Agriculture, Fisheries and Forestry in the Warrnambool and South West region of Victoria, 2013

Charlene Trestrail, Peter Martin, Kristen Corrie, Ian Frakes and Kasia Mazur

Research by the Australian Bureau of Agricultural and Resource Economics and Sciences

About my region 13.23
March 2013
Contents

1 Regional overview .................................................................................................................... 1
   Employment ............................................................................................................................ 1
2 Agriculture sector .................................................................................................................. 3
   Value of agricultural production .......................................................................................... 3
   Number and type of farms ................................................................................................. 3
   Farm financial performance—Victoria ................................................................................... 5
   Performance of broadacre farms—Victoria ............................................................................ 5
   Performance of grains industry farms—Victoria ..................................................................... 6
   Performance of sheep industry farms—Victoria ..................................................................... 7
   Performance of beef industry farms—Victoria ........................................................................ 8
   Performance of dairy industry farms—Victoria ....................................................................... 9
3 Fisheries sector ....................................................................................................................... 11
4 Forestry sector ......................................................................................................................... 13
References .................................................................................................................................. 14

Tables

Table 1 Number of farms, by industry classification, 2010–11 .................................................. 4
Table 2 Financial performance, Victoria broadacre industries, 2010–11 to 2012–13, average per farm ................................................................................................................................................. 6
Table 3 Financial performance, Victoria dairy industry, 2010–11 to 2012–13, average per farm .................................................................................................................................................................. 10

Figures

Figure 1 Employment profile, Warrnambool and South West region, August 2011 .......... 2
Figure 2 Value of agricultural production, Warrnambool and South West region, Victoria, 2010–11 ................................................................................................................................................ 3
Figure 3 Distribution of farms by estimated value of agricultural operations, Warrnambool and South West region, Victoria, 2010–11 .......................................................... 4
Figure 4 Real farm cash income, broadacre industries, average per farm ......................... 6
Figure 5 Real farm cash income, grains industry, average per farm .................................... 7
Figure 6 Real farm cash income, sheep industry, average per farm .................................... 8
Figure 7 Real farm cash income, beef industry, average per farm ....................................... 8
Figure 8 Real farm cash income, dairy industry, average per farm .................................... 9

Maps

Map 1 Warrnambool and South West region of Victoria ............................................................ 1
1 Regional overview

The Warrnambool and South West region of Victoria is located in the south-west corner of the state, and adjoins the South Australian border (Map 1). The region comprises the six local government areas of Colac-Otway, Corangamite, Glenelg, Moyne, Southern Grampians, Warrnambool, and part of Surf Coast, and the major regional towns of Colac, Hamilton and Warrnambool. The region covers a total area of around 26 400 square kilometres or 12 per cent of Victoria's total area and is home to approximately 120 700 people (ABS 2011).

The total land held by farm businesses was estimated to be 1 819 227 hectares in the Warrnambool and South West region in 2010–11. Agricultural land in the region was mainly used for grazing (1 522 353 hectares) and cropping (193 751 hectares), with some forestry (20 190 hectares) also taking place. In addition, 45 052 hectares of land held by farm businesses was set aside for conservation (ABS 2012).

Map 1 Warrnambool and South West region of Victoria

Employment

Australian Bureau of Statistics (ABS) census data from 2011 indicates that around 56 600 people were employed in the Warrnambool and South West region. The Warrnambool and South West region accounts for 2 per cent of total employment in Victoria and 15 per cent of all people employed in the Victorian agriculture, forestry and fishing sector.

The largest employing sector was agriculture, forestry and fishing (8525 people), which represented 15 per cent of the region's workforce. Of this, 92 per cent were employed in agriculture, 5 per cent in support services for the agriculture, forestry and fishing sector, 1 per cent were employed in forestry and logging, and 1 per cent were employed in fishing, hunting and trapping. In addition, an estimated 2495 people were employed in food product manufacturing and 601 people were employed in wood, pulp and paper product manufacturing in the region (included in the manufacturing sector employment).
The second largest employing sector was health care and social assistance (7216 people), followed by retail trade (6079 people). Other important employment sectors included manufacturing (5875 people), and construction (4247 people).

Figure 1 Employment profile, Warrnambool and South West region, August 2011

Source: Australian Bureau of Statistics
2 Agriculture sector

Value of agricultural production

In 2010–11 the gross value of agricultural production (GVAP) in the Warrnambool and South West region was $2.1 billion, which was 18 per cent of the total gross value of agricultural production in Victoria ($11.6 billion) for 2010–11. This is the most recent year for which data are available from the ABS on GVAP by statistical area.

The Warrnambool and South West region has a diverse and important agricultural sector. In 2010–11, the Warrnambool and South West region accounted for around 36 per cent of the total value of Victorian milk production, 33 percent of the total value of cattle and calves production, and 32 per cent of the total value of sheep and lambs production.

The most important commodity in the region, based on the value of agricultural output, was milk (Figure 2). In 2010–11, milk contributed 42 per cent ($884 million) to the total gross value of agricultural production in the Warrnambool and South West region. Cattle and calves production accounted for 22 per cent ($449 million), sheep and lambs production contributed 17 per cent ($353 million) and wool accounted for 7 per cent ($176 million).

Figure 2 Value of agricultural production, Warrnambool and South West region, Victoria, 2010–11

Source: Australian Bureau of Statistics

Number and type of farms

ABS data indicate that in 2010–11 there were 4838 farms in the Warrnambool and South West region with an estimated value of agricultural operations of more than $5000 (Table 1). The region contains 15 per cent of all farm businesses in Victoria.
Table 1 Number of farms, by industry classification, 2010–11

<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>Warrnambool and South West region</th>
<th>Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no.</td>
<td>%</td>
</tr>
<tr>
<td>Dairy</td>
<td>1,419</td>
<td>29</td>
</tr>
<tr>
<td>Beef cattle</td>
<td>1,253</td>
<td>26</td>
</tr>
<tr>
<td>Sheep</td>
<td>766</td>
<td>16</td>
</tr>
<tr>
<td>Mixed livestock</td>
<td>547</td>
<td>11</td>
</tr>
<tr>
<td>Mixed grains and livestock</td>
<td>224</td>
<td>5</td>
</tr>
<tr>
<td>Other livestock</td>
<td>98</td>
<td>2</td>
</tr>
<tr>
<td>Grain growing</td>
<td>82</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>449</td>
<td>9</td>
</tr>
<tr>
<td>Total Agriculture</td>
<td>4,838</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: Where the estimated value of agricultural operations is more than $5000.

Source: Australian Bureau of Statistics

Farms are classified in Table 1 according to the activities that generate most of their value of production. Dairy (1419 farms) was the most common, accounting for 29 per cent of all farms in the Warrnambool and South West region, and 29 per cent of all dairy farms in Victoria.

A large proportion of farms in the region are small in terms of their business size. Estimated value of agricultural operations (EVAO) is a measure of the value of production from farms and a measure of their business size, and is somewhat similar to turnover. Around 51 per cent of farms in the Warrnambool and South West region had an EVAO of less than $150 000 (Figure 3). These farms accounted for only 9 per cent of the total value of agricultural operations in 2010–11. In comparison, 28 per cent of farms in the region had an EVAO of more than $350 000 and accounted for an estimated 74 per cent of the total value of agricultural operations in the region in 2010–11.

Figure 3 Distribution of farms by estimated value of agricultural operations, Warrnambool and South West region, Victoria, 2010–11

Source: Australian Bureau of Statistics
Farm financial performance—Victoria

Each year, ABARES interviews Australian broadacre and dairy producers as part of its annual survey program. Broadacre industries covered in this survey include the grains, grains–livestock, sheep, beef and sheep–beef industries. The information collected is a basis for analysing the current financial position of farms in these industries and expected changes in the short term. This paper uses data from the ABARES Australian agriculture and grazing industries survey (AAGIS) and Australian dairy industry survey (ADIS) to compare estimates of financial performance indicators (Box 1) for broadacre and dairy farms in Victoria.

Box 1 Definitions

<table>
<thead>
<tr>
<th>Major financial performance indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total cash receipts</strong>: total revenues received by the business during the financial year.</td>
</tr>
<tr>
<td><strong>Total cash costs</strong>: payments made by the business for materials and services and for permanent and casual hired labour (excluding owner manager, partner and family labour).</td>
</tr>
<tr>
<td><strong>Farm cash income</strong>: total cash receipts – total cash costs</td>
</tr>
<tr>
<td><strong>Farm business profit</strong>: farm cash income + changes in trading stocks – depreciation – imputed labour costs</td>
</tr>
<tr>
<td><strong>Profit at full equity</strong>: return produced by all the resources used in the business, farm business profit + rent + interest + finance lease payments – depreciation on leased items</td>
</tr>
<tr>
<td><strong>Rate of return</strong>: return to all capital used, profit at full equity * 100 / total opening capital</td>
</tr>
<tr>
<td><strong>Equity ratio</strong>: Farm capital minus farm debt expressed as a percentage of farm capital</td>
</tr>
</tbody>
</table>

Industry types

- **Grains**: farms mainly engaged in producing broadacre crops such as wheat, coarse grains, oilseeds and pulses, and including farms running sheep and/or beef cattle in conjunction with substantial broadacre crop activity.
- **Sheep**: farms mainly engaged in running sheep.
- **Beef**: farms mainly engaged in running beef cattle.
- **Dairy**: farms mainly engaged in milk production.

Performance of broadacre farms—Victoria

Farm cash income for broadacre farms in Victoria is projected to decline from an estimated average of $96,200 per farm in 2011–12 to an average of $83,000 in 2012–13 (Figure 4, Table 2). If achieved, the 2012-13 farm cash income would still be around 15 per cent above the average farm cash income recorded for the 10 years to 2011–12.

In 2012-13, drier seasonal conditions reduced grain, oilseed and pulse production compared with 2011–12, but the reduction in production is expected to be mostly offset by higher grain prices. With the onset of drier seasonal conditions, receipts from beef cattle are projected to increase in 2012–13, with increases in beef cattle turnoff expected to more than offset a
reduction in sale prices. In contrast, receipts from sheep, lambs and wool are projected to decline by around 20 per cent this season mainly because of lower sheep, lamb and wool prices.

Farm cash incomes are projected to decline in all regions in 2012–13, with the largest decline projected for the Mallee, where there are estimated to have been larger reductions in crop yields. Increases in beef cattle receipts are projected across western Victoria due to higher cattle turnover as a result of drier seasonal conditions, but sheep, lamb and wool receipts are projected to decline in all regions.

Figure 4 Real farm cash income, broadacre industries, average per farm

![Graph showing real farm cash income, broadacre industries, average per farm]

Note: p Preliminary estimate. y Provisional estimate.

Table 2 Financial performance, Victoria broadacre industries, 2010–11 to 2012–13, average per farm

<table>
<thead>
<tr>
<th>Performance indicator</th>
<th>units</th>
<th>2010–11</th>
<th>2011–12p</th>
<th>RSE (%)</th>
<th>2012–13y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total cash receipts</td>
<td>$</td>
<td>332 520</td>
<td>317 300</td>
<td>(16)</td>
<td>306 000</td>
</tr>
<tr>
<td>Total cash costs</td>
<td>$</td>
<td>224 120</td>
<td>221 100</td>
<td>(16)</td>
<td>223 000</td>
</tr>
<tr>
<td>Farm cash income</td>
<td>$</td>
<td>108 390</td>
<td>96 200</td>
<td>(19)</td>
<td>83 000</td>
</tr>
<tr>
<td>Farms with negative farm cash income</td>
<td>%</td>
<td>16</td>
<td>21</td>
<td>(18)</td>
<td>25</td>
</tr>
<tr>
<td>Farm business profit</td>
<td>$</td>
<td>59 770</td>
<td>11 400</td>
<td>(152)</td>
<td>- 5 000</td>
</tr>
<tr>
<td>Profit at full equity - excluding capital appreciation</td>
<td>$</td>
<td>89 700</td>
<td>40 400</td>
<td>(52)</td>
<td>23 000</td>
</tr>
<tr>
<td>Farm capital at 1 July a</td>
<td>$</td>
<td>3 341 830</td>
<td>3 042 700</td>
<td>(14)</td>
<td>na</td>
</tr>
<tr>
<td>Farm debt at 30 June b</td>
<td>$</td>
<td>301 160</td>
<td>291 000</td>
<td>(20)</td>
<td>301 000</td>
</tr>
<tr>
<td>Equity ratio b</td>
<td>%</td>
<td>91</td>
<td>90</td>
<td>(1)</td>
<td>na</td>
</tr>
<tr>
<td>Rate of return - excluding capital appreciation c</td>
<td>%</td>
<td>2.7</td>
<td>1.4</td>
<td>(39)</td>
<td>0.8</td>
</tr>
<tr>
<td>Off-farm income of owner manager and spouse b</td>
<td>$</td>
<td>34 740</td>
<td>38 600</td>
<td>(11)</td>
<td>na</td>
</tr>
</tbody>
</table>

Note: a Excludes leased plant and equipment. b Average per responding farm. c Rate of return to farm capital at 1 July. p ABARES preliminary estimates. y ABARES provisional estimates. na Not available. RSE Relative standard errors, expressed as a percentage of the estimate provided.

Performance of grains industry farms—Victoria

Average farm cash income for Victorian grains industry farms declined in 2011–12. Record grain and oilseed production in 2010–11 resulted in the carryover of significant grain stocks into 2011–12. Sale of on-farm grain stocks boosted crop receipts and helped offset the effect on crop
receipts of reduced grain production combined with lower grain prices. The sell-down of grain stocks cushioned the decline in farm cash income for grains industry farms but lowered the value of on-farm stocks, resulting in a relatively larger decline in farm business profit in 2011–12.

Overall, in 2012–13, crop receipts are projected to remain relatively similar for Victorian grains farms to those recorded in 2011–12, as higher crop prices offset reductions in crop production resulting from drier conditions through winter and spring, particularly in the Wimmera and Mallee regions.

Farm cash income for Victorian grains industry farms is projected to average $128 000 a farm in 2012–13, around 24 per cent above the industry average for the previous 10 years (Figure 5). However, farm cash incomes for Victorian grains industry farms were reduced by dry conditions throughout much of this period.

Figure 5 Real farm cash income, grains industry, average per farm

![Graph showing real farm cash income for grains industry, average per farm in Australia and Victoria from 2000-01 to 2012-13.](image)

Note: 
- p Preliminary estimate.
- y Provisional estimate.

**Performance of sheep industry farms—Victoria**

Farm cash incomes have been relatively high in historical terms for Victorian sheep industry farms in recent years (Figure 6).

In 2011–12, reductions of around 10 per cent in average prices received for adult sheep and lambs resulted in a small decline in average farm receipts for Victorian sheep farms. Despite a reduction in average cash costs resulting mainly from reduced expenditure on sheep purchases, average farm cash income for sheep industry farms declined to an average of $76 000 per farm.

In 2012–13, further reductions in adult sheep and lambs process, together with lower wool prices and a small reduction in wool production, are expected to more than offset increased sheep and lamb turnoff to result in a further decline in farm cash receipts. Despite reductions in expenditure on sheep purchases and interest payments, average farm cash income for sheep industry farms is projected to decline to average $56 000 per farm. This would still be around 9 per cent above the industry average of $52 000 per farm for the previous 10 years, in real terms.
Performance of beef industry farms—Victoria

A much smaller average herd size for Victorian beef industry farms, compared with the average for whole of Australia, results in average farm cash income for Victorian beef industry farms typically being well below the national average (Figure 7).

Turnoff of beef cattle, increased slightly in 2011–12 compared with 2010–11, to result in a small increase in total beef cattle receipts. However this increase was offset by a reduction in receipts from other farm activities, particularly receipts from crops and despite a small reduction in expenditure on beef cattle purchases, average farm cash income for Victorian beef industry farms remained similar to that recorded in 2010–11, an average of $30 000 per farm.
In 2012–13 drier seasonal conditions are projected to result in an increase in beef cattle turnoff, particularly in Western, Central and Northern Victoria, and an increase in overall beef cattle receipts despite a projected reduction in average prices received per head sold. Increased receipts plus a further reduction in expenditure on beef cattle purchases is projected to result in average farm cash income for Victorian beef industry farms increasing to average $41,000 per farm in 2012–13. This is around 16 per cent above the average of $36,000 for the previous 10 years, in real terms (Figure 7).

However, slowing in growth of beef herds that will result from increased cattle turnoff will result in a reduction in the build-up in trading stocks on Victorian beef industry farms. As a consequence, farm business profit for the beef industry is projected to decline in 2012–13.

Performance of dairy industry farms—Victoria

In 2011–12, a small increase in average farm cash income was recorded for Victorian dairy farms. Milk production increased by around 5 per cent, more than offsetting a reduction of around 3 per cent in the average farmgate milk price received as well as an increase in total cash costs. Farm cash income for Victorian dairy farms is estimated to have averaged $141,800 in 2011–12 (Table 3).

In 2012–13, with an increase of only around 1 per cent expected in milk production, a forecast reduction of around 8 per cent in average farmgate milk prices together with an increase in total cash costs, resulting mainly from higher fodder expenditure, are projected to result in lower average farm cash income for all Victorian dairy regions. Farm cash income for Victorian dairy farms is projected to decline to an average of $98,000 per farm, or around 5 per cent above the average for previous 10 years, in real terms. However, average farm cash income for Victorian dairy farms was low in many years during this period due to drought and reduced availability of irrigation water (Figure 8).

Figure 8 Real farm cash income, dairy industry, average per farm

Note: p Preliminary estimate. y Provisional estimate.
Table 3 Financial performance, Victoria dairy industry, 2010–11 to 2012–13, average per farm

<table>
<thead>
<tr>
<th>Performance indicator</th>
<th>units</th>
<th>2010–11</th>
<th>2011–12p</th>
<th>RSE (%)</th>
<th>2012–13y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total cash receipts</td>
<td>$</td>
<td>527 560</td>
<td>583 700</td>
<td>(8)</td>
<td>540 000</td>
</tr>
<tr>
<td>Total cash costs</td>
<td>$</td>
<td>388 650</td>
<td>441 900</td>
<td>(8)</td>
<td>442 000</td>
</tr>
<tr>
<td>Farm cash income</td>
<td>$</td>
<td>138 900</td>
<td>141 800</td>
<td>(15)</td>
<td>98 000</td>
</tr>
<tr>
<td>Farms with negative farm cash income</td>
<td>%</td>
<td>11</td>
<td>16</td>
<td>(46)</td>
<td>22</td>
</tr>
<tr>
<td>Farm business profit</td>
<td>$</td>
<td>75 250</td>
<td>66 900</td>
<td>(33)</td>
<td>2 000</td>
</tr>
<tr>
<td>Profit at full equity - excluding capital appreciation</td>
<td>$</td>
<td>134 530</td>
<td>130 100</td>
<td>(20)</td>
<td>60 000</td>
</tr>
<tr>
<td>Farm capital at 1 July</td>
<td>$</td>
<td>2 981 870</td>
<td>2 989 100</td>
<td>(8)</td>
<td>na</td>
</tr>
<tr>
<td>Farm debt at 30 June</td>
<td>$</td>
<td>602 340</td>
<td>632 800</td>
<td>(11)</td>
<td>592 000</td>
</tr>
<tr>
<td>Equity ratio</td>
<td>%</td>
<td>80</td>
<td>79</td>
<td>(3)</td>
<td>na</td>
</tr>
<tr>
<td>Rate of return - excluding capital appreciation</td>
<td>%</td>
<td>4.4</td>
<td>4.3</td>
<td>(16)</td>
<td>2.0</td>
</tr>
<tr>
<td>Off-farm income of owner manager and spouse</td>
<td>$</td>
<td>22 080</td>
<td>20 000</td>
<td>(22)</td>
<td>na</td>
</tr>
</tbody>
</table>

Note: a Excludes leased plant and equipment. b Average per responding farm. c Rate of return to farm capital at 1 July.

p ABARES preliminary estimates. y ABARES provisional estimates. na Not available. RSE Relative standard errors, expressed as a percentage of the estimate provided.
3 Fisheries sector

The Warrnambool and South West region contains a range of seafood sectors, with the main production species caught in the area being rocklobster and abalone. A wide variety of finfish and eels are also harvested in the region and land based abalone farms are established in the south west part of the region. The seafood processing industry servicing the area is primarily located at Warrnambool, Port Fairy and Portland.

Recreational fishing is popular in this region. In the 2000 National Recreational and Indigenous Fishing Survey, the participation rate varied between 15 per cent and 22 per cent depending on the locality, much higher than the state average of 12.7 per cent (Henry and Lyle 2003). Residents fish mainly in coastal waters of western Victoria from Apollo Bay to the south Australian border. The Hopkins River and Glenelg River are also popular with many fishers. King George whiting, snapper, Australian salmon, black bream and mullet are the most common marine species targeted by fishers. Freshwater fishing is also popular for residents where redfin, trout, eels and yabbies are harvested. Overall, fishing from the shore is the most popular way that residents access the fishery, but boat fishing is significant, accounting for 42 per cent of the recreational and indigenous fishing effort in the region. During the last ten years a seasonal fishery for southern bluefin tuna (SBT) has developed in the continental shelf waters of this region (Green et al. 2012). Private trailerboats and charter boats access this fishery during autumn and winter from the ports of Apollo Bay, Warrnambool, Port Fairy and Portland. Local residents make up about 45 per cent of the SBT fishers and almost all the others live in the Greater Melbourne and Geelong regions.

In 2010–11 the gross value of Victoria’s fisheries production (both aquaculture and wild-catch) was $68 million, an increase of 5 per cent ($3 million) from 2009–10. Victoria contributed 3 per cent of the total value of Australian fisheries production in 2010–11. In value terms, the wild-catch sector accounted for 74 per cent ($51 million) of the state’s total production and the aquaculture sector accounted for the remaining 26 per cent ($18 million).

Victoria’s wild-catch fisheries sector is dominated by two main products—abalone and Southern rocklobster—which account for 47 per cent and 30 per cent, respectively, of the total value of wild-caught production in 2010–11. Over the last decade the value of Victoria’s wild-caught fisheries products has reduced from $143 million (2000–01) to $51 million (2010–11; in 2010–11 terms).

The product for which the real value of production declined most over the past decade is wild-caught abalone, falling by $46 million from $70 million (2000–01) to $24 million (2010–11; in 2010–11 terms). This is largely attributable to the Abalone Viral Ganglioneuritis disease which has significantly reduced abalone production in the Victorian wild-catch sector in recent years. A large proportion of abalone is exported, mostly to Hong Kong, China and Japan. Exchange rate movements have a significant effect on the value of abalone exports and, in turn, production.

Commonwealth fisheries active in the waters off Victoria include the Commonwealth Trawl Sector (main source of domestic fresh fish for Sydney and Melbourne markets) and the Shark Gillnet and Shark Hook Sectors (supplies gummy shark or ‘flake’ to Melbourne) of the Southern and Eastern Scalefish and Shark Fishery. The Bass Strait Central Zone Scallop Fishery, Small Pelagic Fishery (mostly fishmeal for aquaculture and agriculture) and the Southern Squid Jig Fishery also operate in the waters off Victoria. Portland is a key landing site and homeport for Commonwealth fisheries.
In 2010–11 the volume of Victoria’s aquaculture production increased by 27 per cent (534 tonnes) to 2 503 tonnes. Salmonids and blue mussels accounted for 77 per cent of this volume and 56 per cent of the total value of Victorian aquaculture in 2010–11.

In 2011–12, Victoria’s fisheries product exports were valued at $157 million. The main export products include abalone and Southern rocklobster. Hong Kong and Japan are the major destinations for Victorian fisheries exports, accounting for 48 per cent and 15 per cent of the total value of exports in 2011–12, respectively. Other major export destinations include Singapore (11 per cent), Vietnam (9 per cent), China (5 per cent) and Thailand (4 per cent).

Recreational fishing is popular in Victoria. In the national survey of recreational fishers undertaken in the early 2000s it was found that Victoria had approximately 550 000 recreational fishers that fished in the 12 months to May 2000, an estimated 13 per cent of Victoria’s population (Henry and Lyle 2003). This includes gamefishing for species such as southern bluefin tuna (Green et al. 2012). Recreational fishing also includes diving for Southern rocklobster, abalone, and scallops and hook and line fishing for a range of finfish species, such as snapper, King George whiting, black bream and flathead. Freshwater anglers target rainbow and brown trout, as well as native freshwater fish.
4 Forestry sector

In 2010–11, the total plantation area in the Warrnambool and South West region was approximately 191,000 hectares, comprised of around 121,900 hectares of hardwood plantations, 68,200 hectares of softwood plantations and 900 hectares of other plantations. In the Warrnambool and South West region the main hardwood species planted is blue gum (*Eucalyptus globulus*) and the main softwood species planted is radiata pine (*Pinus radiata*).

In 2008, there were around 481,000 hectares of native forests in the Warrnambool and South West region, comprised mainly of eucalypt medium open (177,000 hectares), eucalypt medium woodland (163,000 hectares) and eucalypt tall open (32,000 hectares) forest types. The majority of native forests are managed for nature conservation (224,000 hectares) and 114,000 hectares are multiple use forests available for timber production. Major timber processing industries are located in Portland, Milltown and Colac.

Total sales and service income in the Victorian forest and wood product industry was estimated at around $7.8 billion in 2010–11, of which $4.4 billion was from the sale of paper and paper products, and the remaining $3.4 billion was generated from other wood product sales. Victoria is also the third largest exporter of woodchips in Australia, exporting around 1.1 million bone dry tonnes in 2010–11, valued at $197 million. In 2011–12, both the volume and value of woodchip exports increased to 1.5 million tonnes and $271 million respectively. Victoria is the only state that reported an increase in woodchip exports between 2010–11 and 2011–12.
References


