 11% of the total fisheries production in Australia. Since salmon farming started in the late 1990s, salmonoid production has increased significantly with more than 95% of farmed production occurring in Tasmania, the majority of which occur in the Channel and Huon district within the southern region (Department of Primary Industries & Water 2009a). For example, salmon production in the Huon River and Esperance district accounts for 60% of total state production (GHD Pty Ltd 2007).

Second to the salmon industry is the Tasmanian Abalone Industry, which is the largest wild abalone fishery in the world (Department of Primary Industries & Water 2009), boasting 25% of the total world production (2009, Tasmanian Abalone Council). The wild abalone fishery accounts for 22% or \$106m of the value of the Tasmanian seafood industry (Department of Primary Industries & Water 2009b). Within Southern Tasmania, the rocky coastline provides valuable habitat for the blacklip abalone, with the rare greenlip abalone found only along the Northern coast and Bass Strait Islands.

Other major fisheries in Tasmania of importance to the region include farmed Oysters and rock lobster (wild fishery). The Tasmanian Oyster industry is based primarily on the Pacific Oyster, which is grown at various sites around the State, including major sites in the region such as Pitt Water. The Tasmanian rock lobster production value and volume ranks third against other states, accounting for just over \$58m in production value (Australian Bureau of Agricultural and Resource Economics 2009).

In total aquaculture production (farmed fisheries) in Tasmania exceeded \$319 million in 2007-08 accounting for a 67% of total fish production. Together the salmonoid, abalone & oyster species accounted for 99% of this gross value of production (Australian Bureau of Agricultural and Resource Economics 2009).

4.2 Legislative & Governance Context

Activities associated with wild fisheries are undertaken without the need for any planning approvals.

The marine farming industry is regulated by the Department of Primary Industries, Parks, Water and Environment (DPIPWE) under the *Living Marine Resources Management Act 1995* and the *Marine*

² Discussion relating to the value of trout fishing has been discussed in context of its recreational and tourism value in Sections 4.4 as it does not constitute a commercial fishery.

Farming Planning Act 1999. Under the latter Act, marine farming development plans are prepared, designating areas in State waters where marine farming may occur. The processes under these pieces of legislation essentially establish planning approval mechanisms separate to those under the *Land Use Planning and Approvals Act 1993*, which does not apply to the establishment of marine farms.

All marine farming operations must be licensed under the *Living Marine Resources Management Act 1995*. Licenses include environmental conditions to ensure that marine farming operations are sustainable and do not have an unacceptable impact on the marine environment.

In addition, the Department of Health and Human Services manages the Tasmanian Shellfish Quality Assurance Program under the *Public Health Act 1997* and the *Food Act 1998*. This includes monitoring water quality in shellfish growing areas and the public health status of shellfish on marine farms, to ensure the safety of farmed shellfish for human consumption.

Land based facilities are however subject to the usual planning approval processes under *Land Use Planning and Approvals Act 1993* (and in some instances the *Environmental Management and Pollution Control Act 1994*, where it is for a Level 2 activity).

4.3 Planning Implications

While the actual act of fishing and marine farming occurs without any relationship to the land use planning system, there are several related issues for which future planning needs to take into account. Firstly fisheries, in particular the aquaculture industry, are dependent on high water quality. Land based activities within water catchments have the potential to detrimentally affect marine habitats upon which various fisheries are based. Such activities include sewage disposal, point source discharges, land clearance and work causing sedimentation and nutrient or chemical runoff.

Fisheries are also dependent upon land based facilities to successfully operate. This not only includes ensuring berthing facilities and fishing ports are either made available or protected (for those existing) from other land uses, but ensuring that appropriate land is made available for downstream processing opportunities. While some processing activities can occur in industrial areas, as evident from the aquaculture industry in the region, land is generally required in coastal areas in proximity to marine farms (to enable live haul for example). This land needs to be appropriately serviced given the high level of physical infrastructure requirements and appropriately located to avoid conflicts with other uses and impacts upon the natural values of the coastline. Potential impacts from land based facilities include removal of coastal vegetation, reclamation of the coast, reduction in scenic quality, erosion, degradation of Aboriginal heritage and degraded plant communities and habitats (GHD Pty Ltd 2007: 88).

The planning for land based facilities associated with the aquaculture industry is a particularly important matter for the Channel, Huon & Pitt Water districts; with considerable development pressure for processing plants on or adjacent to the foreshore. A planning system that is not well equipped to deal with these development pressures can be an added burden to facilitating what is a highly important industry for the region and State not only in terms of employment (direct and indirect) but overall production value.

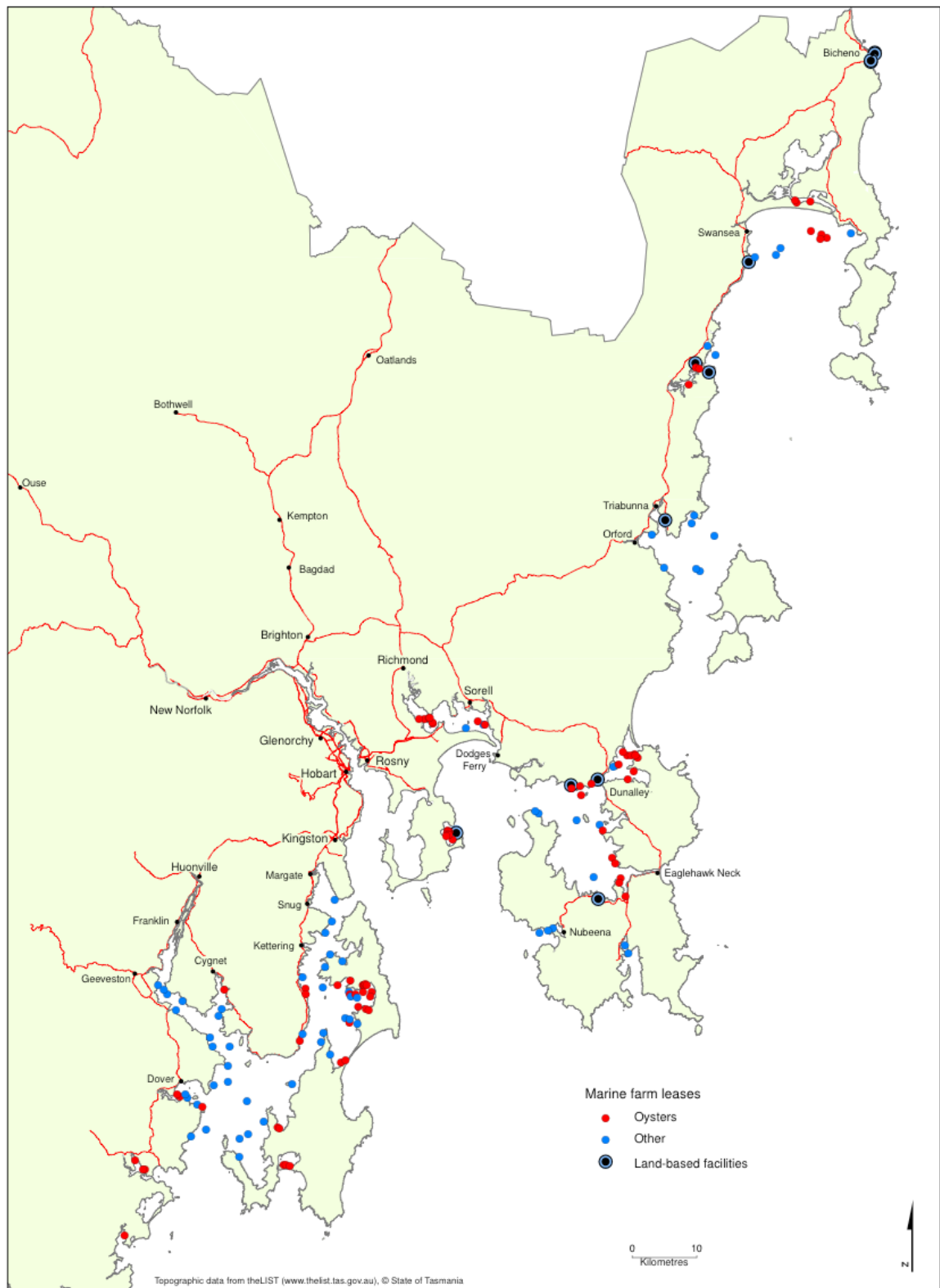


Figure 29: Marine Farm Facilities in Southern Tasmania (map available separately)

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Southern Tasmania

REGIONAL PLANNING PROJECT

The Southern Tasmania Regional Planning Project
is a joint initiative of the State of Tasmania, the Southern Tasmanian Councils Authority,
the 12 Southern Councils and the Sullivans Cove Waterfront Authority