Our Ref: E05.9582

29 July 2016

Linda Davis
Acting Director, Southern
NSW Department of Planning and Environment
PO Box 5745
WOLLONGONG NSW 2520

Dear Linda,

Submission to Draft South East and Tablelands Regional Plan

At the Ordinary Council Meeting held on 26 July 2016, Eurobodalla Shire Council resolved to make a submission to the Draft South East and Tablelands Regional Plan.

Please find attached Council's submission for consideration in the finalisation of the Regional Plan.

Yours sincerely

Jeff Morgan
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cc. Member for Bega

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Eurobodalla Shire Council Submission to the draft South East and Tablelands Regional Plan

Eurobodalla Shire Council has reviewed the draft South East and Tablelands Regional Plan and is pleased to provide this submission. The South East and Tablelands is a large and diverse region, stretching from the Sydney Metropolitan Region to the Victorian border and extending west to include a number of local government areas around the Australian Capital Territory. As noted in the draft Plan, there are five distinct landscapes that make up the region and there are many varied relationships that exists between these different parts of the region.

Council supports the vision outlined in the draft Plan as a balanced approach to social, economic and environmental outcomes for the region over the next 20 years. Council also supports the establishment of a Coordination and Monitoring Committee to oversee implementation of the Plan, providing there is strong representation from local government on the Committee or in a sub-committee that reports to the Coordination and Monitoring Committee, such as a Planning Directors Group with representation from each LGA in the region.

Council acknowledges that, for such a large area, it is difficult to develop a strategic regional plan that captures all of the issues and opportunities that are relevant to each part of the region. Council is of the view that, despite some good commentary on issues of relevance to the region, many of the actions in the draft Plan are overly generic and routine in nature. Many of the actions reflect work already underway or are core functions of the State Government or councils.

The draft Regional Plan is particularly lacking with respect to the infrastructure needs and opportunities in the region. Actions relating to infrastructure in the south coast part of the region are limited to the Eden Port and continued implementation of the Queanbeyan to Batemans Bay Corridor Strategy (Kings Highway). While there is passing mention of the Princes Highway and the Moruya Airport, there are no specific actions regarding these important pieces of infrastructure. In particular, the need to improve B-double access along the major highways connecting the South Coast to Sydney, Canberra and Melbourne should be a specific action in the Regional Plan. The Merimbula and Moruya Airports are not identified on the maps in the Draft Plan. The Batemans Bay and Bermagui marinas are not mentioned and there are no actions relating specifically to this marine infrastructure.

This submission provides comments on the goals, directions and actions contained in the draft Plan. This submission is supported by a recent report commissioned by Council by the National Institute of Economic and Industry Research (NIEIR, 2016) called 'Eurobodalla Shire and drivers of economic growth'. The NIEIR report is referenced throughout this submission and a full copy is attached.

Goal 1: Sustainably manage growth opportunities from the ACT

Council is pleased that a key feature of the draft Regional Plan relates to the relationship between the region and the ACT. However, it is disappointing that there is very little discussion or action in this section of the draft Plan that is of relevance to Eurobodalla. Implementation of the Queanbeyan to Batemans Bay Corridor Strategy is the only item of direct relevance to Eurobodalla.

This section of the draft Plan has a strong focus on the relationships between the ACT and the immediately adjoining LGAs, to the detriment of the relationships that exist will other LGAs in the region. There are a number of important cross-regional relationships, issues and opportunities for all LGAs as a result of proximity to the ACT.

The Plan could be strengthened by the inclusion of some discussion and appropriate actions relating to the following:

Cross-border tourism collaborations and planning

A significant growth opportunity from the ACT for Eurobodalla is in tourism. Council is already working with other Councils in the region and the ACT Government on tourism promotions and this work should be recognised in this section of the Regional Plan.

Some tangible planning actions that could be included is the identification and development of the Queanbeyan to Batemans Bay Corridor (Kings Highway) as a tourist drive; and the Capital, Coast and Alpine Touring Route which is already being promoted to maximise the opportunity for international visitors arriving in Canberra to disperse through Eurobodalla, Bega Valley and the Snowy Monaro local government areas.
There are many existing and potential attractions and experiences along both these tourist drives/touring routes that would benefit from further development as tourism corridors, including:

- Towns and villages such as Queanbeyan, Bungendore, Braidwood, Nelligen, Batemans Bay, Moruya, Narooma, Tilba, Bega, Merimbula and Cooma;
- Further development of Batemans Bay as a coastal gateway tourist destination including the potential to develop a regional Gateway Discovery Centre to attract visitors and promote the south coast and southern NSW;
- The Monga, Budawang and Clyde River National Parks and the Batemans Marine Park;
- The Shoalhaven and Clyde Rivers;
- Potential for rural tourism on private land;
- Food related tourism, in particular relating to oyster aquaculture; and
- Potential for lookouts along the Kings Highway near Clyde Mountain.

The above suggested action could be included under this Goal or under Goal 3.

Cross-border health and education collaborations and planning

Eurobodalla residents rely on facilities in Canberra for specialist health care and many young people head to Canberra for higher education. Given the aging of Eurobodalla's population, there is a significant risk to the economy if actions are not taken to improve health and education opportunities locally. Improved local health is essential to the retention of older residents in the workforce and as active volunteers for as long as possible. Improved local education is essential to increasing the retention rate of young persons and providing them with the necessary skills to fill local jobs.

> "The skills of households within each region's catchment are core drivers of the region's economic performance. This point is demonstrated by examining the relationship between the regional concentration of high skilled households and regional economic performance. Regions with a higher level of skilled workers are more productive. The question of industry scale arises for Eurobodalla so it is likely that it will be difficult to exploit economies of scale and this could mean less scope to improve living standards." (NIEIR, 2016)

Eurobodalla currently has a campus of the Wollongong University, however there may be opportunities for one of the Canberra universities to establish a campus in a coastal location. Council is also investigating the opportunity to establish one or a number of "university centres" in Eurobodalla following the model established at Cooma recently. Investigating these possibilities could be included as an action in the Regional Plan. It is noted that under Goal 4 of the draft Plan there is an action relating to school asset planning, but there is no similar action in the draft Plan relating to higher education opportunities.

Also under Goal 4 of the draft Plan, there are two actions relating to opportunities for growth of the region's hospitals and complementary health services. While these actions are generic, they are supported. What is lacking is any discussion or action relating to the vast potential for change in the health sector over the next 20 years due to technology and innovation. Council considers this to be a potential growth opportunity that our region can take advantage of due to our close proximity to and relationship with the ACT.

Opportunities for remote working using technology (NBN)

The introduction of high-speed broadband is mentioned in the draft Plan's vision, but there is no specific direction or action or other discussion on this important matter. The delivery of the National Broadband Network along the coast will facilitate significant potential for economic growth in Eurobodalla, through remote working opportunities and greater on-line access to export markets. It will also substantially assist in improving education and, as noted above, health outcomes for Eurobodalla residents.

> "The Internet and telecommunications more generally are critically important in laying the foundations for a new economy. The Internet is strategically important, as are related skill sets, for two key reasons. Firstly, to assist in leveraging existing sectors and businesses such as tourism and its marketing and systems and secondly as a foundation for future business development in such areas as Professional services and new media, creative production. The key task here is to ensure that the Shire becomes better connected and Internet savvy." (NIEIR, 2016)

Potential for air links between Canberra and the coast

There are currently no air services between Canberra and the coast. The expansion of the Canberra Airport to take international flights potentially opens up a range of other opportunities for direct connections to other parts of the region, including the coast. The Regional Plan could include an action to investigate such opportunities and to develop a plan to facilitate more intra-regional air connections.

While the draft Plan mentions the Moruya Regional Airport Master Plan in relation to tourism opportunities, it should also acknowledge the economic development opportunities that arise from further development and growth of the airport facility and contain a specific action to encourage and support such opportunities.

Goal 2: Protect and enhance the region's natural environment

Council supports in principle the various environmental actions in the draft Plan. However, whilst the discussion in the draft Plan relating to the coastal environment is specific and relevant to the region or parts thereof, a number of the actions are quite generic and routine.

One action that is specific and directly relevant to Eurobodalla is Action 2.2.1, which is to develop urban growth area maps to guide sustainable growth on the Far South Coast. The draft Plan states that the "*growth area maps will provide clarity for land owners, developers and the community about where growth is likely to occur and the environmental and infrastructure issues that are likely to arise as urban development proceeds*". Whilst Council supports the intent of this action, in Eurobodalla urban growth areas are already defined (as urban release areas) in Eurobodalla Local Environmental Plan 2012 and many of these areas were considered in the Sensitive Urban Lands Report 2006. It is unclear what further mapping or strategic issues assessment is required at this

stage. Council notes that there are elements of Direction 2.2 that apply equally to other parts of the South East and Tablelands Region, such as riparian area protection.

Another specific action that has relevance to Eurobodalla is Action 2.2.5 to prepare a Marine Estate Strategy for NSW. Council supports this action and also welcomes the action to prepare a Local Environmental Planning Practice Note relating to waterways zones.

In relation to "*high quality environmental value mapping and spatial data*", in Eurobodalla this work has been undertaken through preparation of the Rural Lands Strategy and a process for regular updating of the mapping is in place. In relation to "*support planning authorities to undertake strategic, landscape-scale assessment of biodiversity and areas of high environmental; value*", funding for councils will be required to do this.

In relation to the requirement for councils to "*confirm and validate the location and boundaries of regional biodiversity corridors*", it is not clear why the onus should be on councils to do this. If this is to remain in the Plan, Councils will require funding and other support to do this. Through the preparation of the Rural Lands Strategy, Council resolved to refer to vegetation maps and controls in Development Control Plans rather than in the Local Environmental Plan. It is Council's view that this enables easier and more regular updating of the mapping.

In relation to securing the region's water resources, Council welcomes Action 2.4.1 to finalise and implement outstanding water sharing plans, including those for the Clyde, Deua and Tuross Rivers and for South Coast groundwater sources. An important action in Council's Rural Lands Strategy is "*that Council hold discussions with Department of Primary Industries (Water) to test the potential for a variation in policy approach to water resources in coastal catchments*". In particular, the Strategy identifies that there may be potential for the 10% catchment area limit for rural dams to be increased in coastal catchments where environmental flows may be higher than for inland areas. Further, the Strategy suggests that there may be potential for the granting of additional small water extraction licences for horticultural producers and a review of the use and efficiency of all current water allocations. Council would encourage similar actions being considered for inclusion in the Regional Plan and/or in the finalisation of the water sharing plans.

Goal 3: Strengthen the economic opportunities of the region

Council supports in principle the various economic actions in the draft Plan. In particular, Council fully supports Action 3.1.2 to develop a marine-based tourism strategy for the Illawarra, Shoalhaven and the Far South Coast. However, many of the other actions are quite generic and routine.

In relation to the action to identify regionally important agricultural lands, in order to develop up to date agricultural land mapping, the Department of Primary Industries should develop new soils mapping for the region.

In terms of "regional strategic assets", it is disappointing that only two are mentioned – Port of Eden and Canberra Airport. There are many other assets that qualify as "regional" and "strategic" and many of these are mentioned elsewhere in the draft Plan. To reinforce their significance, the following should be identified under Direction 3.4 with specific actions developed.

- The National Park Estate and the Batemans Marine Park – these assets are fundamental to growing the tourism economy.
- Important aquaculture estuaries – aquaculture is an important and growing industry all along the south coast.

- The region's "Regional Centres", being Batemans Bay, Bega, Bowral, Goulburn and Queanbeyan – strengthening the regional centres is key to the promotion of the region as a place to live, work and play.
- Significant regional Aboriginal and European places/trails, such as Mount Gulaga, Montague Island, the Bundian Way, the Corn Trail and the Tilba Heritage Conservation Area – like the National Park estate, these are important to growing the tourism industry.
- Other airports in the region, including Moruya and Merimbula – building capacity for growth at regional airports is important for a range of economic outcomes, including business travel, health transport, tourism and freight.
- The major highways, including the Princes and Kings Highways – improving B-double access along these highways will open up significant economic opportunities.

In relation to the Princes Highway, while there is a discussion in the draft Plan relating to continued improvements to the Princes Highway, there should be a specific action regarding this in the Plan, similar to Action 1.2.1 relating to the Kings Highway (Queanbeyan to Batemans Bay Corridor Strategy).

> "Infrastructure deficiencies make it difficult for low productivity/high unemployment regions to increase productivity." (NIEIR, 2016)
>
> "Cumulative regional investment (the capital stock per capita installed in a region) is a fundamental factor that determines the level of economic activity. The data shows that a strong relationship between construction capital stock installed in an LGA catchment and catchment level of economic activity. Infrastructure investment is thus a core regional development issue. To grow employment and real incomes, regions must grow their capital stock." (NIEIR, 2016)

It is noted that there is no action under this goal in relation to the major regional centres in the region, as these have been included under Goal 4. Council suggests that the discussion and actions relating to regional centres is more appropriately located in the economic section of the Plan.

The draft Plan does not provide much discussion or any actions to support the important aquaculture and fishing industries on the South Coast. The draft Plan does provide a specific focus on some key industries, but does not include an action relating to the need for further diversification of local economies in the region and in particular the need to attract more "knowledge jobs".

Goal 4: Build communities that are strong, healthy and well connected

Council supports in principle the various social actions in the draft Plan. However, many of them are quite generic and routine.

This is particularly the case in relation to the proposed health and education actions, which relate to growth planning and capacity assessment. Whilst planning for growth in schools and hospitals is welcome, this is a core function of government and should be being undertaken on an ongoing basis. The results of such planning should be the development of specific actions that can be included in the Regional Plan. Which schools or hospitals in the region will be improved, how will they be improved and in what time frame?

Council supports Action 4.1.1, particularly with respect to considering affordable housing needs and strategies and welcomes the development of a state-wide, whole-of-government strategy for affordable housing. Council hopes that more tangible actions will result from the development of such strategies.

It is also noted that there is no action relating to community engagement in planning processes in the draft Plan, a key element of the ongoing NSW planning reforms. Further, while the challenges and opportunities arising from the aging of the population is referred to in the introduction section of this goal, there are no specific actions included.

Council supports Action 4.5.3 to investigate further opportunities to improve bus operations in urban centres and connections with regional communities. Council hopes that such investigations will result in more tangible actions for local communities.

Conclusion

The draft South East and Tablelands Regional Plan provides a reasonably good description of the region but is lacking in terms of the number of specific and tangible actions for the growth of the region. A great majority of the actions in the draft Plan could apply to any region in NSW. The Draft South East and Tablelands Regional Plan should be unique to this region. In particular, the actions in the Plan should be more specific to the unique challenges and opportunities of this region.

Council welcomes this opportunity to provide comments on the draft Regional Plan and is willing to work with the Department of Planning and Environment and other Councils in our region to make the Regional Plan more specific and relevant to the South East and Tablelands Region and therefore more likely to make the positive impacts, particularly in regard to growth in the economy and jobs, that the Plan is intended to achieve.

Eurobodalla Shire and drivers of economic growth

A report for
EUROBODALLA SHIRE

Prepared by the
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May 2016

While the National Institute endeavours to provide reliable forecasts and believes the material is accurate it will not be liable for any claim by any party acting on such information.

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1. Eurobodalla Shire forecasts

Gross regional product for the shire is forecast to grow at an average rate of 2.4 per cent per annum to 2035, that is, at a slightly lower rate forecast for the State of NSW at 2.69 per cent. GRP in the Eurobodalla Shire is forecast to decline slightly over the period to 2020 before growth commences once more. The initial decline is as a result of the macro-economic circumstances for Australia generally following the global financial crisis, the end of the mining investment boom, declining terms of trade and household expenditures curtailed by high levels of household debt and the tightening of government expenditures.

Without any special strategic development and investments, forecasts for growth for industry sector GRP in the Shire to 2035 fail to reveal an industry that is growing at rates significantly above other industries. Construction, Health and social assistance and Accommodation and food services are likely to grow at a slightly faster rate than other industries in the shire.

In the period 1995 to 2015 industry GRP growth across a range of industry sectors was sluggish. Industry employment declined significantly for the Agriculture, forestry and fishing sector.

Drivers of industry GRP growth have been the Construction, Retail trade, Education and training and Health services and social assistance. While the Accommodation and food services sector has grown its contribution to GRP growth has been lower than the other key industry sectors and like the Construction sector has actually declined in the most recent period since 2010. Industry GRP for Professional services has also declined in the most recent period.

Industry employment is forecast to grow by an average of 1.27 per cent per annum to 2035 which is slightly below projected population growth. Industry employment which has recently been in decline is forecast to regain the 2010 employment level by 2020 and continue to grow from that date and in line with improvements in macroeconomic circumstances.

Over the next decade the **key economic drivers** are likely to be the following.

Industry sectors

- Health Care and social assistance (including older age care);
- Education and training;
- Construction;
- Retail;
- Niche agricultural production; and
- Accommodation and food services.

Strategic

- Skills and skills development;
- Internet and telecommunications;
- Capacity to export (this includes tourism related activity);
- Knowledge based and creative; and
- Environment

Table 1.1 Eurobodalla key indicator forecasts													
	1995	2000	2005	2010	2015	2020	2025	2030	2035	1995-2015	2015-2035	Difference	NSW 2015-2035
GRP (2013 $m)	990	1,126	1,361	1,342	1,365	1,236	1,503	1,838	2,194	1.62%	2.40%	0.8%	2.69%
JTW employment	9,839	10,965	12,458	12,966	12,227	13,057	14,040	14,955	15,738	1.09%	1.27%	0.2%	1.21%
UR employment	10,182	11,329	13,120	13,644	13,265	14,123	15,145	16,015	16,854	1.33%	1.20%	-0.1%	1.16%
Exports(2013 $m)	409	456	495	366	385	405	414	429	451	-0.31%	0.80%	1.1%	0.46%
Value added (2013 $m)	777	900	1,023	1,004	1,031	817	1,031	1,288	1,562	1.42%	2.10%		2.36%
Population	29,667	32,730	35,536	36,677	37,740	40,298	43,676	47,157	50,382	1.21%	1.45%	0.2%	1.42%
Households	11,183	12,769	13,885	14,728	15,257	16,810	18,171	19,485	20,666	1.57%	1.53%	0.0%	1.43%
HDI (2013 $m)	671	828	1,050	1,225	1,423	1,654	1,878	2,144	2,398	3.83%	2.64%	-1.2%	2.34%
HDI per household ($)	59,964	64,861	75,595	83,158	93,260	98,405	103,356	110,006	116,055	2.23%	1.10%	-1.1%	1.20%

Note: HDI includes ownership of dwellings.

Table 1.1 shows the headline indicator data for Eurobodalla Shire for the period 1995 to 2015 and forecasts NIEIR forecasts for these indicators 2035.

GRP data is the headline data for this indicator for Eurobodalla Shire expressed as 2013 dollar values and shows a growth rate for this indicator in the Shire at 2.4 per cent per annum, that is, slightly below the forecast NSW state average of 2.69 per cent. The average per annum GRP growth rate in the Shire over the period 2015 -2035 is however .8 per cent per annum higher than was the case in the historic data. The forecasts predict that higher levels of GRP growth will be achieved post 2020 in line with a general improvement in Australia's economic circumstances.

Industry employment (JTW employment) is forecast to grow at 1.27 per cent per annum over the forecast period and at a slightly higher rate than the State average. This rate is slightly higher than for the period 1995 – 2015. Resident employment, that is residents of the Eurobodalla Shire working in the Shire or adjoining Shires, is also forecast to grow at an average rate of 1.2 per cent to 2035.

Exports and Industry value added at factor cost (or Industry GRP less taxes) are expressed in $million. For exports after an initial period of decline to 2020 the average per annum growth rate for Industry value added is 2.1 per cent, higher than the historic performance but slightly lower than the state average.

Household disposable income (HDI) is shown in both $million totals and dollars per household. The forecasts show a lower rate of growth than what was the case in the period to 2015.

Points to note

An analysis of the NIEIR databases for the Shire suggest that the period to 2020, given current macro-economic circumstances and regional geography, are likely to be a time for consolidation rather than high growth. Important during this period will be to ensure that the region has its share of Health services and related investment, that education and local industry work towards creating a more of a cohesive system that considers local industries educational and training needs and to encourage local businesses to become more engaged in the education and training process as a way of creating at least some local advantage.

The Internet and telecommunications more generally are critically important in laying the foundations for a new economy. The Internet is strategically important, as are related skill sets, for two key reasons. Firstly, to assist in leveraging existing sectors and businesses such as tourism and its marketing and systems and secondly as a foundation for future business development in such areas as Professional services and new media, creative production. The key task here is to ensure that the Shire becomes better connected and Internet savvy.

In terms of the local tourism economy the task will be to work out how to capture more local value for the industry sector. Attracting more visitors from interstate and overseas and developing appropriate leisure opportunities for higher spending visitors are such tasks. A word of caution, this process does not particularly require large amounts of investment that will make Eurobodalla look like everywhere else. It is likely that high value tourists are looking for a unique experience and in a place of natural beauty, so these things should be valued.

Retail will remain important, particularly as an employing sector. The Retail and Construction sectors are important as they provide local jobs, particularly opportunities for young people to enter employment.

NIEIR data suggest a relatively low contribution to the region's economy from employment in the arts and creative sector, in some ways this is surprising given relative proximity and links to Canberra and the regions capacity for lifestyle attraction. This needs further investigation. Poor Internet connectivity will hamper growth in this sector.

To achieve the best employment outcomes, the skills of residents are going to have to align with the demands of changing industry and opportunity. This message needs to be loud and clear and quality opportunities for retraining and learning new skills have to be available (particularly important in the next five years) locally.

As a general comment Eurobodalla Shire employment and GRP growth will continue to depend on a range of industry sectors and there is no obvious and single silver bullet that changes this. What is required is a range of policies addressing the principles of regional economic development so that longer term development planning helps to maximise the potential of the region.

Data in this report are based on financial years unless otherwise specified.

2. Principles of regional development

This section discusses the contemporary principles of economic development which underpin the industry drivers of economic growth. These principles are important when taking into account the need for longer term planning to ensure that the Eurobodalla Shire is in the best possible position to benefit from its existing advantages. The task is then to consider what measures can be taken in respect of these principles to ensure the best regional outcomes for Eurobodalla and its future prosperity.

The principles discussed here have been developed by NIEIR as a result of findings from many regional economic development studies including the *State of the Regions* reports. Also incorporated here are a set of principles of economic development derived from regional geography and connection to major centres such as Sydney and Canberra.

Not each of these principles apply to Eurobodalla Shire in full measure but each contribute to our understanding of regional economic development.

Culture also has a role in economic development and during times of change, particularly changes to industry structure, technology and skills demand, in as much as change requires flexibility from workers and acceptance of changing circumstances. A readiness to learn about new skills and new opportunities are among the cultural changes required. It is recognised that these things are not easy, particularly in a regional context. Encouraging entrepreneurship to create employers rather than employees is becoming increasingly important in diversifying regional economies and reducing long term economic risk.

PRINCIPLE ONE: High-income economies, apart from those with a unique and extensive natural resource base, now depend on sustained innovation as the core driver of long-term economic growth. This means regional economic development outcomes will increasingly require knowledge and innovation led industries as the foundation of future prosperity.

PRINCIPLE TWO: The capacity to innovate depends on knowledge and networks at the regional level.

PRINCIPLE THREE: Knowledge-based regions require a high concentration of highly skilled global knowledge workers, these workers tend to migrate to regions with a wide variety of cultural and lifestyle choices. The productivity benefits arise from human interaction, not only in offices and factories but in cafes, shops and educational and recreation venues.

PRINCIPLE FOUR: Regions with high-productivity jobs (or with commuter access to high-productivity jobs) have high household incomes and low unemployment rates.

PRINCIPLE FIVE: Until such time as the knowledge-economy can be generalised, the young will continue to leave low-income, high-unemployment regions and migrate to high-income, low unemployment regions.

PRINCIPLE SIX: Australia's difficulties in adopting the knowledge economy would be eased if knowledge economy jobs could be decentralised. This has proved very difficult, though there has been some decentralisation but mainly to inner metropolitan suburbs. Further decentralisation is likely to be incremental – from metropolitan centres into inner suburbs and into regional capital cities which have already established themselves as outposts of the knowledge economy. Diffusion of the knowledge economy will require infrastructure support, especially investment in telecommunications and transport.

PRINCIPLE SEVEN: Infrastructure deficiencies make it difficult for low productivity/high unemployment regions to increase productivity. Relatively low housing costs are an advantage for regions seeking to attach themselves to the knowledge economy, as are lifestyle choices; these assist in attracting knowledge workers. However, such workers must be provided with the means to be productive, by placing themselves at the interface between the local economic base (particularly export industries) and the global economy. This requires investment in telecommunications and transport. It also requires low-key local investment so that every main street becomes an outpost of the knowledge economy.

PRINCIPLE EIGHT: Retirees are leaving high-income, high-cost, low-unemployment regions and migrating to low-income, low-cost, high unemployment regions. The flow of older people to retirement regions was initially encouraged by marked differentials in house prices. Though the differential is not quite as compelling as it was, retirement migration is still taking place. Retirement migration can be an important source of income to recipient regions in that it supports construction activity. Such regions have to maintain the inflow of retirees to keep the construction going, but this is not always possible. The question for Eurobodalla is whether the shire can turn the attributes which attracted retirees (and the retirees themselves) into greater participation in the knowledge economy.

PRINCIPLE NINE: Low productivity regions are ageing rapidly while high productivity regions are ageing relatively slowly. In regions where productivity is low because of high retiree populations, many households depend on transfer payments, either social security payments or returns on financial investments, supplemented by government finance of health facilities. A region with a high proportion of retirees accordingly depends on other regions for much of its income. The challenge for Eurobodalla is to leverage the liveability which originally attracted retirees into the attraction of knowledge-based businesses.

PRINCIPLE TEN: Regions may also suffer low productivity because they have specialised in declining industries, usually accompanied by a failure to invest.

PRINCIPLE ELEVEN: The accumulation of household debt limits capacity of many households, particularly in Metropolitan regions, to finance local services. For the foreseeable future a large proportion of Australian households will be forced to prioritise debt servicing, which will reduce their capacity to respond to opportunities.

PRINCIPLE TWELVE: Income inequality within and between regions is associated with depressed economic growth. International evidence summarised by the OECD and IMF shows that increases in inequality generate reductions in long-term economic growth rates. Within Australia, the higher the per-capita disposable income of a region, the higher the growth rate it achieves. As the OECD suggests, this is likely to reflect inequality of access to educational opportunity but it is also likely to reflect inequality of access to employment.

PRINCIPLE THIRTEEN: There is increasing inequity in regional economic performance in Australian cities and regions. The greater the distance a sub-region is from the central LGA (of the City of Melbourne or Sydney), the greater the likelihood that there is an increase in inequality. A core issue here maybe declining access to high productivity employment and, in some cases, declining access to hours of work in outer areas and regions. These are the key reasons for increasing inequality.

PRINCIPLE FOURTEEN: The greater the level of economic activity located within a region's catchment, the greater the economic benefit to residents within the catchment.

PRINCIPLE FIFTEEN: Cumulative regional investment (the capital stock per capita installed in a region) is a fundamental factor that determines the level of economic activity.

The data shows that a strong relationship between construction capital stock installed in an LGA catchment and catchment level of economic activity. Infrastructure investment is thus a core regional development issue. To grow employment and real incomes, regions must grow their capital stock. This suggests potentially high effectiveness of planning instruments that allocate public sector capital directly to regions, using this to influence private sector investment decisions.

PRINCIPLE SIXTEEN: The scale of economic activity in any given industry sector drives productivity improvements. In the contemporary context this idea draws attention to the potentially important role of high-tech/knowledge-based clusters as a means of both lifting productivity and better sharing its benefits, provided these clusters have good accessibility to the region and in the case of Eurobodalla, to Canberra.

PRINCIPLE SEVENTEEN: The capacity to export out of a region is a core driver of economic activity.

PRINCIPLE EIGHTEEN: The skills of households within each region's catchment are core drivers of the region's economic performance. This point is demonstrated by examining the relationship between the regional concentration of high skilled households and regional economic performance. Regions with a higher level of skilled workers are more productive. The question of industry scale arises for Eurobodalla so it is likely that it will be difficult to exploit economies of scale and this could mean less scope to improve living standards.

PRINCIPLE NINETEEN: Different industry types have different multipliers (or flow-on impacts) for expansion: high-technology industries have the largest multipliers and, therefore, the greater the concentration of high-technology industry in a region, the better the relative economic performance.

The following should be noted:

1. In the absence of policy/planning intervention there is a tendency for increasing inequality between regions. Both State and Federal Governments have a role here in assisting local government to meet their strategic and economic growth plans.
2. The scale, as measured by population size or the scale of labour market/ economic catchment of regions, as determined by travel times, is a key driver of productivity and the ability of residents to capture hours of work.
3. Some industries are more important and effective, per $m value-added, in driving regional economic development than others. High-tech/knowledge-based industries have particular importance, in part because of the importance of economies of scale and scope in driving productivity and profitability and in part because they are innovation-intensive industries, whose innovations tend to benefit a much wider circle of firms and industries than just the businesses undertaking the initial innovation (including firms in other industry sectors).
4. Because of the importance of economies of scale and scope and the indirect benefits which can be captured from innovation by others, high-tech/ knowledge-based firms want to cluster together, either in the central region or regions close thereto.
5. As a result, if regions have poor economic outcomes in terms of hours of work available per working age resident and/or dollars earned per hour of work, one important reason for this will be a lack of high-tech based employment opportunities within the region's labour market catchments.

3. Eurobodalla industry structure

Table 3.1 gives industry sector GRP for the Eurobodalla Shire since 1992. The top contributors to GRP formation in the Eurobodalla Shire in 2015 were the Health and social assistance, Construction, Retail, Accommodation and food services and Education sectors.

Figure 3.1: Eurobodalla industry component of GRP – 2015

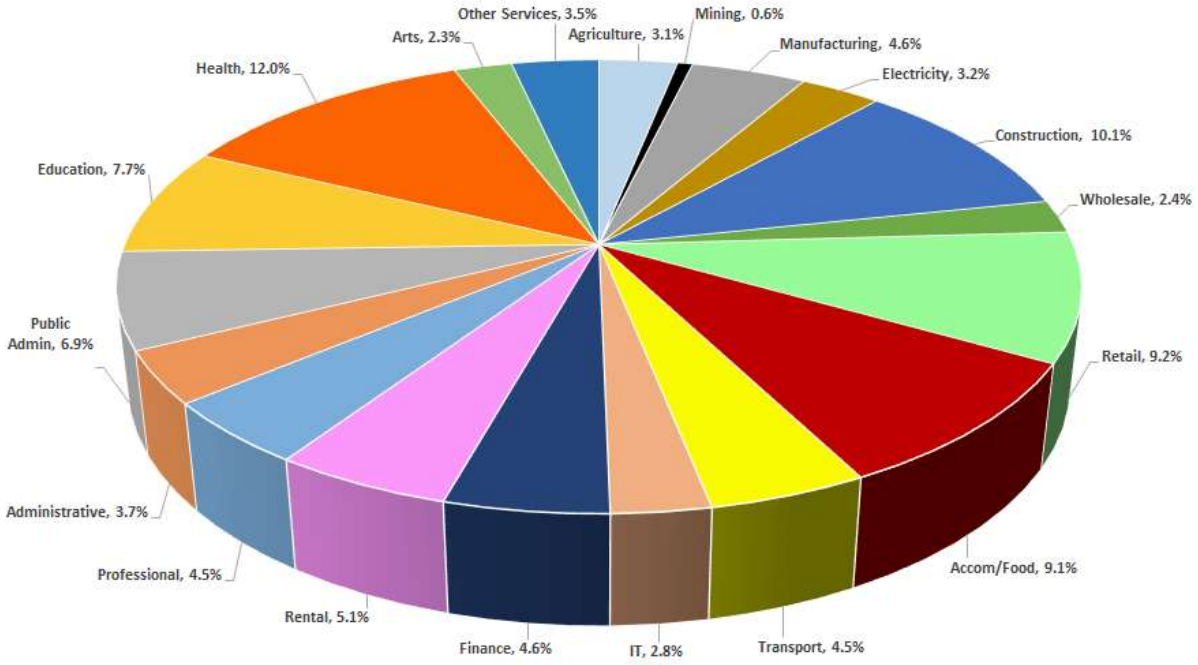


Table 3.2 shows the classification of industry sectors/sub-sectors into low, medium and high-tech output and employment. The high-tech sectors of significance to Eurobodalla Shire economic development are Agriculture (likely to be niche specialisations and high value adding – food product manufacturing and processing is a growth industry in Australia), some aspects of Financial services, New media developments/Internet longer term, Professional, scientific and technical services, Computer system design and related services, Tertiary education, Adult education, Hospitals and related health services and Creative and performing arts. It is important to note that much of the high-tech new industries regional economy will be dependent on high quality telecommunications Internet services.

To realise opportunities from new media developments such as Airbnb and the range of social media available to local businesses for marketing activities, the region's businesses will need to know how to get the best from this new marketing and sales opportunities. Benefits to the region generally will accrue from a sophisticated approach to the Internet and IT systems. For Eurobodalla this may particularly be the case for specialist/niche agricultural production (particularly fresh foods) and processing and tourism related activity. One key opportunity for the region, particularly given its existing advantages, will be to increase the visitation of international and interstate visitation.

Value adding timber products such as furniture making and nature tourism represent other opportunities where the region has advantages which can be developed further.

The economics of relatively small scale tourism is understood and the shortage of high quality tourist accommodation will have to be resolved over the longer term, in the meantime new ways of accommodating tourists, such as Airbnb, will need to be leveraged and some central planning may assist in these developments.

Attracting well off retirees does stimulate construction activity, but NIEIR's research tends to indicate that retirees then go on to spend relatively small amounts in the local community for such things as cleaning and gardening services, groceries and costs relating to vehicles etc. As an extension to retirement migration it will be important to ensure there are enough aged care facilities in the Shire to cater for what is likely to be a growing demand for these services.

A role for council, and this is particularly important over the next decade, will be to ensure that the Health and social services sector continues to grow in line with demand. The same is the case for education.

Table 3.1 Eurobodalla: Value added at factor cost (excluding taxes) by industry sector ($'000)												
	1992	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
Agriculture, Forestry and Fishing	21.9	23.3	24.9	21.3	27.3	28.9	20.9	21.9	24.3	25.8	24.0	16.2
Mining	1.6	2.1	2.3	3.2	3.8	4.1	3.8	3.4	2.8	3.0	2.3	2.7
Manufacturing	53.3	55.3	57.6	59.1	56.5	55.3	57.5	61.8	65.2	64.7	69.5	78.3
Electricity, Gas, Water and Waste Services	41.4	40.9	40.2	40.6	41.3	38.8	37.8	40.9	43.0	39.9	39.3	41.9
Construction	149.2	143.9	129.1	111.9	81.3	61.2	63.7	71.2	84.5	73.8	88.6	115.2
Wholesale Trade	18.8	18.8	20.0	22.7	24.6	25.1	26.9	28.8	31.1	30.0	28.6	26.3
Retail Trade	53.9	54.8	56.3	60.5	66.2	67.2	68.8	73.9	78.2	77.4	80.6	87.7
Accommodation and Food Services	63.8	58.4	58.9	62.7	63.0	63.9	64.9	70.6	73.7	77.1	74.0	75.3
Transport, Postal and Warehousing	10.6	11.0	12.1	14.3	17.2	18.4	20.1	21.8	23.0	23.3	23.2	25.5
Information Media and Telecommunications	18.9	20.7	21.8	24.1	25.0	24.8	25.7	26.7	24.8	22.9	26.1	25.7
Financial and Insurance Services	46.2	46.6	49.3	46.4	46.3	47.2	47.9	50.0	51.0	49.8	49.1	46.8
Rental, Hiring and Real Estate Services	53.1	54.6	52.8	54.2	53.8	54.1	55.9	59.8	68.2	74.3	54.2	57.4
Professional, Scientific & Technical Services	25.7	23.5	23.0	25.6	24.9	25.6	27.2	31.0	33.4	36.0	37.7	40.5
Administrative and Support Services	26.7	28.5	29.6	33.7	33.5	33.0	35.6	39.2	41.5	45.9	55.2	54.0
Public Administration and Safety	36.8	39.3	42.4	46.2	48.5	52.6	51.9	55.0	58.3	61.0	65.6	63.4
Education and Training	47.7	51.2	51.3	52.0	53.3	55.7	57.4	60.5	63.9	63.4	64.4	65.8
Health Care and Social Assistance	44.4	47.2	50.4	54.8	58.9	62.3	65.9	69.1	75.4	78.3	81.3	78.9
Arts and Recreation Services	16.1	15.0	14.2	14.3	14.0	14.4	15.5	19.3	21.4	20.4	20.5	19.6
Other Services	26.6	27.2	27.3	29.6	31.9	33.9	34.4	35.4	36.2	36.6	35.5	36.5
Total	**756.8**	**762.4**	**763.4**	**777.5**	**771.1**	**766.6**	**781.8**	**840.4**	**900.0**	**903.6**	**919.6**	**957.8**

Table 3.1 Eurobodalla: Value added at factor cost (excluding taxes) by industry sector ($'000) – continued													
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Agriculture, Forestry and Fishing	20.5	23.9	27.5	22.3	20.4	26.7	27.4	32.8	30.3	30.9	34.1	32.3	609.7
Mining	3.8	3.6	3.8	4.3	2.7	1.9	2.4	2.2	4.5	6.5	7.3	6.5	84.7
Manufacturing	81.6	85.4	84.6	79.9	73.0	64.5	60.0	57.9	53.2	51.6	49.9	47.6	1523.3
Electricity, Gas, Water and Waste Services	44.6	44.9	47.3	48.5	50.1	48.9	55.9	54.1	48.4	45.5	36.2	34.1	1044.3
Construction	128.7	120.8	109.8	103.7	103.4	92.2	94.6	89.9	80.5	76.3	87.8	106.5	2367.8
Wholesale Trade	25.0	24.6	22.1	20.0	19.6	20.1	20.6	20.4	20.8	23.5	25.9	23.8	568.3
Retail Trade	94.4	100.0	101.2	104.5	103.7	104.7	101.7	97.0	93.3	97.0	93.7	93.3	2010.2
Accommodation and Food Services	78.4	84.6	88.7	89.4	87.7	83.2	84.6	93.4	95.3	90.1	86.1	89.1	1856.8
Transport, Postal and Warehousing	27.4	29.3	28.9	31.6	35.6	34.6	35.4	37.0	37.1	39.6	39.2	43.9	640.1
Information Media and Telecommunications	24.9	25.8	27.2	28.5	29.0	28.2	28.2	28.1	27.7	27.9	27.1	29.1	619.0
Financial and Insurance Services	48.4	48.6	50.0	51.4	53.5	52.2	49.5	46.4	44.7	46.1	47.4	46.5	1161.5
Rental, Hiring and Real Estate Services	59.0	59.3	61.2	54.5	48.2	50.1	48.2	44.3	49.1	66.2	64.4	52.4	1349.4
Professional, Scientific & Technical Services	39.2	39.3	39.8	38.7	38.3	39.4	41.7	42.9	44.3	45.0	44.3	46.4	853.5
Administrative and Support Services	52.4	54.3	49.4	46.6	47.2	43.3	40.1	39.6	37.7	38.3	40.5	39.2	985.2
Public Administration and Safety	62.5	63.6	63.6	64.3	63.9	66.6	66.3	66.1	66.8	66.9	67.7	72.0	1411.2
Education and Training	66.5	67.3	68.3	70.3	72.4	76.9	80.9	82.4	82.9	82.7	81.0	81.4	1599.7
Health Care and Social Assistance	82.7	87.6	93.8	98.3	101.0	106.8	112.2	115.6	116.7	121.2	124.9	126.0	2053.9
Arts and Recreation Services	21.1	23.4	21.9	22.7	23.9	24.7	21.6	20.3	19.1	21.7	26.1	24.0	475.2
Other Services	38.4	36.9	35.7	35.1	35.3	34.8	32.6	30.6	30.4	32.5	38.2	36.4	808.0
Total	**999.6**	**1023.1**	**1024.8**	**1014.5**	**1008.9**	**999.9**	**1003.8**	**1001.0**	**982.9**	**1009.7**	**1021.9**	**1030.5**	

Table 3.2 The grouping of industries into low, medium and high-technology			
Industry	**Tech classification**	**Industry**	**Tech classification**
Agriculture	M	Accommodation	L
Aquaculture	M	Food and beverage services	L
Forestry and logging	L	Road transport	L
Fishing, hunting and trapping	M	Rail transport	L
Agriculture, forestry and fishing support services	H	Water transport	L
Coal mining	M	Air and space transport	L
Oil and gas extraction	M	Other transport	L
Metal ore mining	M	Postal and courier pick-up and delivery services	L
Non-metallic mineral mining and quarrying	M	Transport support services	M
Exploration and other mining support services	H	Warehousing and storage services	L
Food product manuf.	M	Publishing (except internet and music publishing)	H
Beverage and tobacco product manuf.	M	Motion picture and sound recording activities	H
Textile, leather, clothing and footwear manuf.	M	Broadcasting (except internet)	H
Wood product manuf.	M	Internet publishing and broadcasting	H
Pulp, paper and converted paper product manuf.	M	Telecommunications services	H
Printing (including reproduction of recorded media)	M	Internet service providers, web search portals and data processing services	H
Petroleum and coal product manuf.	H	Library and other information services	H
Basic chemical and chemical product manuf.	H	Finance	H
Polymer product and rubber product manuf.	H	Insurance and superannuation funds	H
Non-metallic mineral product manuf.	M	Auxiliary finance and insurance services	H
Primary metal and metal product manuf.	M	Rental and hiring services (except real estate)	L
Fabricated metal product manuf.	H	Property operators and real estate services	L
Transport equipment manuf.	H	Professional, scientific & technical services (except computer system design & related services)	H
Machinery and equipment manuf.	H	Computer system design and related services	H
Furniture and other manuf.	M	Administrative services	M
Electricity supply	M	Building cleaning, pest control & other support services	M
Gas supply	M	Public administration	M
Water supply, sewerage and drainage services	M	Defence	L
Waste collection, treatment and disposal services	M	Public order, safety and regulatory services	L
Building construction	M	Preschool and school education	M
Heavy and civil engineering construction	M	Tertiary education	H
Construction services	M	Adult, community and other education	H
Basic material wholesaling	L	Hospitals	H
Machinery and equipment wholesaling	L	Medical and other health care services	M
Motor vehicle & motor vehicle parts wholesaling	L	Residential care services	L
Grocery, liquor and tobacco product wholesaling	L	Social assistance services	L
Other goods wholesaling	L	Heritage activities	M
Commission-based wholesaling	L	Creative and performing arts activities	H
Motor vehicle and motor vehicle parts retailing	L	Sports and recreation activities	L
Fuel retailing	L	Gambling activities	L
Food retailing	L	Repair and maintenance	M
Other store-based retailing	L	Personal and other services	L
Non-store retailing and retail commission based buying	L	Private households employing staff and undifferentiated goods	L

4. Eurobodalla employment

4.1 Journey to work (industry employment)

An analysis of journey to work patterns for Eurobodalla Shire reveals little of surprise and shows that Eurobodalla Shire is drawing heavily on local residents to fill its employment positions. Typically, within any regional economy the retail and construction sectors have the highest levels of local employment and industries such as the healthcare sector tend to have higher rates of out of LGA commuting. This said it appears that for Eurobodalla Shire there is inbound commuting to fill retail sector employment positions, the same appears to be the case for construction. Incoming workers numbers for the Health care and social assistance sector are perhaps a little lower than expected, but again nothing of significance, possibly reflecting the level of specialisation locally (higher levels of professional employment occurring in larger centres) combined with likely commuting distances and the lifestyle opportunities that the shire offers resulting in much of the employment demand for this sector being filled by residents.

The ACT and Canberra are important in terms of providing high-tech and high paid employment opportunities for workers claiming place of first residence in Eurobodalla Shire. Shoalhaven and the Bega Valley are providing Eurobodalla with the majority of its non-resident workforce. The Canberra connection and associated networks are seen to be strategically important in developing the future economy of the Eurobodalla Shire.

Figure 4.1 shows the employment share of Eurobodalla Shire by industry sector. The largest employers are Retail, Health care and social assistance, Construction, Accommodation and food services and education and training. These industries providing over 60 per cent of all local employment.

Since 1995 significant declines in employment have occurred in Agricultural, forestry and fisheries with the number of workers declining by around 50 per cent over the period to around 300 employment positions in 2015.

Employment in the construction industry, while it has grown since 1995, has also been volatile, declining again from a peak in 2005 to around 1450 local employment positions by 2015. What is important here is to try to create policies that encourage steady growth in construction industry activity, continuity of projects, as far as this is possible, is important not only in terms of employment but for skills development and training activities. The Construction sector is an important employer of younger males and an industry that can assist young people to remain in their communities because of the employment opportunities the sector offers.

The Manufacturing sector continues to be an important employer in the Eurobodalla Shire, although employment is in decline as with national and state trends, the sector still provides around 600 local employment positions. Manufacturing is a higher value adding industry and also at a regional level can have strong links to the construction industry.

The Accommodation and food services sector has seen employment growth of around 100 position since 2005 and this sector will remain strategically important to the Eurobodalla Shire as a driver of new opportunities/attraction of new residents to the region. It is the industry sector with capacity to market the region and its possibilities.

Table 4.1 Eurobodalla journey to work by industry			
A1	**Going out**	**Same LGA**	**Coming in**
Agriculture, Forestry and Fishing	21	324	18
Mining	9	20	0
Manufacturing	22	581	26
Electricity, Gas, Water & Waste Services	0	153	0
Construction	119	1,249	98
Wholesale Trade	16	211	7
Retail Trade	45	1,796	108
Accommodation and Food Services	57	1,394	53
Transport, Postal and Warehousing	29	394	25
Information, Media and Telecoms	5	178	7
Financial and Insurance Services	12	170	5
Rental, Hiring and Real Estate Services	9	209	11
Professional, Scientific and Technical Services	41	476	14
Administrative and Support Services	30	385	14
Public Administration and Safety	99	673	57
Education and Training	68	980	63
Health Care and Social Assistance	87	1,617	121
Arts and Recreation Services	6	210	4
Other Services	36	491	29
Total	**709 (5.8%)**	**11,513**	**659 (5.4%)**
Coming out to:			
Unincorporated ACT		287	
Bega Valley (A)		159	
Shoalhaven (C)		90	
Sydney (C)		15	
Coming in from:			
Shoalhaven (C)		315	
Bega Valley (A)		248	

The Health care and social assistance sector has steadily grown its employment in Eurobodalla Shire, local employment in the sector rising from around 1,050 in 1995 to 1,850 in 2015. Education sector employment has also grown significantly rising from 670 local employment positions in 1995 to 1,150 in 2015.

The Health care and social assistance and Education sectors are the sectors in Eurobodalla Shire in which jobs growth has been strongest in the last decade. The largest declines in employment over the last decade have been in the Construction and Retail sectors. Wholesale sector employment has also declined.

Figure 4.1: Eurobodalla industry employment share – 2015

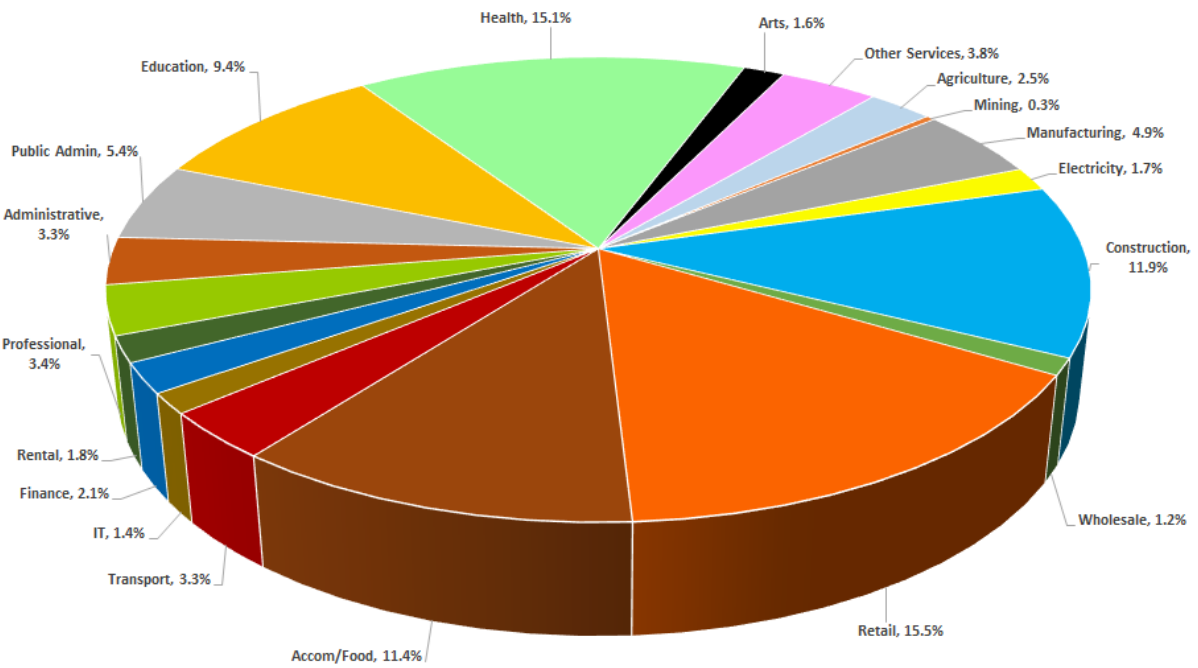


Figure 4.2 shows employment by industry sector for jobs located in the Shire in 2015.

Figure 4.2: Eurobodalla employment by industry – 2015

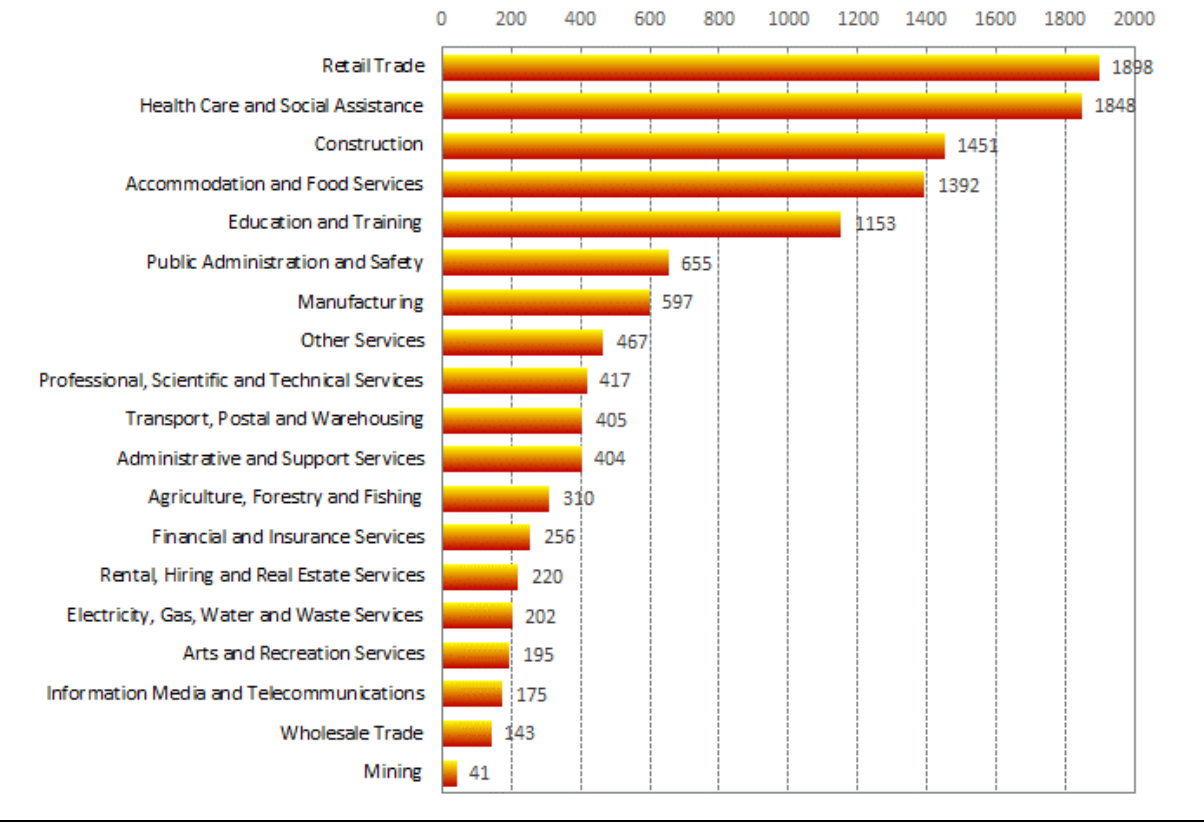


Figure 4.3 charts the growth and decline of employment by industry sector within the Eurobodalla Shire.

Figure 4.3: Eurobodalla industry employment – change from 2005 to 2015

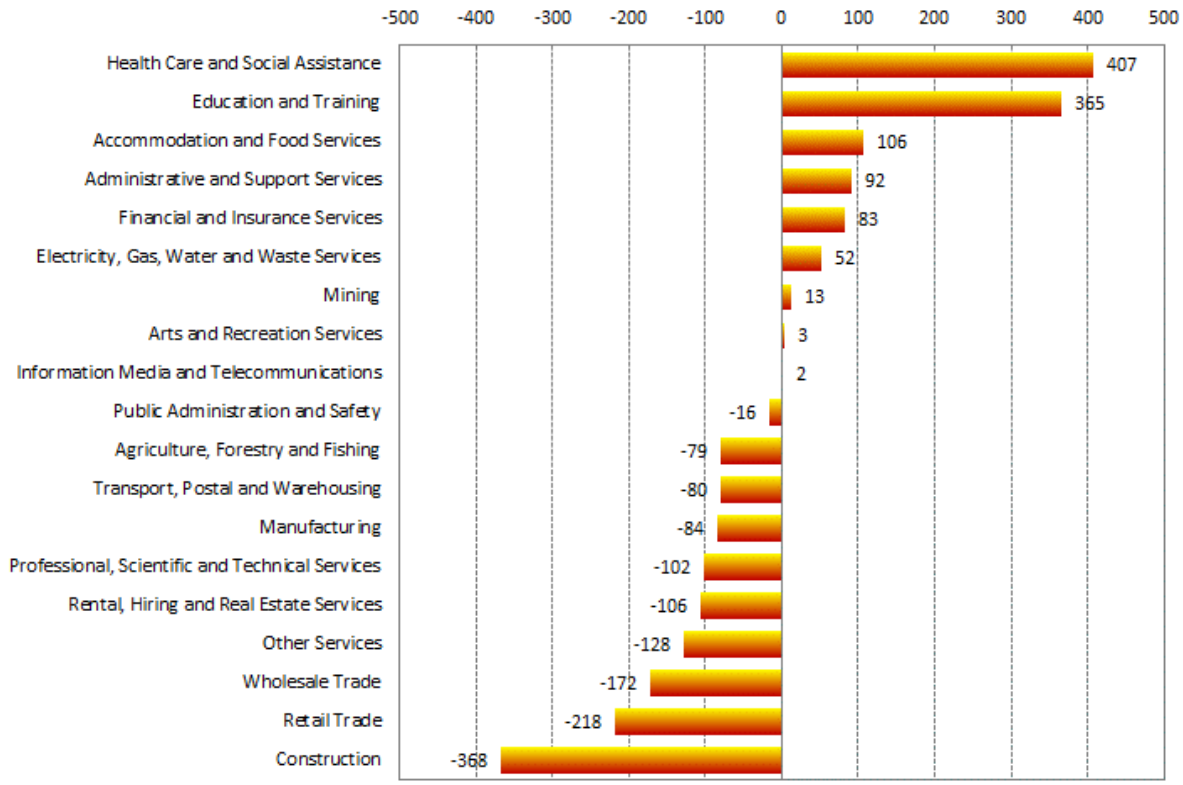
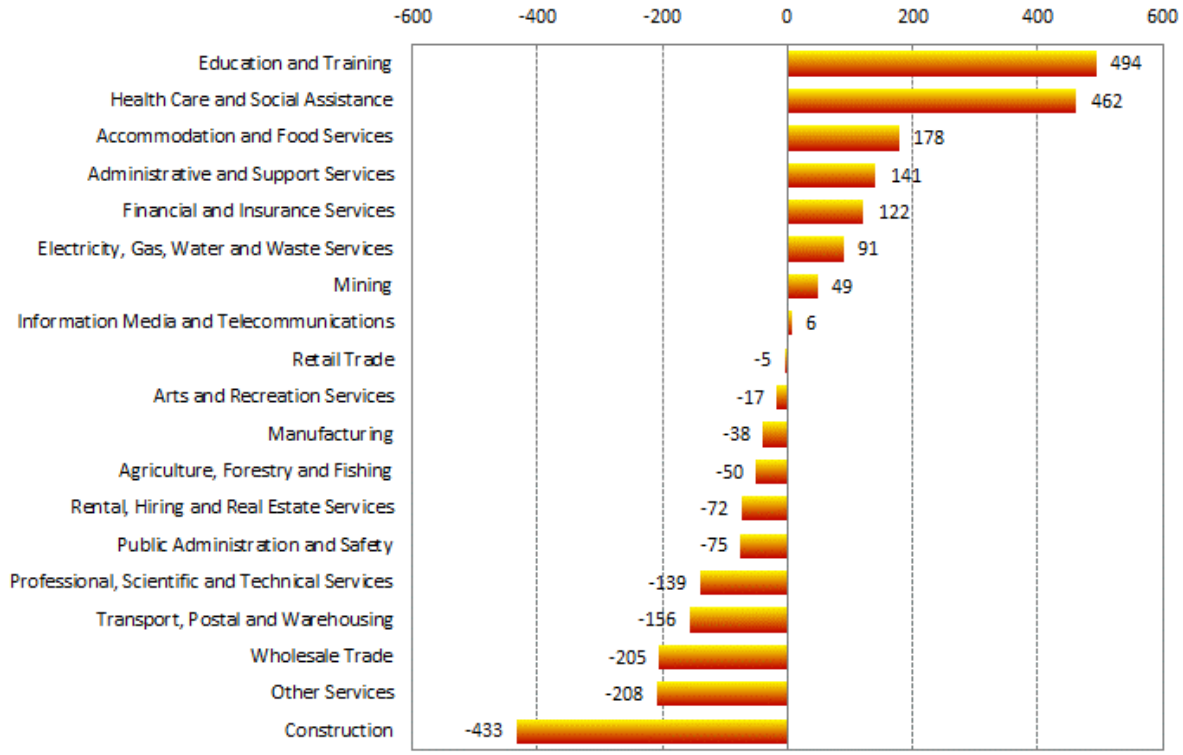


Figure 4.4 shows employment by industry change, this time for the residents of Eurobodalla Shire. The chart shows that for shire residents the largest growth in employment over the last decade has occurred in the Education and training and Health Care and social assistance sectors. The largest decline in resident employment has occurred in the construction sector. There has also been a decline in employment of residents in the Professional and scientific services sector. This is of some concern as this sector will be of strategic importance to the Eurobodalla Shire long term, particularly in relation to its links with Canberra.

Figure 4.4: Eurobodalla resident employment – change from 2005 to 2015



4.2 Industry and occupations

National trends

Fastest growing employment industries in Australia have typically been:

- Health care and social assistance;
- Professional, scientific and technical services; and
- Public administration and safety.

Largest employing industries in Australia:

- Health care and social assistance;
- Retail;
- Construction;
- Manufacturing; and
- Professional, scientific and technical services.

Fastest growing occupational groups in Australia:

- Professionals;
- Community service workers;
- Managers;
- Technicians and trade workers;
- Sales workers; and
- Machinery operators and drivers.

Fastest growing jobs in Australia:

- Carers, aged and disabled;
- Sales assistants;
- Registered nurses;
- Clerks;
- Child care workers;
- Retail managers;
- Accountants;
- Advertising and sales managers;
- Electricians; and
- Education aides.

Skills – National features:

- A decline in skills shortages overall because of the soft job market and higher levels of education and training;
- In emerging industries – skills were an issue including in the area of digital transition of industry sectors; and
- Employability skills were an issue including understanding technology, problem solving, working in a team, communication skills, planning and using initiative.

4.3 Eurobodalla: Industry classification by low, medium and high-tech employment

Table 4.2 shows industry employment for Eurobodalla classified into the groups of low, medium and high-technology employment as classified in Table 3.2 in this report. The share of higher tech employment within a region is important because high-tech employment and high-tech industries make a positive contribution to productivity and value added output and hence a region's wealth. These figures are an indicator of employment trends as they relate to these classifications. It should be noted that Sydney will have an influence on the classification as the Sydney CBD and adjoining LGAS have a high level of high-tech employment. The issue for Eurobodalla is to create strategies that influence industry composition and employment over the long term to ensure high-tech employment prospects within the Shire continue to grow into the future.

For industry employment the split between low, medium and high-tech employment shows the following trends.

- **Low-tech**: For Eurobodalla employment in the industry subsectors classified as low-tech, since 2000 there has been a decline in the share of low-tech employment when compared to total employment from 49 per cent in 2000 to 45.7 per cent in 2015. Recent data tends to suggest that the share of low-tech employment is increasing. When compared to New South Wales at 38.4 per cent, there is a higher share of low-tech employment in Eurobodalla in 2015 at 45.7 per cent.
- **Medium-tech**: For Eurobodalla employment in the industry subsectors classified as medium-tech, since 2000 there has been a rise in the share of medium-tech employment when compared to total employment from 38.5 per cent in 2000 to 40.7 per cent in 2015. Recent data tends to suggest that the share of medium-tech employment is declining slightly. When compared to New South Wales at 35.2 per cent, there is a higher share of medium-tech employment in Eurobodalla in 2015 at 40.7 per cent.
- **High-tech**: For Eurobodalla employment in the industry subsectors classified as high-tech, since 2000 there has been a slight rise in the share of high-tech employment when compared to total employment from 12.5 per cent in 2000 to 13.6 per cent in 2015. Recent data tends to suggest that the share of high-tech employment is decreasing. When compared to New South Wales at 26.4 per cent, there is a significantly lower share of high-tech employment in Eurobodalla in 2015 at 13.6 per cent.

For resident employment the split between low, medium and high-tech employment shows the following trends:

- **Low-tech**: For Eurobodalla, resident employment and in the industry subsectors classified as low-tech, since 2000 there has been a decline in the share of low-tech employment when compared to total employment from 47.8 per cent in 2000 to 45 per cent in 2015. Recent data tends to suggest that the share of low-tech employment by residents of the Shire is increasing. When compared to New South Wales at 38.1 per cent, there is a higher share of low-tech employment for the residents of Eurobodalla in 2015 at 45 per cent.
- **Medium-tech**: For Eurobodalla, resident employment in the industry subsectors classified as medium-tech, since 2000 there has been a rise in the share of medium-tech employment for residents when compared to total employment from 39.5 per cent in 2000 to 40.7 per cent in 2015. Recent data tends to suggest that the share of medium-tech employment is declining slightly. When compared to New South Wales at 35.6 per cent, there is a higher share of medium-tech resident employment in Eurobodalla in 2015 at 40.7 per cent.
- **High-tech**: For Eurobodalla resident employment, in the industry subsectors classified as high-tech, since 2000 there has been a slight rise in the share of high-tech employment when compared to total employment from 12.7 per cent in 2000 to 14.3 per cent in 2015. Recent data tends to suggest that the share of high-tech employment for residents is decreasing. When compared to New South Wales at 26.3 per cent, there is a lower share of high-tech resident employment in Eurobodalla in 2015 at 14.3 per cent.

Appendix C provides more detail by industry regarding these classifications.

Table 4.2 Industry employment: Technology level classification												
Tech classification	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
Low	4492	4536	4624	4779	4901	4923	5027	5093	5368	5450	5482	5637
Medium	3512	3520	3586	3727	3830	3978	4161	4321	4222	4220	4320	4867
High	1249	1248	1273	1332	1391	1412	1438	1434	1375	1321	1265	1354
Total	**9254**	**9304**	**9483**	**9839**	**10122**	**10314**	**10627**	**10849**	**10965**	**10990**	**11067**	**11858**
	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Low	5704	5826	5924	5790	5603	5517	5557	5790	5829	5821	5683	5587
Medium	5187	5082	5085	5359	5499	5412	5440	5528	5471	5260	4962	4977
High	1467	1550	1579	1616	1762	1953	1969	1889	1971	1961	1703	1663
Total	**12358**	**12458**	**12588**	**12765**	**12863**	**12882**	**12966**	**13207**	**13271**	**13043**	**12348**	**12227**

Table 4.3 Industry employment: Technology level classification comparison (per cent)				
Tech classification	**Eurobodalla – 2000**	**Eurobodalla – 2010**	**Eurobodalla –2015**	**NSW – 2015**
Low	49.0	42.8	45.7	38.4
Medium	38.5	42.0	40.7	35.2
High	12.5	15.2	13.6	26.4

Table 4.4 Resident employment: Technology level classification												
Tech classification	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
Low	4499	4533	4627	4810	4964	5004	5122	5167	5412	5479	5562	5778
Medium	3782	3785	3852	3979	4078	4221	4428	4600	4471	4474	4564	5168
High	1263	1281	1327	1393	1457	1483	1525	1526	1446	1381	1299	1426
Total	**9545**	**9598**	**9806**	**10182**	**10499**	**10708**	**11076**	**11293**	**11329**	**11333**	**11426**	**12371**
	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Low	5877	6006	6087	5958	5725	5575	5647	5813	5853	5927	5868	5964
Medium	5531	5419	5429	5721	5868	5784	5801	5881	5805	5642	5346	5402
High	1601	1695	1716	1763	1951	2181	2196	2098	2184	2205	1946	1899
Total	**13009**	**13120**	**13231**	**13442**	**13544**	**13540**	**13644**	**13792**	**13843**	**13774**	**13160**	**13265**

Table 4.5 Resident employment: Technology level classification comparison (per cent)				
Tech classification	**Eurobodalla – 2000**	**Eurobodalla – 2010**	**Eurobodalla –2015**	**NSW – 2015**
Low	47.8	41.4	45.0	38.1
Medium	39.5	42.5	40.7	35.6
High	12.7	16.1	14.3	26.3

5. Eurobodalla Shire education attainment

Table 5.1 shows the level of education attainment by residents in the Shire compared to what is the case for NSW. These are lower levels of degree qualified residents in the Eurobodalla Shire than for NSW and higher levels of certificate level qualifications than is the case for NSW.

Table 5.1 Level of highest educational attainment – 2011 (per cent)		
	Eurobodalla	**NSW**
Postgraduate Degree Level	1.9	4.5
Graduate Diploma and Graduate Certificate Level	2.1	1.6
Bachelor Degree Level	7.1	14.6
Advanced Diploma and Diploma Level	7.7	8.8
Certificate Level	20.9	16.7
School Education Level	51.3	45.8
Not stated	9.0	8.2

Tertiary qualifications for Shire residents are more highly represented in the fields of Engineering, Health workers, Architecture and building, Management and commerce and Education.

Table 5.2 Non-school qualification: Field of study – 2011 (per cent)		
	Eurobodalla	**NSW**
Natural and Physical Sciences	1.3	3.0
Information Technology	1.3	3.3
Engineering and Related Technologies	19.4	17.3
Architecture and Building	12.2	6.1
Agriculture, Environmental and Related Studies	3.1	2.2
Health	13.1	9.1
Education	8.3	8.2
Management and Commerce	14.3	22.1
Society and Culture	7.5	10.9
Creative Arts	2.2	3.8
Food, Hospitality and Personal Services	5.5	4.7
Mixed Field Programmes	0.4	0.1
Not stated	11.4	9.3

6. Eurobodalla occupations

Tables 6.1 and 6.2 show the composition of industry and resident occupations for Eurobodalla Shire and compares these with the industry composition of occupations for all of NSW.

Eurobodalla Shire industry and resident employment has a lower share of Professionals and managers as is the case for the NSW average (heavily influenced by Sydney) and has a higher component of Labourers, Technicians and trade workers, Community and personal service workers and Sales workers than for NSW industry and resident employment.

Strategic driver occupations: Improve share of Professional and managerial employment for both industry and resident employment.

Table 6.1 Composition of industry occupations – Eurobodalla and New South Wales (per cent)

	Eurobodalla					NSW				
Industry Occupations	**1995**	**2000**	**2005**	**2010**	**2015**	**1995**	**2000**	**2005**	**2010**	**2015**
Managers	13.4	12.6	10.4	11.9	9.5	12.6	12.1	13.0	13.3	13.2
Professionals	11.6	12.4	13.0	15.1	13.7	17.4	19.5	20.4	22.4	23.4
Technicians and trades workers	19.2	19.6	20.9	18.0	20.5	15.8	15.3	14.8	14.1	14.1
Community and personal service workers	8.1	9.2	9.3	12.0	13.0	6.7	7.6	8.2	9.3	10.1
Clerical and administrative workers	12.3	11.7	11.9	12.8	10.9	18.1	17.5	16.6	15.6	14.5
Sales workers	12.4	12.9	14.1	11.7	12.9	9.5	9.8	10.1	9.2	9.3
Machinery operators and drivers	6.0	6.0	5.8	5.5	5.5	6.9	6.8	6.3	6.1	6.4
Labourers	17.0	15.5	14.5	13.1	14.0	13.1	11.5	10.6	9.9	9.2

Table 6.2 Composition of resident occupations – Eurobodalla and New South Wales (per cent)

	Eurobodalla					NSW				
Industry Occupations	**1995**	**2000**	**2005**	**2010**	**2015**	**1995**	**2000**	**2005**	**2010**	**2015**
Managers	13.2	12.5	10.5	12.2	9.8	12.6	12.1	13.0	13.3	13.2
Professionals	11.3	12.3	13.0	15.3	14.0	17.4	19.5	20.4	22.4	23.4
Technicians and trades workers	20.0	20.1	21.4	18.3	20.8	15.8	15.3	14.8	14.1	14.1
Community and personal service workers	8.1	9.2	9.3	11.9	12.9	6.7	7.6	8.2	9.3	10.1
Clerical and administrative workers	12.3	11.9	12.3	13.1	11.4	18.1	17.5	16.6	15.6	14.5
Sales workers	12.1	12.6	13.8	11.4	12.5	9.5	9.8	10.1	9.2	9.3
Machinery operators and drivers	6.4	6.3	6.0	5.5	5.5	6.9	6.8	6.3	6.1	6.4
Labourers	16.5	15.0	13.7	12.3	13.1	13.1	11.5	10.6	9.9	9.2

The flowing pie charts provide a guide to the occupational structure for each industry sector within the Eurobodalla Shire.

Figure 6.1: Eurobodalla: Industry occupation – Agriculture, forestry and fishing

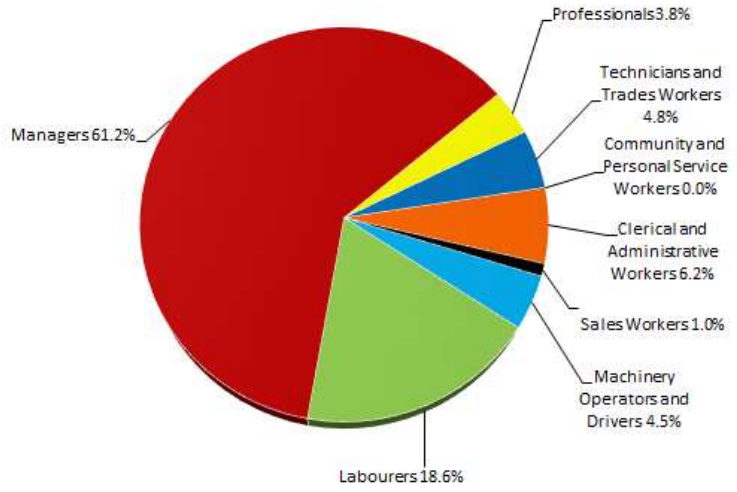


Figure 6.2: Eurobodalla: Industry occupation – Mining

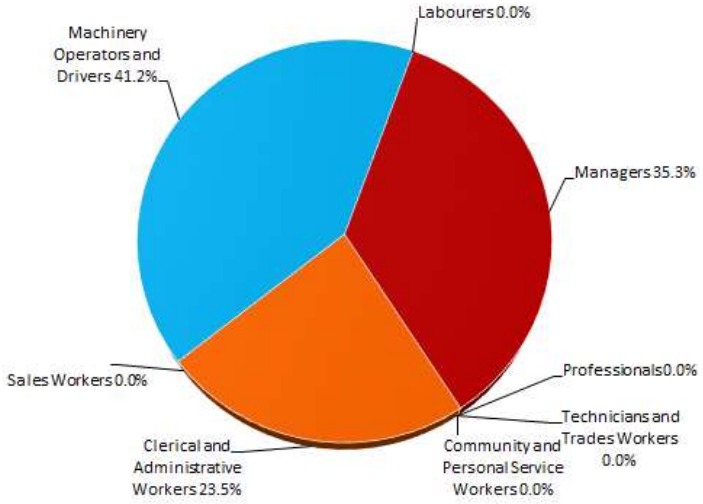


Figure 6.3: Eurobodalla: Industry occupation – Manufacturing

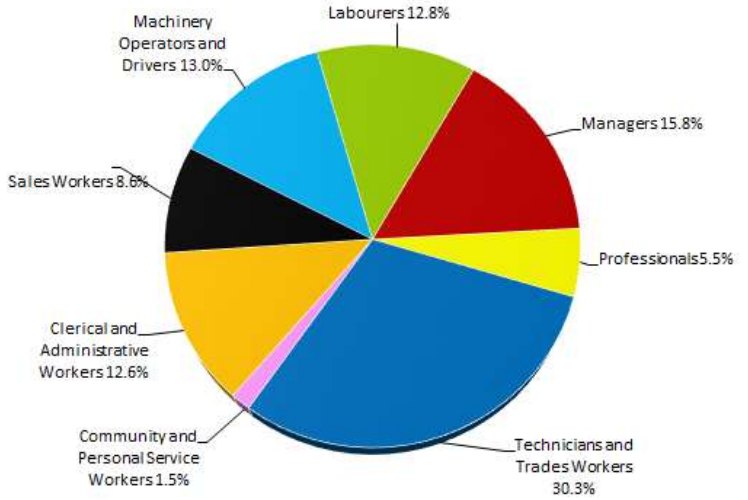


Figure 6.4: Eurobodalla: Industry occupation – Electricity, gas, water and waste services

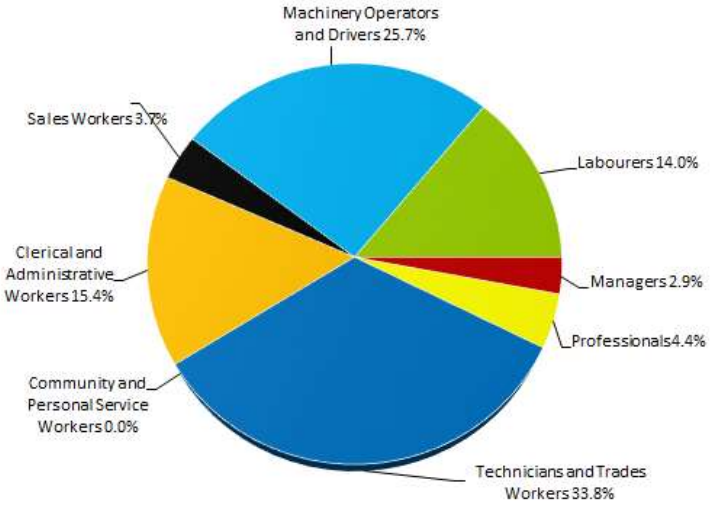


Figure 6.5: Eurobodalla: Industry occupation – Construction

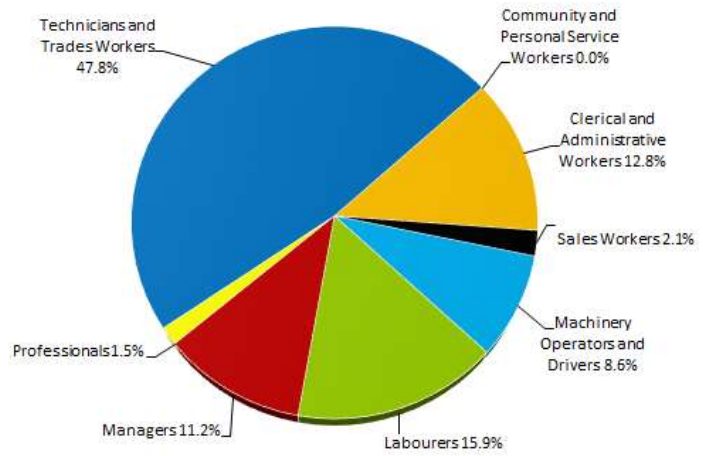


Figure 6.6: Eurobodalla: Industry occupation – Wholesale trade

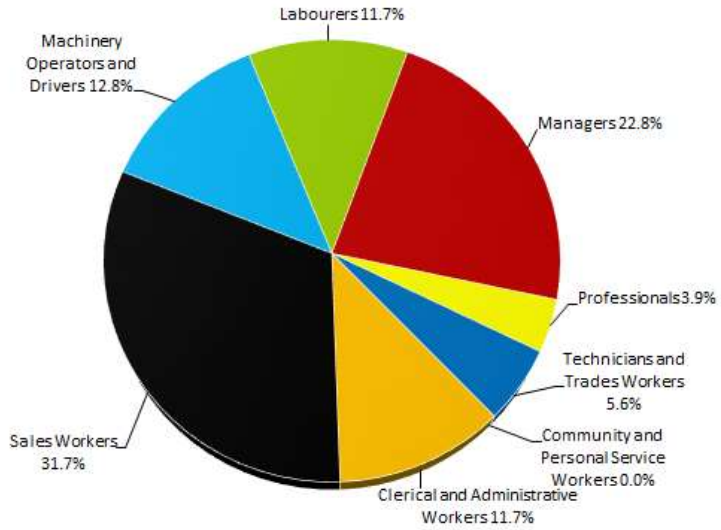


Figure 6.7: Eurobodalla: Industry occupation – Retail trade

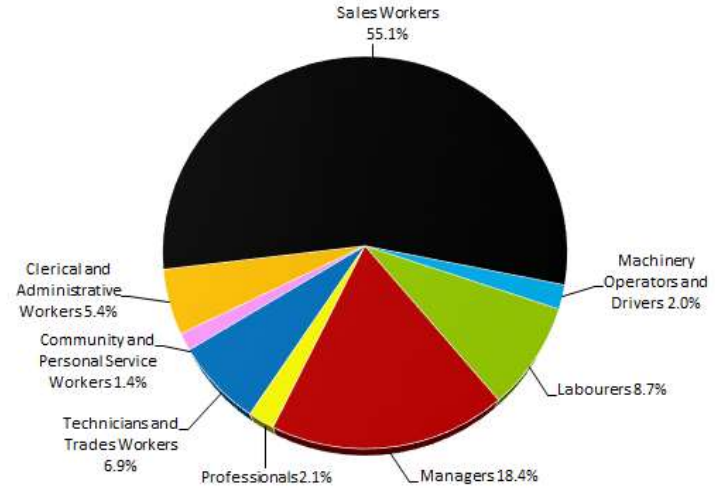


Figure 16.8: Eurobodalla: Industry occupation – Accommodation and food services

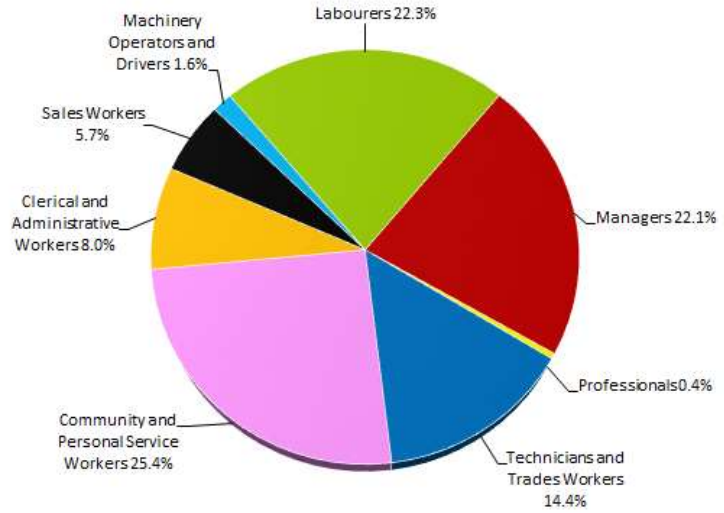


Figure 6.9: Eurobodalla: Industry occupation – Transport, postal and warehousing

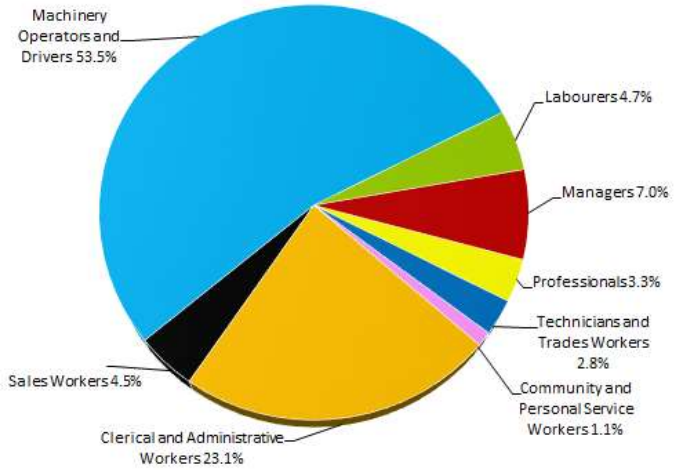


Figure 611: Eurobodalla: Industry occupation – Financial and insurance services

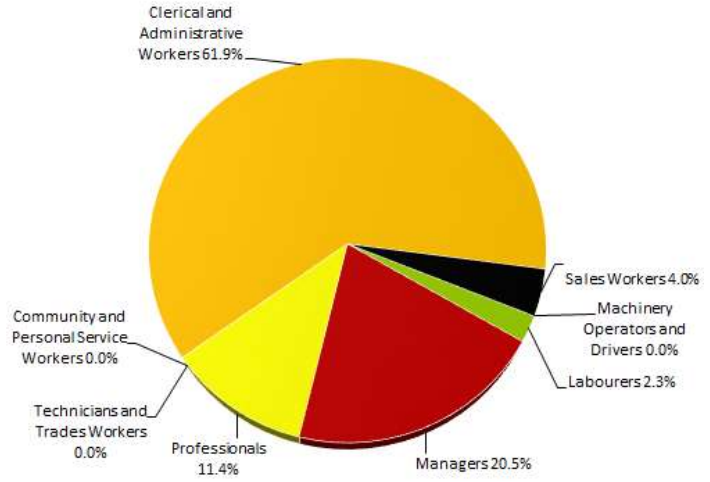


Figure 6.10: Eurobodalla: Industry occupation – Information media and telecommunications

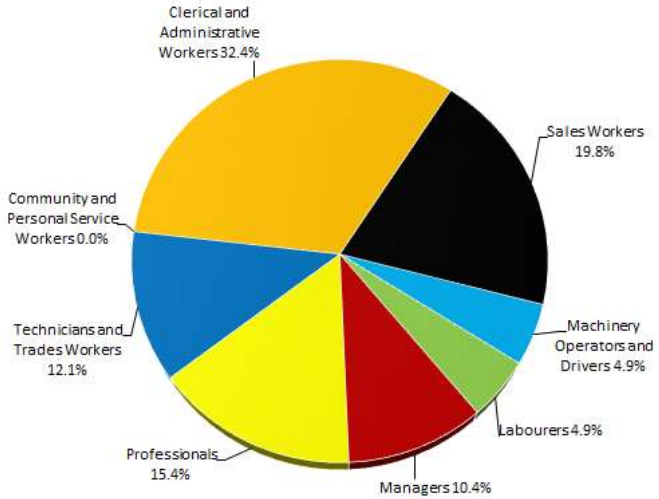


Figure 6.12: Eurobodalla: Industry occupation – Rental, hiring and real estate services

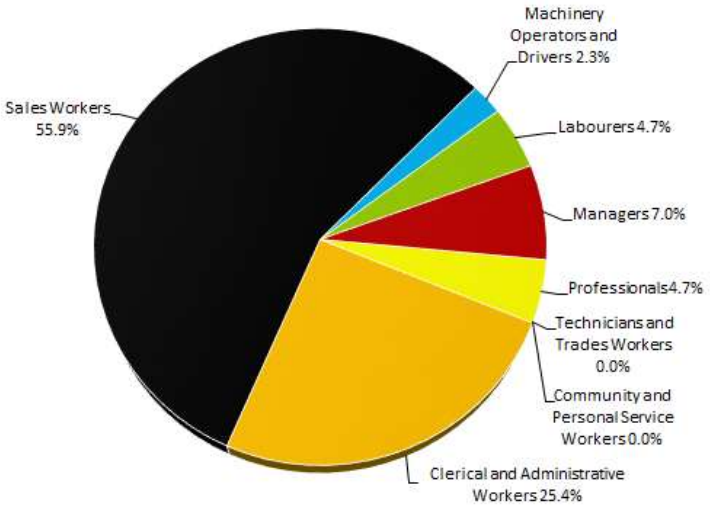


Figure 6.13: Eurobodalla: Industry occupation – Professional, scientific and technical services

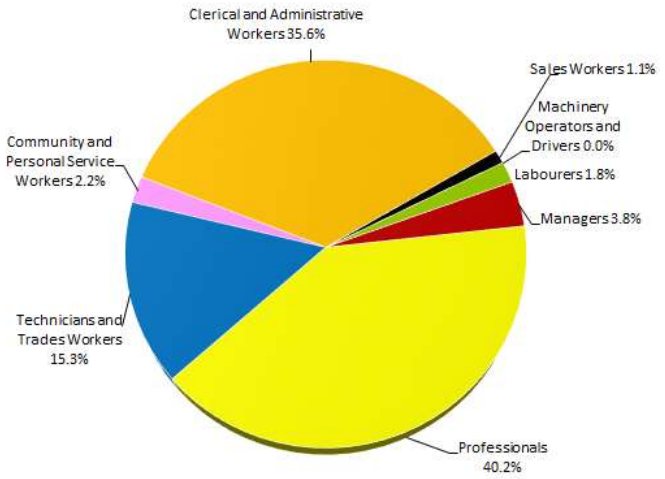


Figure 6.14: Eurobodalla: Industry occupation – Administrative and support services

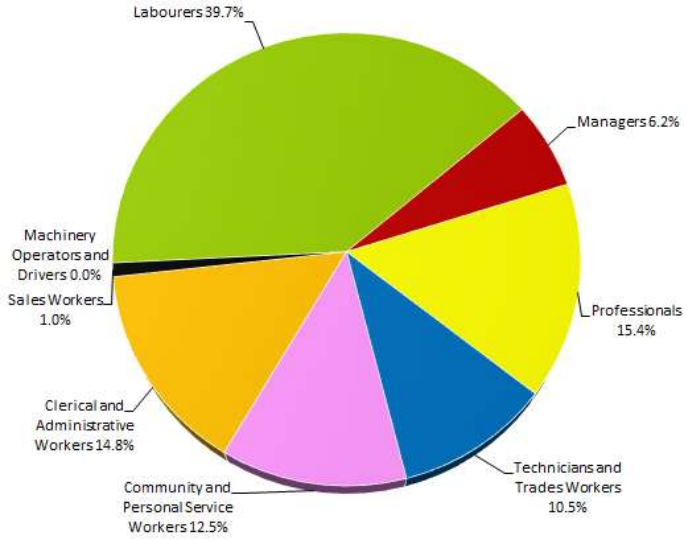


Figure 6.15: Eurobodalla: Industry occupation – Public administration and safety

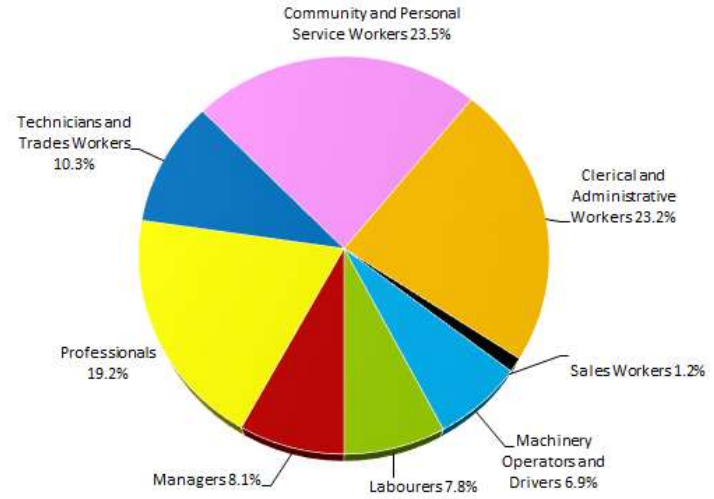


Figure 6.16: Eurobodalla: Industry occupation – Education and training

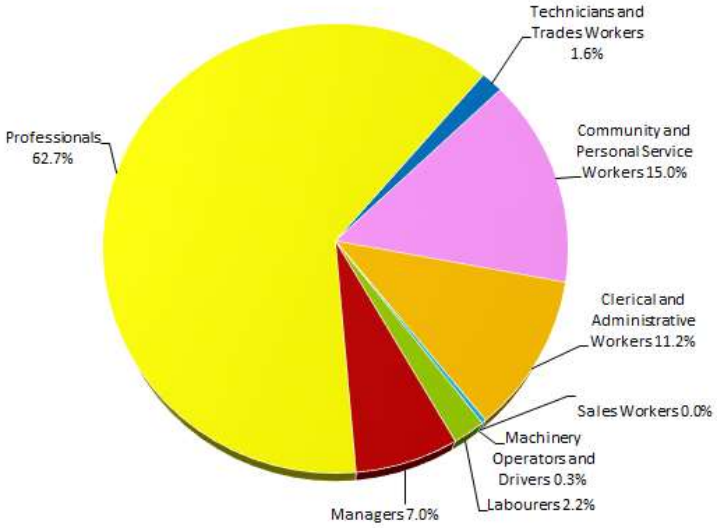


Figure 6.17: Eurobodalla: Industry occupation – Health care and social assistance

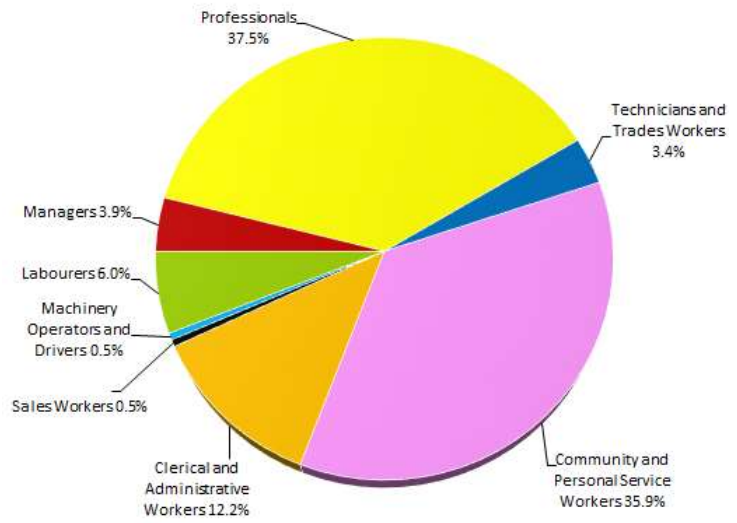


Figure 6.18: Eurobodalla: Industry occupation – Arts and recreation services

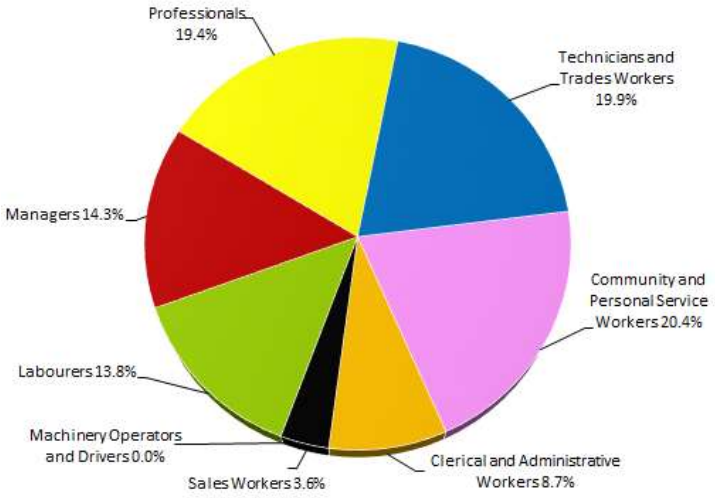
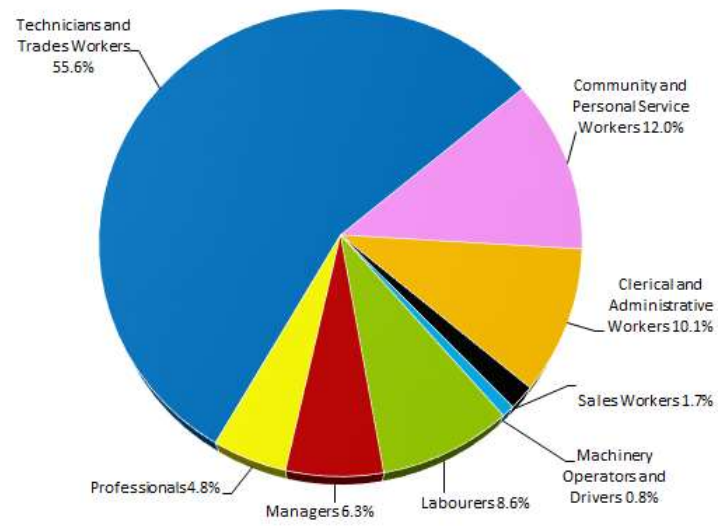


Figure 6.19: Eurobodalla: Industry occupation – Other services



APPENDIX A

Eurobodalla – economic indicators

EUROBODALLA (A)

LABOUR FORCE

	Number ('000s)						Percentage change					% p.a. growth	
	2010	2011	2012	2013	2014	2015	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015	2010 -2013	2013 -2015
Population	36.8	37.1	37.1	37.3	37.6	37.8	0.7%	0.1%	0.5%	0.9%	0.4%	0.4%	0.7%
No. Households	14.8	14.9	15.0	15.0	15.2	15.3	0.8%	0.5%	0.5%	0.8%	1.1%	0.6%	0.9%
NIEIR Workforce	16.3	16.0	15.9	16.0	15.8	16.7	-1.6%	-0.8%	0.3%	-0.9%	6.0%	-0.7%	2.5%
NIEIR Employment	13.7	13.8	13.8	13.7	13.2	13.6	0.8%	0.1%	-1.1%	-3.5%	2.7%	0.0%	-0.4%
NIEIR Unemployment	2.6	2.2	2.1	2.3	2.6	3.2	-14.4%	-6.6%	9.4%	14.7%	22.5%	-4.4%	18.5%

UNEMPLOYMENT AND UNDER EMPLOYMENT

	Percentage						Percentage point change					Average % point change p.a.	
	2010	2011	2012	2013	2014	2015	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015	2010 -2013	2013 -2015
NIEIR U/E Rate	15.9%	13.8%	13.0%	14.2%	16.4%	14.4%	-2.1	-0.8	1.2	2.2	2.6	-0.6	2.4
Headline U/E Rate	10.5%	7.5%	5.6%	6.7%	9.1%	9.3%	-3.0	-1.9	1.1	2.4	4.1	-1.3	3.3
NIEIR Structural U/E Rate	15.5%	17.1%	17.6%	18.0%	18.6%	16.2%	1.6	0.5	0.3	0.6	-2.3	0.8	-0.9
Social Security Take-up	20.2%	21.8%	22.5%	44.9%	30.3%	23.8%	1.6	0.6	22.4	-14.6	-6.5	8.2	-10.6
Hours Per Week(1)	18.8	19.0	19.4	19.7	19.8	20.2	0.2	0.3	0.3	0.1	0.4	0.3	0.3
Not Employed Share(1)	36.9%	35.9%	34.4%	34.4%	36.8%	34.2%	-1.0	-1.5	0.0	2.4	-2.6	-0.8	-0.1
Not In Employment(1)	50.5%	49.9%	49.0%	48.2%	48.0%	46.9%	-0.6	-0.8	-0.8	-0.2	-1.1	-0.8	-0.7

Note: (1) Relative to Working Age Population, Not in Employment is based on FTE.

INCOME FLOWS & PRODUCTIVITY

	Level $m cvm						Per capita $cvm						% p.a. growth of level	
	2010	2011	2012	2013	2014	2015	2010	2011	2012	2013	2014	2015	2010 -2013	2013 -2015
Wages/Salaries	556	530	551	515	501	515	15,118	14,299	14,862	13,805	13,305	13,619	-2.6%	0.0%
Taxes Paid	121	106	113	110	107	114	3,274	2,848	3,039	2,957	2,842	3,019	-2.9%	1.7%
Benefits	244	322	369	395	407	434	6,623	8,680	9,937	10,596	10,812	11,485	17.5%	4.8%
Business Income	168	160	160	159	157	161	4,553	4,319	4,302	4,258	4,162	4,272	-1.8%	0.8%
Interest Paid	90	113	109	89	73	74	2,438	3,050	2,936	2,396	1,934	1,945	-0.1%	-9.3%
Property Income	220	234	237	226	239	262	5,990	6,306	6,388	6,051	6,351	6,941	0.8%	7.8%
Disposable Income	1,225	1,262	1,346	1,340	1,355	1,423	33,275	34,028	36,276	35,937	35,996	37,643	3.0%	3.0%
Rank	181	183	181	184	185	180	491	481	428	428	420	374		
%Rank #1	2%	2%	2%	2%	2%	2%	32%	30%	36%	34%	29%	24%		
Resident GRP (Local)	1,232	1,272	1,286	1,260	1,306	1,322	56,690	59,010	60,934	60,385	62,440	64,115	0.8%	2.4%
Rank	191	192	195	197	194	194	393	384	361	380	360	328		
Industry GRP (Local)	1,187	1,231	1,246	1,213	1,249	1,257	91,253	93,428	94,146	93,475	101,227	101,614	0.7%	1.8%
Rank	183	185	187	190	188	189	205	204	218	248	202	183		

Note:
(1) All years stated above are fiscal year ending.
(2) Figures for wages/salaries include superannuation supplements.
(3) Figures for disposable income (less depreciation expense) include imputed income from ownership of dwellings.
(4) Figures for Resident GRP (Local) are per working age population and figures for Industry GRP (Local) are per industry employee. Both are at Factor Cost.
(5) $m cvm = $ million chain volume measure, which is flows of constant 2012-13 value converted from current values by the ABS using their chain volume methodology.

EUROBODALLA (A)

SOCIAL SECURITY

	% Pop	Australian average
Youth Allowance – Other (share of 16-21 years)	9.9%	5.7%
Youth Allowance – Student/Apprentice (share of 16-21 years)	3.9%	13.4%
Newstart Allowance (share of 22-64 years)	8.6%	5.2%
Disability, carer, widow and wife (share of 41-64 years)	26.7%	15.5%
Age pension (share of 65+)	72.8%	67.6%

Cash benefits share of disposable income	Share	Rank
2015	30.5	20
2014	30.0	11
2013	29.5	11
2012	27.4	15
2011	25.5	14
2010	19.9	138
2009	23.4	133
2008	21.9	116
2007	22.5	90

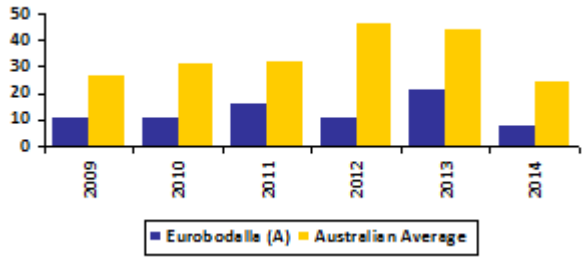
POPULATION CHANGE

	2000	2005	2010	2015
Share of population				
Age 0-19	25.0%	23.7%	22.4%	21.4%
Age 20-29	7.6%	7.0%	7.3%	7.3%
Age 30-54	32.5%	31.6%	28.7%	25.1%
Age 55+	35.0%	37.7%	41.5%	46.1%
Population change (average between years)				
Age 0-19		40	-36	-34
Age 20-29		1	38	16
Age 30-54		105	-140	-211
Age 55+		381	367	427
Average annual growth		**1.5%**	**0.6%**	**0.5%**

PATENT APPLICATIONS

	Number	Australian average	Rank
Annual average (2009-2014)			
Patents	4.8	7,666.3	186
Hi Tech	0.2	959.5	224
Info. Tech	0.0	398.7	218
Engineering	1.3	839.0	130
Patents p.a. per 100,000 people			
Patents p.a.	13.0	33.9	276
Hi Tech p.a.	0.4	4.3	258
Info. Tech p.a.	0.0	1.8	218
Engineering p.a.	3.6	3.8	121

Patent applications per 100,000 residents



Population change by age group

TEMPERATURE AND RAINFALL

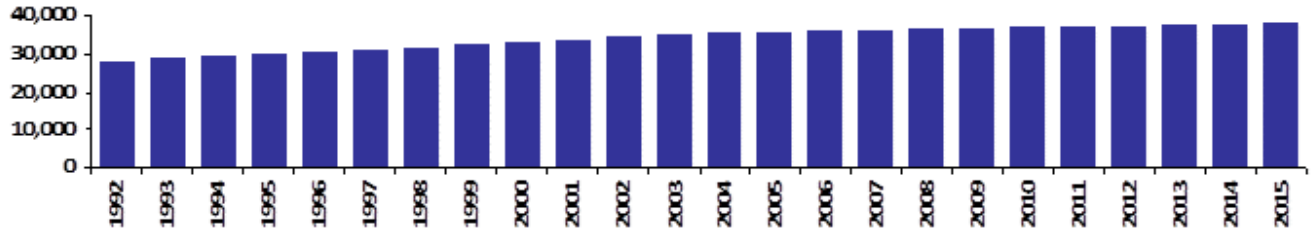
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Temperature (Avg (C))	16	16	16	16	16	17	16	16	16	17	17
Rank	370	344	397	397	381	367	369	394	399	387	374
Rainfall (mm)	879	856	860	664	641	864	752	1,097	911	921	1,152
Rank	138	110	119	234	246	137	309	132	117	96	76

Note: Temperature is the average minimum and maximum for each day in the year.

POPULATION

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Population	30	31	32	32	33	34	34	35	35	36	36	36	36	36	37	37	37	37	38	38

Population profile



EUROBODALLA (A)

HOUSEHOLD WEALTH & DEBT

Indicator	Year			Rank			% Rank 1		
	2007	2012	2015	2007	2012	2015	2007	2012	2015
Wealth per Household ($cvm '000s)	808	701	838	88	105	129	14.8%	16.4%	23.3%
Value of Property and Unincorporated Business	588	533	479	72	121	148	18.7%	19.9%	19.6%
Value of Financial Assets	350	307	490	221	234	189	10.9%	14.6%	21.2%
Value of Household Liabilities	130	140	131	359	428	478	21.3%	26.4%	28.5%
Disposable Income after Debt Service Costs	76	90	93	545	487	446	24.5%	19.6%	16.9%
Household Debt Service Ratio	18%	16%	13%	207	313	378	64.1%	26.3%	22.1%
Household Debt to Gross Income Ratio	1.42	1.33	1.24	207	313	378	64.1%	26.3%	22.1%

CONSTRUCTION

	2006-2008	2009	2010	2011	2012	2013	2014	2015	Percentage increase 2010-12 to 2013-15
Value $m cvm per annum									
Residential New Construction	100	52	51	55	41	38	67	74	22%
Residential Renovations	54	54	54	55	50	43	42	43	-19%
Non-residential	16	15	34	38	16	11	9	17	-58%
Engineering	60	82	75	82	96	98	78	69	-3%
Total	230	203	213	229	203	190	197	203	-9%
Value per capita $cvm									
Residential New Construction	2,769	1,424	1,376	1,472	1,109	1,018	1,785	1,959	20%
Residential Renovations	1,505	1,487	1,454	1,470	1,355	1,166	1,118	1,140	-20%
Non-residential	446	404	923	1,027	434	288	245	446	-59%
Engineering	1,664	2,254	2,042	2,215	2,580	2,619	2,074	1,822	-5%
Total	6,384	5,569	5,794	6,184	5,478	5,092	5,221	5,367	-10%
Rank (value per capita)									
Residential New Construction	122	305	329	290	353	360	201	174	
Residential Renovations	165	172	189	194	220	190	236	162	
Non-residential	370	404	294	340	464	460	454	367	
Engineering	334	282	326	315	315	310	332	334	
Total	262	351	366	352	398	397	368	334	

Note: Percentage increase represents the increase (or decrease) of the last three years average when compared to the average of the three years prior to those.

SHIFT SHARE DECOMPOSITION OF RESIDENT EMPLOYMENT, HOURS AND INCOME

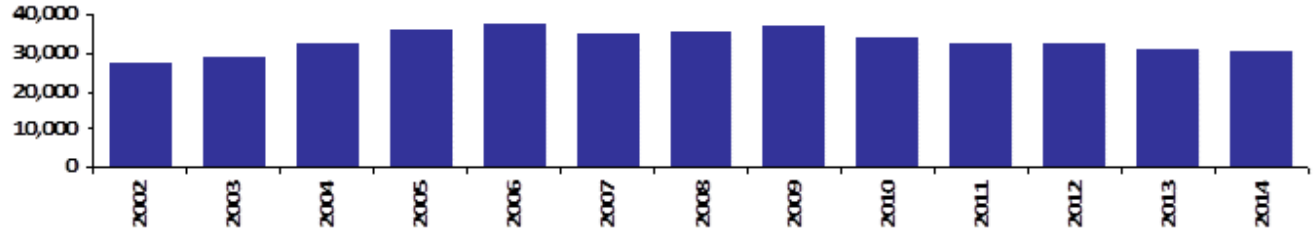
Indicator	1999-2007 (%)				2007-2015 (%)				Change in shift 2007-2015 : 1999-2007 (%)			
	National shift	Industry shift	Regional shift	Total change	National shift	Industry shift	Regional shift	Total change	National shift	Industry shift	Regional shift	Total change
Resident Hourly Rate	0.7	0.0	0.6	1.3	-1.4	0.0	0.8	-0.6	-2.1	0.0	0.2	-1.9
Resident Hours Worked	0.4	0.1	-0.5	0.0	0.7	0.2	0.4	1.4	0.4	0.1	1.0	1.4
Resident Income	0.9	0.4	0.5	1.8	0.2	0.2	0.8	1.1	-0.7	-0.2	0.3	-0.7

CONSUMPTION

Indicator	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Growth
Consumption ($m cvm)	0,929	1,006	1,150	1,283	1,336	1,263	1,291	1,341	1,254	1,202	1,210	1,146	1,152	1.8%
– Per Cap ($cvm)	27,137	28,851	32,552	35,979	37,271	34,979	35,572	36,790	34,057	32,420	32,605	30,721	30,614	1.0%
– Per Cap Rank	359	300	190	102	93	201	175	117	185	262	255	391	408	373

Note: All years stated above are calendar years.

Consumption per capita



EUROBODALLA (A)

HOUSING

Housing indicator	1991.3	1997.3	2001.3	2006.3	2011.2	2014.2	2015.2	1997.3 Rank	2015.2 Rank	Annual growth 1997-15
Avg value of dwellings ($cvm '000s)	168.2	185.2	213.0	393.8	365.4	336.4	353.7	181	186	3.7%
Avg dwelling prices to household disposable income	3.8%	2.9%	3.5%	5.7%	4.7%	3.9%	3.9%	119	145	1.8%
Mortgage burden on average dwelling purchase	n/a	22.8%	27.8%	45.7%	37.2%	31.2%	31.4%	119	145	1.8%
Greenfield construction costs to average dwelling price	149.9%	150.5%	164.7%	106.9%	126.3%	141.8%	139.5%	257	267	-0.4%
Catchment dwelling purchase income support ($cvm)	43,734	45,717	46,094	50,303	56,602	56,950	62,454	532	528	1.8%
Dwelling affordability - average mortgage on existing dwelling to catchment income support	n/a	32.3%	36.9%	62.5%	51.5%	47.1%	45.2%	93	123	1.9%
Dwelling affordability - average mortgage on new dwelling to catchment income support	n/a	48.6%	60.8%	66.8%	65.1%	66.8%	63.0%	15	21	1.5%
Community services available in catchment - hours/capita	86.3	101.9	104.3	95.1	106.8	104.9	108.3	492	512	0.3%
Adult population per dwelling	2.0	2.0	2.0	2.0	2.0	2.0	2.0	478	373	0.1%

EMPLOYED, HOURS WORKED AND INCOME

Indicator	1995	2000	2005	2010	2015	1995 Rank	2000 Rank	2005 Rank	2010 Rank	2015 Rank
Resident Employment	10,188	11,342	13,144	13,705	13,382	194	189	182	188	197
Resident Hours	17,648	19,007	20,305	20,701	21,903	195	192	195	199	206
Resident Income	517	635	793	810	840	191	192	190	204	202
Industry Employment	9,856	10,994	12,488	13,003	12,368	191	186	180	186	196
Industry Hours	16,949	18,383	19,108	19,533	20,117	192	191	191	202	206
Industry Income	492	606	740	765	775	187	188	186	195	198
Resident Avg Weekly Hours Per Employee	33.3	32.2	29.7	29.0	31.5	506	529	553	548	477
Resident Avg Hourly Rate Per Employee ($cvm)	29.3	33.4	39.0	39.1	38.3	278	305	252	248	231
Industry Avg Weekly Hours Per Employee	33.1	32.2	29.4	28.9	31.3	480	502	548	532	454
Industry Avg Hourly Rate Per Employee ($cvm)	29.1	33.0	38.7	39.2	38.5	274	305	238	229	217

INDUSTRY GROUPS

		Resident employment					Industry employment				
		1995	2000	2005	2010	2015	1995	2000	2005	2010	2015
A	Agriculture, Forestry and Fishing	619	761	387	477	337	606	752	389	460	310
B	Mining	23	45	39	92	88	17	34	29	36	41
C	Manufacturing	675	819	718	602	680	654	763	682	561	597
D	Electricity, Gas, Water & Waste Services	121	97	157	108	247	128	112	150	138	202
E	Construction	929	1038	1963	1680	1530	846	964	1820	1575	1451
F	Wholesale Trade	368	407	354	197	149	328	362	315	181	143
G	Retail Trade	1693	2011	2138	1770	2133	1718	1976	2115	1800	1898
H	Accommodation and Food Services	1293	1439	1313	1418	1490	1266	1409	1286	1385	1392
I	Transport, Postal and Warehousing	345	415	558	430	402	315	362	485	404	405
J	Information Media and Telecoms	173	173	180	239	186	181	183	173	220	175
K	Financial and Insurance Services	242	190	201	478	323	228	165	173	411	256
L	Rental, Hiring and Real Estate Services	210	173	319	254	247	212	200	326	246	220
M	Prof, Scientific & Technical Services	329	434	586	620	447	311	398	519	550	417
N	Administrative and Support Services	220	335	315	400	456	206	311	312	375	404
O	Public Administration and Safety	559	580	778	1174	703	532	519	670	1018	655
P	Education and Training	729	727	836	1257	1329	670	693	788	1197	1153
Q	Health Care and Social Assistance	1054	999	1466	1635	1927	1045	1087	1440	1637	1848
R	Arts and Recreation Services	173	149	186	213	170	169	166	192	206	195
S	Other Services	429	537	627	601	419	406	509	594	567	467
Z	**TOTAL**	**10,182**	**11,329**	**13,120**	**13,644**	**13,265**	**9,839**	**10,965**	**12,458**	**12,966**	**12,227**
Z1	Hi Tech	477	605	750	775	641	457	560	679	693	583
Z2	Hi Income	365	353	359	739	611	341	313	335	605	470
Z3	Infrastructure Services	1955	1875	2488	3105	3426	1884	1946	2420	3040	3196

APPENDIX B

Indicator explanations

Appendix B: Indicator explanations

Regional indicators

Population

Residential population by region for 2008 to 2014 is taken from the *ABS estimated resident population* (ERP) series. The 2015 population was derived from household growth for 2013/2014 and constrained to 2015 state population growth. The 2015 household total was derived by increasing the 2014 household total by the number of dwelling approvals.

No. of households

The number of households per region uses the *ABS Censuses* for 2006 and 2011. From the 2011 benchmark, new residential building approvals data is used to grow the stock of houses in a region. This data is provided by the ABS and reported quarterly. If however, the new building approvals data is added to the stock in 2011 an over estimation will occur, due to the demolition of old houses. Therefore, National Economics uses estimated demolition rates to ensure no double counting occurs.

Workforce

Before 2011 the workforce is based on NIEIR's unemployment level plus employment based on the tax statistics. This is driven forward using a measure of the labour force adjusted for the movement of people from the workforce to Disability Support Pensions (DSP). The labour force estimates are produced by the *Department of Employment* (DE). The information is contained in the *Small Area Labour Markets* publication that is produced quarterly. The labour force is defined as the yearly average level for 2006 to 2015. The average DE figure is added to the excess movement to disability support pensions. Excess movement is defined as any growth in excess of the rate of growth in the general population. It therefore assumes that there is a natural level of people (expressed as a per cent of the population) who need to access the DSP. The DSP data is ascertained from the Department of Social Security. The rationale for adding in people who move from unemployment benefits to disability support is to measure the real labour force. If a person is receiving unemployment benefits, they are counted as part of the labour force, however when people move from unemployment benefits to the DSP they are excluded. This impacts on the unemployment rate which is defined as the number of unemployed divided by the labour force.

Employment

Before 2012 this is based on the tax statistics adjusted to NIEIR definitions. This National Economics' measure of employment is the adjusted labour force as defined above, minus the estimated National Economics unemployment level. This means that since some unemployed people will be working a small number of hours, the NIEIR employment estimates exclude those employees who are on benefits while working a small number of hours.

NIEIR unemployment

This is derived from unemployment numbers from DE and the excess disability figure discussed above, it combines the official definitions of unemployed with an adjustment for any excess shift to Disability Support Pensions.

Social Security take-up

This is a National Economics' measure derived from Social Security data. It includes all people aged 16 to 64 years receiving Newstart Allowance, Disability Support Pensions, Parenting Payment – Single, and Youth Allowance for non-students/apprentices. It is expressed as a percentage of the population aged 16 to 64 years.

Headline unemployment

This is the unemployment rate produced by the *Department of Employment* (DE). Their *Small Area Labour Markets* publication contains estimates of employment, labour force participation, unemployment and the unemployment rate by Statistical Local Areas (SLAs). NIEIR does additional adjustments to the data to smooth the series. Hence, it is now designated the headline unemployment rate to denote that it is not exactly equal to the DE series.

NIEIR structural unemployment

This is a measure of the level of long-term unemployed as a percentage of the NIEIR workforce. It includes all those classified as long-term unemployed, those receiving disability support pensions, 50 per cent of people from a non-English speaking background receiving Newstart allowance, 50 per cent of people receiving single parent's benefits and all people receiving the mature age allowance. This measure excludes people on Newstart allowance short-term and anyone receiving youth allowance. It therefore assumes that none of the youth are structurally unemployed.

Hours per week per working age population

This is a measure of the amount of work available relative to the number of people available to work. In effect it is a measure of underemployment in that a low ratio indicates that the adult population is under-utilised in an employment sense.

Not-Employed share of working age population

This is a simple measure of those not in employment as per the NIEIR Employment definition as a proportion of the working age population.

Not in Employment share of working age population (Full Time Equivalent)

This is similar to the above measure but the employment definition is adjusted to Full Time Equivalent and hence also measures over time, shifts in the part-time/full-time balance.

Income flows and productivity

Source: ATO Taxation Statistics, National Accounts Data

This panel uses National Accounts definitions. All state totals are reconciled to the household accounts in the Australian Bureau of Statistics' "State Accounts".

The household disposable income indicator for each region is household disposable income from wages and salaries (including supplements, e.g. superannuation contributions) plus benefits and business income (adjusted to gross operating surplus basis consistent with the State Accounts) and interest and dividends received (including superannuation accrued earnings) and rent income less direct taxes, interest paid and depreciation expenses. The ABS 'other income' is treated as a balancing item. All data are in real dollars, which for this year are in 2012-13 prices.

To 2011-12 all data are derived from the postcode tax statistics. The data is estimated for subsequent years using the following series:

- wages/salaries;
- taxes paid;
- benefits;
- business income; and
- property income.

Wages/salaries

The following dot points outline the calculation of the non-farm components of wages and salaries income.

- Recent growth in income from taxation records provides the trend in income per person that can be expected in each region. This measure is required due to the very large differences in wage growth at the regional level.
- Growth in employment at the local area level is combined with growth in income per employee and the base levels of income from Taxation Statistics to produce updates of income at the regional level.
- State and national account control totals are then used to balance wages and income growth.
- As with all information collected from taxation Statistics the data is converted from postcode definitions to ABS regions using the postcode to Local Government Area concordance derived from the latest available census.

Again, farm income is estimated using rainfall data as a proxy for the impact of drought on regional incomes. The change in rainfall from long-term average is used as a basis for allocating farm income on a regional basis. Farm income cannot be derived from declared taxable income from primary production due to problems of declaration and the transfer of losses between tax years. Instead, the NIEIR estimate is based on the most recent measure of gross agricultural output converted to a realised income measure consistent with national accounts. In this process differences between the relative income generating capacity of various agricultural activities are accounted for. By varying the incomes derived by our estimate of the impact of drought we obtain a reasonably accurate distribution of incomes.

Taxes paid

This total income tax paid is the net tax paid after deductions and rebates. It includes the Medicare levy as well as the additional Medicare levy for high-income taxpayers. The 2008 to 2012 figures are based on reported taxation statistics. The 2013, 2014 and 2015 figures have been estimated using state control totals and the estimates of income created earlier.

Benefits

This figure is an estimate of the total amount of government benefits as defined in the National Accounts, received at the local level. The Local Area distribution of the National Accounts data is estimated utilising the postcode distribution of Commonwealth benefits sourced from the Australian Taxation Office publication *Taxation Statistics* and a population component to capture those not required to submit tax returns.

Business income

The business income for a region is effectively based on the value of the businesses that operate in the region and the relative performance of the economy as a whole. Unfortunately net business income as reported in *Taxation Statistics* does not adequately capture the total impact of business income. National Economics utilises small area microsimulation of the value of unincorporated businesses based on realised cash flows. Using state control totals and the estimated value of business assets the destination of business income can be adequately measured. The changes in business income reflect both the evolution of business values through time as well as the macro-economic trends captured in economy wide reported values of business income.

Interest paid

The amount of interest paid by the household sector is a function of the stock of debt, the nature of the debt and interest rates applied. In order to keep abreast of the impacts that the rising level of household debt in the late 1990's National Economics developed a Household Debt Model which estimates the impact of debt at the local level. One of the measures derived from this model is the amount of interest paid by the household sector on debt. The debts incurred in running unincorporated businesses are not included, but rather used in the net business income estimates presented in the table. The debt included covers housing, personal finance and credit card debt. These model estimates are balanced to state and national control totals automatically.

Property income

Net property income is derived from Taxation Statistics, and balanced to state control totals. This small measure cannot be updated at the local level and hence National Economics relies on state trends to derive the 2013, 2014 and 2015 estimates.

Household disposable income

The household disposable income estimates are benchmarked to the ABS net (that is after depreciation) household disposable income estimates in ABS State Accounts.

This means an estimate for superannuation supplements is added to wages. Also required (other than what has been outlined above) are estimates for:

(i) imputed owner occupier rental income; and

(ii) depreciation.

Imputed owner occupier rental income is based on the value of owner occupied property in a region. Depreciation State totals are allocated to LGAs on the basis of a weighted average of the replacement value of the dwelling stock by LGA and the market value of the dwelling stock, and aggregated to regions.

Resident GRP (local)

Gross regional product or value added (GRP) comprises wages and salaries plus business income. Local GRP excludes the gross surplus of companies, since this is difficult to allocate to any small geographic area. This estimate is on a residential basis and hence represents value added by the businesses in which the residents work rather than value added by businesses located in the region.

Industry GRP (local)

Resident GRP is here allocated to the region of each resident's workplace according to the commuting patterns documented in the 2011 Census Journey to Work tables.

Social Security

Source: Department of Social Security

Summarised from data published by the Department of Social Security.

Cash Benefits Share of Disposable Income

This is simply benefits as a percentage of disposable income. Both components are parts of the Income Flows Table data discussed above.

Population change

Source: ABS Census

Based on ABS Census and National Economics' population and migration modelling program called PopInfo.

Patent applications per 100,000 people

This indicator measures the number of patent applications from businesses and individuals over a five year time period. It is an average from 2009 to 2014, expressed as the number of patents per 100,000 residents. Expressing the measure in these terms allows for regional comparisons.

The patent data is provided by IP Australia. The number of applications was chosen over patents granted, due to the long delays associated with the granting of patents. In some cases this can be up to 5 years.

This measure acts as a proxy for scientific innovation, knowledge endowment and entrepreneurial dynamism.

Hi-Tech and IT applications per 100,000 people

The patent application data is grouped into 31 different classifications. The following classifications were identified as 'Hi-Tech':

- electrical devices and engineering;
- information technology;
- optics;
- instrumentation;
- medical engineering;
- polymers;
- pharmaceuticals;
- biotechnology;
- environmental processes;
- nuclear engineering; and
- space technology, weapons.

Temperature

Source: Commonwealth Bureau of Meteorology, National, Climate Centre.

Numbers given are the average minimum and maximum daily temperature for meteorological stations in the region. NB: as with all other series in this report, averages are for financial years.

Rainfall

Source: Commonwealth Bureau of Meteorology, National, Climate Centre, Australian Monthly Rainfall.

Specially requested monthly rainfall data from each available Australian weather station is assigned into the appropriate region and then totalled and averaged to generate the average annual rainfall for each region. As for all other series in this report, rainfall is for financial years.

Population

Source: ABS Estimated regional population

The ABS publication provides regional and state estimates to 2014. Figures for 2015 are NIEIR estimates.

Household wealth and debt

All wealth and debt estimates are benchmarked back to the ABS Australian National Accounts – Financial Accounts and National ABS estimates for dwelling stock and value of unincorporated business assets.

National financial assets are divided into two types, namely direct income generating financial assets and financial assets on which an imputed income is added to household income, namely superannuation assets for working households. Direct financial assets are allocated to LGAs on the basis of the Taxation Statistics' interest received data.

Imputed financial assets are allocated to LGAs using microsimulation modelling based on the ABS Household Income Survey (HES) unit and data for 2003-04 and earlier HES years. The same procedure is adopted for allocating household total liabilities. For the benchmark years, e.g. 2011, a key Census variable in the microsimulation modelling is household mortgage debt service costs.

The value of unincorporated business assets is derived from the SOR LGA business income estimates, which in turn are based on the Taxation Statistics and ABS State Income Accounts. The value of housing is based on property values outlined below and Census benchmarks for average rent paid by renters. The rental property is allocated back to the LGA of the owners based on rental income estimates, which in turn is derived from Tax Statistics.

The wealth indicator in the tables is equal to value of dwellings owned by residents of an LGA plus holdings of financial assets less stock of household liabilities.

The household debt service ratio equals interest paid on debt plus 0.07 of the outstanding stock of liabilities to allow for repayments divided by disposable income.

The household income measure used for the debt to income ratio is household disposable income plus depreciation plus interest paid.

Engineering and residential renovation, new residential and, non-residential construction

Source: ABS publication 8731.0 – Building Approvals Australia

Building approvals data is converted to constant price values. Forecasts are derived using National Economics construction models.

Shift share decomposition of resident employment and local gross product – resident

The aggregate national effect measures the change in an industry indicator at the regional level on the assumption that this indicator grew at the same rate as the national indicator when aggregated across all industries.

The national industry shift measures the change in the industry indicator for a region on the basis of the differential growth between the industry indicator at the national level and the overall aggregate growth for the indicator (that is across all industries) at the national level. If the national industry growth of the indicator is less than the overall growth of the indicator then the effect at the regional level will be negative.

The regional competitive shift measures the change in the indicator at the regional level due to the differential growth between the industry growth for the region and the industry growth at the national level. If the last term is positive, it means that the growth of the indicator at the regional level for industry *i* is greater than the national growth of the indicator for industry *i*. That is, the region is exhibiting (for whatever reason) greater competitiveness in growing the industry compared to the national average industry growth benchmark.

Consumption

Consumption is defined as in the ABS National Accounts, state accounts. NIEIR has allocated state consumption, as estimated by the ABS, to regions according to regional population characteristics and incomes, using microsimulation methodology based on the Household Expenditure Survey.

Housing

Source: RP Data; various derived statistics on dwellings and income.

The average value of dwellings is the average value of dwellings sold in the region (both houses and flats) as reported by RP Data. It has been deflated by the National Accounts consumption deflator.

The ratio of average dwelling price to household disposable income is calculated using average household disposable income for the region.

The mortgage burden on average dwelling purchase is derived from the ratio of average dwelling price to household disposable income, by assuming that a household purchases a dwelling at the average regional price financed by a mortgage at an interest rate of 7.2 per cent with a deposit of 25 per cent of value. The mortgage thus calculated is reported as a percentage of average household disposable income for the region.

Greenfield construction costs have been calculated from benchmark costings prepared for the five largest metropolitan areas by the National Housing Supply Council. The costings are valid for 2008, and have been forward and back-projected using a combination of the ABS price indices for new project homes and house prices. The average cost so calculated is divided by the RESI average value of all dwellings sold in the region. The comparison is valid for the 2000s, but owing to the uncertainties of back-projection the 1990s values should be treated with caution.

The mortgage burden on new construction is derived from greenfield construction costs using the same methodology as for the ratio of mortgage payments to disposable income for the average house purchase. The caution concerning 1990s value applies here also.

Adult population per dwelling derives from the ABS Estimated regional populations, projected by NIEIR to 2015.

Resident and place of work employment and income

For sources for resident employment see above. Place of work employment is modelled using the journey to work matrix derived from the 2011 Census. Please note that UR is place of residence, and POW is place of work.

Hours and dollars per hour

The starting point for estimating hours and dollars per hour is the estimation of hours and dollars per hour at the 1-digit ANZSIC 2006 level at the State/Territory level. This is done by deriving total hours worked per quarter by industry and State/Territory from the ABS Labour Force Bulletin. The wages and salaries plus mixed income series are tables from the ABS Annual State Accounts Bulletin, converted to $/hour by dividing by the estimates of total hours worked by industry. The annual series have then been converted to quarterly series by ensuring that the total industry quarterly estimates sum to state wages and salaries plus mixed income series from the ABS Quarterly State Accounts.

Hours of work by industry and dollars per hours at the LGA level for usual residents were estimated from a country-wide calculation, per quarter, where the LGA hours and $/hour column income constraints were derived as outlined above. The row constraints were the state industry totals as outlined above. There were also group LGA constraints imposed at the 1-digit industry level derived from the quarterly regional estimates from the ABS Labour Force Bulletin.

The base matrix was derived for 2011.3 from the Census.

Industry estimates of employment hours of work and $/hour by employment location were obtained by projecting workplace employment from the 2011.3 Census benchmark. Floorspace completion estimates by building type and by LGA were used to update the 2011.3 matrix of employment by location by industry. The employment location estimates were then estimated by 'back engineering' via the updated journey to work matrix based on usual residents, employment, hours and dollars per hour.

Finally, because of the erratic nature of the Labour Force data, five and seven quarter moving averages were passed through the data.

Industry groups

Source: ABS Census data analysed and projected by NIEIR

Industry groups are defined in ANZSIC. Hi tech industries are defined as above, see under Patents. Hi income industries comprise groups B, K, M and N and part of group C (fabricated metals, transport equipment and machinery and equipment). Infrastructure services comprise groups P, Q and R – that is, they cover social infrastructure (health, education and culture) and exclude public administration and physical infrastructure.

UR = usual place of residence as recorded at the Census, as distinct from the location where the person may be recorded (e.g. while on holiday).

POW = usual place of work**,** i.e. the location of jobs (imputed sign-on points in the case of mobile jobs)

Figure B.1: Key map

1 - Darwin

11 - Wide Bay Burnett
12 - SEQ Sunshine Coast
13 - SEQ Moreton Bay
14 - SEQ Brisbane City
15 - SEQ Logan Redland
16 - SEQ Gold Coast
17 - SEQ West Moreton

21 - NSW Newcastle
22 - Sydney Outer West
23 - Sydney Outer North
24 - Sydney Northern Beaches
25 - Sydney Paramatta Bankstown
26 - Sydney Old West
27 - Sydney Central
28 - Sydney Eastern Beaches
29 - Sydney Outer South West

31 - Melbourne Northern Outer
32 - Melbourne Northern Inner
33 - Melbourne Eastern Inner
34 - Melbourne City
35 - Melbourne Southern Inner

41 - SA North
42 - Adelaide North
43 - Adelaide South
44 - SA Fleurieu
45 - SA East

51 - Perth Outer North
52 - Perth Central
53 - Perth Outer South
54 - WA Peel South West

APPENDIX C

Industry and resident employment – High, medium and low-tech share by industry sector

Table C.1	Eurobodalla industry employment: High-tech share by industry sector, NSW compared (per cent)					
	2000		2010		2015	
	Eurobodalla	NSW	Eurobodalla	NSW	Eurobodalla	NSW
Agriculture, Forestry and Fishing	4.9	5.8	3.5	6.1	3.8	6.3
Mining	23.0	9.2	0.0	11.2	0.0	12.0
Manufacturing	24.5	39.9	27.8	39.9	29.6	40.7
Electricity, Gas, Water and Waste Services	0.0	0.0	0.0	0.0	0.0	0.0
Construction	0.0	0.0	0.0	0.0	0.0	0.0
Wholesale Trade	0.0	0.0	0.0	0.0	0.0	0.0
Retail Trade	0.0	0.0	0.0	0.0	0.0	0.0
Accommodation and Food Services	0.0	0.0	0.0	0.0	0.0	0.0
Transport, Postal and Warehousing	0.0	0.0	0.0	0.0	0.0	0.0
Information Media and Telecommunications	100.0	100.0	100.0	100.0	100.0	100.0
Financial and Insurance Services	100.0	100.0	100.0	100.0	100.0	100.0
Rental, Hiring and Real Estate Services	0.0	0.0	0.0	0.0	0.0	0.0
Professional, Scientific and Technical Services	100.0	100.0	100.0	100.0	100.0	100.0
Administrative and Support Services	0.0	0.0	0.0	0.0	0.0	0.0
Public Administration and Safety	0.0	0.0	0.0	0.0	0.0	0.0
Education and Training	22.3	37.4	21.0	36.3	21.9	37.0
Health Care and Social Assistance	19.6	28.8	20.0	30.7	18.6	29.2
Arts and Recreation Services	17.7	24.7	17.7	25.4	15.7	26.4
Other Services	0.0	0.0	0.0	0.0	0.0	0.0

Table C.2	Eurobodalla industry employment: Medium-tech share by industry sector, NSW compared (per cent)					
	2000		2010		2015	
	Eurobodalla	NSW	Eurobodalla	NSW	Eurobodalla	NSW
Agriculture, Forestry and Fishing	85.8	92.3	81.0	91.8	81.6	91.7
Mining	77.0	90.8	100.0	88.8	100.0	88.0
Manufacturing	75.5	60.1	72.2	60.1	70.4	59.3
Electricity, Gas, Water and Waste Services	100.0	100.0	100.0	100.0	100.0	100.0
Construction	100.0	100.0	100.0	100.0	100.0	100.0
Wholesale Trade	0.0	0.0	0.0	0.0	0.0	0.0
Retail Trade	0.0	0.0	0.0	0.0	0.0	0.0
Accommodation and Food Services	0.0	0.0	0.0	0.0	0.0	0.0
Transport, Postal and Warehousing	3.4	7.9	4.2	11.1	5.8	11.2
Information Media and Telecommunications	0.0	0.0	0.0	0.0	0.0	0.0
Financial and Insurance Services	0.0	0.0	0.0	0.0	0.0	0.0
Rental, Hiring and Real Estate Services	0.0	0.0	0.0	0.0	0.0	0.0
Professional, Scientific and Technical Services	0.0	0.0	0.0	0.0	0.0	0.0
Administrative and Support Services	100.0	100.0	100.0	100.0	100.0	100.0
Public Administration and Safety	74.3	57.8	74.2	62.3	75.3	62.2
Education and Training	77.7	62.6	79.0	63.7	78.1	63.0
Health Care and Social Assistance	31.0	35.0	25.9	29.0	26.1	28.6
Arts and Recreation Services	27.5	12.0	30.1	11.6	33.0	11.2
Other Services	53.0	48.6	59.1	48.1	51.6	47.8

Table C.3	Eurobodalla industry employment: Low-tech share by industry sector, NSW compared (per cent)					
	2000		2010		2015	
	Eurobodalla	NSW	Eurobodalla	NSW	Eurobodalla	NSW
Agriculture, Forestry and Fishing	9.3	1.9	15.4	2.1	14.6	2.0
Mining	0.0	0.0	0.0	0.0	0.0	0.0
Manufacturing	0.0	0.0	0.0	0.0	0.0	0.0
Electricity, Gas, Water and Waste Services	0.0	0.0	0.0	0.0	0.0	0.0
Construction	0.0	0.0	0.0	0.0	0.0	0.0
Wholesale Trade	100.0	100.0	100.0	100.0	100.0	100.0
Retail Trade	100.0	100.0	100.0	100.0	100.0	100.0
Accommodation and Food Services	100.0	100.0	100.0	100.0	100.0	100.0
Transport, Postal and Warehousing	96.6	92.1	95.8	88.9	94.2	88.8
Information Media and Telecommunications	0.0	0.0	0.0	0.0	0.0	0.0
Financial and Insurance Services	0.0	0.0	0.0	0.0	0.0	0.0
Rental, Hiring and Real Estate Services	100.0	100.0	100.0	100.0	100.0	100.0
Professional, Scientific and Technical Services	0.0	0.0	0.0	0.0	0.0	0.0
Administrative and Support Services	0.0	0.0	0.0	0.0	0.0	0.0
Public Administration and Safety	25.7	42.2	25.8	37.7	24.7	37.8
Education and Training	0.0	0.0	0.0	0.0	0.0	0.0
Health Care and Social Assistance	49.5	36.2	54.1	40.3	55.3	42.2
Arts and Recreation Services	54.8	63.3	52.2	63.0	51.2	62.4
Other Services	47.0	51.4	40.9	51.9	48.4	52.2

Table C.4	Eurobodalla resident employment: High-tech share by industry sector, NSW compared (per cent)					
	2000		2010		2015	
	Eurobodalla	NSW	Eurobodalla	NSW	Eurobodalla	NSW
Agriculture, Forestry and Fishing	4.9	5.9	3.4	6.0	3.6	6.3
Mining	24.1	8.8	9.5	11.5	11.4	11.3
Manufacturing	24.3	39.7	29.7	39.8	32.5	40.6
Electricity, Gas, Water and Waste Services	0.0	0.0	0.0	0.0	0.0	0.0
Construction	0.0	0.0	0.0	0.0	0.0	0.0
Wholesale Trade	0.0	0.0	0.0	0.0	0.0	0.0
Retail Trade	0.0	0.0	0.0	0.0	0.0	0.0
Accommodation and Food Services	0.0	0.0	0.0	0.0	0.0	0.0
Transport, Postal and Warehousing	0.0	0.0	0.0	0.0	0.0	0.0
Information Media and Telecommunications	100.0	100.0	100.0	100.0	100.0	100.0
Financial and Insurance Services	100.0	100.0	100.0	100.0	100.0	100.0
Rental, Hiring and Real Estate Services	0.0	0.0	0.0	0.0	0.0	0.0
Professional, Scientific and Technical Services	100.0	100.0	100.0	100.0	100.0	100.0
Administrative and Support Services	0.0	0.0	0.0	0.0	0.0	0.0
Public Administration and Safety	0.0	0.0	0.0	0.0	0.0	0.0
Education and Training	24.2	37.7	21.8	36.5	22.4	37.0
Health Care and Social Assistance	19.5	28.7	20.7	30.8	19.3	29.4
Arts and Recreation Services	20.2	25.0	19.2	25.2	18.0	26.5
Other Services	0.0	0.0	0.0	0.0	0.0	0.0

Table C.5	Eurobodalla resident employment: Medium-tech share by industry sector, NSW compared (per cent)					
	2000		2010		2015	
	Eurobodalla	NSW	Eurobodalla	NSW	Eurobodalla	NSW
Agriculture, Forestry and Fishing	88.6	92.2	85.6	91.9	87.3	91.7
Mining	75.9	91.2	90.5	88.5	88.6	88.7
Manufacturing	75.7	60.3	70.3	60.2	67.5	59.4
Electricity, Gas, Water and Waste Services	100.0	100.0	100.0	100.0	100.0	100.0
Construction	100.0	100.0	100.0	100.0	100.0	100.0
Wholesale Trade	0.0	0.0	0.0	0.0	0.0	0.0
Retail Trade	0.0	0.0	0.0	0.0	0.0	0.0
Accommodation and Food Services	0.0	0.0	0.0	0.0	0.0	0.0
Transport, Postal and Warehousing	3.1	8.0	3.0	11.3	3.3	11.5
Information Media and Telecommunications	0.0	0.0	0.0	0.0	0.0	0.0
Financial and Insurance Services	0.0	0.0	0.0	0.0	0.0	0.0
Rental, Hiring and Real Estate Services	0.0	0.0	0.0	0.0	0.0	0.0
Professional, Scientific and Technical Services	0.0	0.0	0.0	0.0	0.0	0.0
Administrative and Support Services	100.0	100.0	100.0	100.0	100.0	100.0
Public Administration and Safety	75.0	57.9	73.1	62.3	73.2	62.3
Education and Training	75.8	62.3	78.2	63.5	77.6	63.0
Health Care and Social Assistance	35.2	35.0	26.1	28.9	26.2	28.5
Arts and Recreation Services	23.8	12.7	28.3	12.0	31.6	11.7
Other Services	53.3	48.6	59.3	48.2	51.9	47.7

Table C.6	Eurobodalla resident employment: Low-tech share by industry sector, NSW compared (per cent)					
	2000		2010		2015	
	Eurobodalla	NSW	Eurobodalla	NSW	Eurobodalla	NSW
Agriculture, Forestry and Fishing	6.5	2.0	11.0	2.1	9.1	2.0
Mining	0.0	0.0	0.0	0.0	0.0	0.0
Manufacturing	0.0	0.0	0.0	0.0	0.0	0.0
Electricity, Gas, Water and Waste Services	0.0	0.0	0.0	0.0	0.0	0.0
Construction	0.0	0.0	0.0	0.0	0.0	0.0
Wholesale Trade	100.0	100.0	100.0	100.0	100.0	100.0
Retail Trade	100.0	100.0	100.0	100.0	100.0	100.0
Accommodation and Food Services	100.0	100.0	100.0	100.0	100.0	100.0
Transport, Postal and Warehousing	96.9	92.0	97.0	88.7	96.7	88.5
Information Media and Telecommunications	0.0	0.0	0.0	0.0	0.0	0.0
Financial and Insurance Services	0.0	0.0	0.0	0.0	0.0	0.0
Rental, Hiring and Real Estate Services	100.0	100.0	100.0	100.0	100.0	100.0
Professional, Scientific and Technical Services	0.0	0.0	0.0	0.0	0.0	0.0
Administrative and Support Services	0.0	0.0	0.0	0.0	0.0	0.0
Public Administration and Safety	25.0	42.1	26.9	37.7	26.8	37.7
Education and Training	0.0	0.0	0.0	0.0	0.0	0.0
Health Care and Social Assistance	45.2	36.2	53.1	40.3	54.5	42.1
Arts and Recreation Services	56.0	62.4	52.5	62.7	50.4	61.8
Other Services	46.7	51.4	40.7	51.8	48.1	52.3