

TAI POUTINI WEST COAST GROWTH STUDY

OPPORTUNITIES REPORT
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**MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT**
HĪKINA WHAKATUTUKI

Ministry for Primary Industries
Manatū Ahu Matua



MINISTERS' FOREWORD

Maximising New Zealand's economic prosperity and social wellbeing means ensuring there are employment opportunities and improving quality of life for the people in all of our regions.

We know that the economic and social performance of regions varies significantly. Through the Regional Growth Programme, the Government is working to build more resilient regions, recognising and capitalising on the investment opportunities and strengths of each area.

The Regional Growth Programme complements the Government's Business Growth Agenda, which is the framework for our efforts to support business growth, create jobs and improve the standard of living for all New Zealanders.

The Tai Poutini West Coast Growth Study follows three previous reports released in 2015 on the Northland, Bay of Plenty and Manawatū-Whanganui regions, and the East Coast Economic Potential Study, which was released in 2014.

The Tai Poutini West Coast Growth Study has been independently conducted and compiled as part of the Regional Growth Programme and explores opportunities to achieve growth in investment, incomes and employment in the region.

The West Coast performed well over the 2000-2012 period on the back of key sectors such as mining, dairying, construction and tourism. Reliance on a few key sectors has exposed the region to sharp drops in the global prices for minerals and milk powder. This downturn since 2012 has not been experienced equally across the region, with Buller being hardest hit.

Regardless, there continues to be strong growth in international visitor numbers, particularly in Westland.

This report asks which sectors drive the West Coast economy. It examines the challenges and looks at how the region can stimulate further investment in these sectors and others.

West Coasters are known for their ingenuity, creativity and commitment to place. The region scores highly on measures of wellbeing related to education, environment, safety and life satisfaction. These are sound platforms from which to attract business to the region.

The establishment of the EPIC Westport Innovation Centre reflects a desire to take advantage of broadband infrastructure to run global businesses, while enjoying the local lifestyle. The Coast's natural environment and outdoor education specialty also lend themselves to international education possibilities, for example, in building world-class management experience programmes.

Building resilience is critical to stabilising the local economy and sustaining a skilled workforce, so that future growth can be supported.

The Government is committed to raising Māori economic performance through He kai kei aku ringa: the Crown-Māori Economic Growth Partnership and the Regional Growth Programme.

The principle of providing the food you need with your own hands (the literal meaning of He kai kei aku ringa) already underpins Māori economic activity in Tai Poutini.

Māori have significant land holdings in Greymouth and Westport and interests in forestry, dairy, resources (rivers and pounamu) and tourism. Ngāi Tahu has

MINISTERS' FOREWORD continued

been operating successful ventures on the West Coast for some time and can contribute to lifting the region's ability to build and grow successful enterprises. Regional businesses can and should see Māori as natural partners in developing economic activity on the West Coast.

This report identifies in detail the economic opportunities on the Coast. The job now is to develop a Regional Economic Action Plan to successfully realise the opportunities identified here. We will work with government agencies and regional leaders to put together that plan with urgency.

Success on the West Coast is dependent on all stakeholders pulling together to do what is right for the region – not just for individual sub-regions or sectors. This study will need to inform and inspire industry, iwi and Māori, and central and local government to act individually and collectively to turn opportunities into realities.

We welcome this report and its findings.



Hon Steven Joyce

Minister for Economic
Development

Minister of Science and
Innovation

Minister for Tertiary Education,
Skills and Employment

Minister for Regulatory Reform

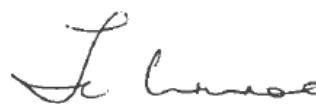
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Richard Paling, Rob MacIntyre, Stuart Henley and Brian Bell provided specialist advice.

**MARTIN
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PART OF FINDEX

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ACRONYMS

Table 1. Acronyms

Acronym	Meaning
ACE (education)	Adult and Community Education
ACE (fisheries)	Annual Catch Entitlement
AEE	Assessment of Environmental Effects
ANZSCO	Australia New Zealand Standard Classification of Occupations
ANZSIC	Australia New Zealand Standard Industrial Classification
BDC	Buller District Council
BGA	Business Growth Agenda
CBD	Central Business District
CFH	Crown Fibre Holdings
DoC	Department of Conservation
DWC	Development West Coast
ECE	Early Childhood Education
EFTS	Equivalent Full-time Students
ETS	Emissions Trading Scheme
FTE	Full-time Equivalent
GDC	Grey District Council
GDP	Gross Domestic Product
HHL	Haast to Hollyford Highway Ltd
ICT	Information and Communications Technology
MBIE	Ministry of Business, Innovation and Employment
Mbps	Mega-bits per second
MoE	Ministry of Education
MPI	Ministry for Primary Industries
MSD	Ministry of Social Development
NCEA	National Certificate of Educational Achievement
NEET	Youth not in employment, education or training
NTFE	Ngāi Tahu Forest Estate
NTS	Ngāi Tahu Seafoods
NTT	Ngāi Tahu Tourism
NZPAM	New Zealand Petroleum and Minerals
NZQA	New Zealand Qualifications Authority
NZTE	New Zealand Trade and Enterprise

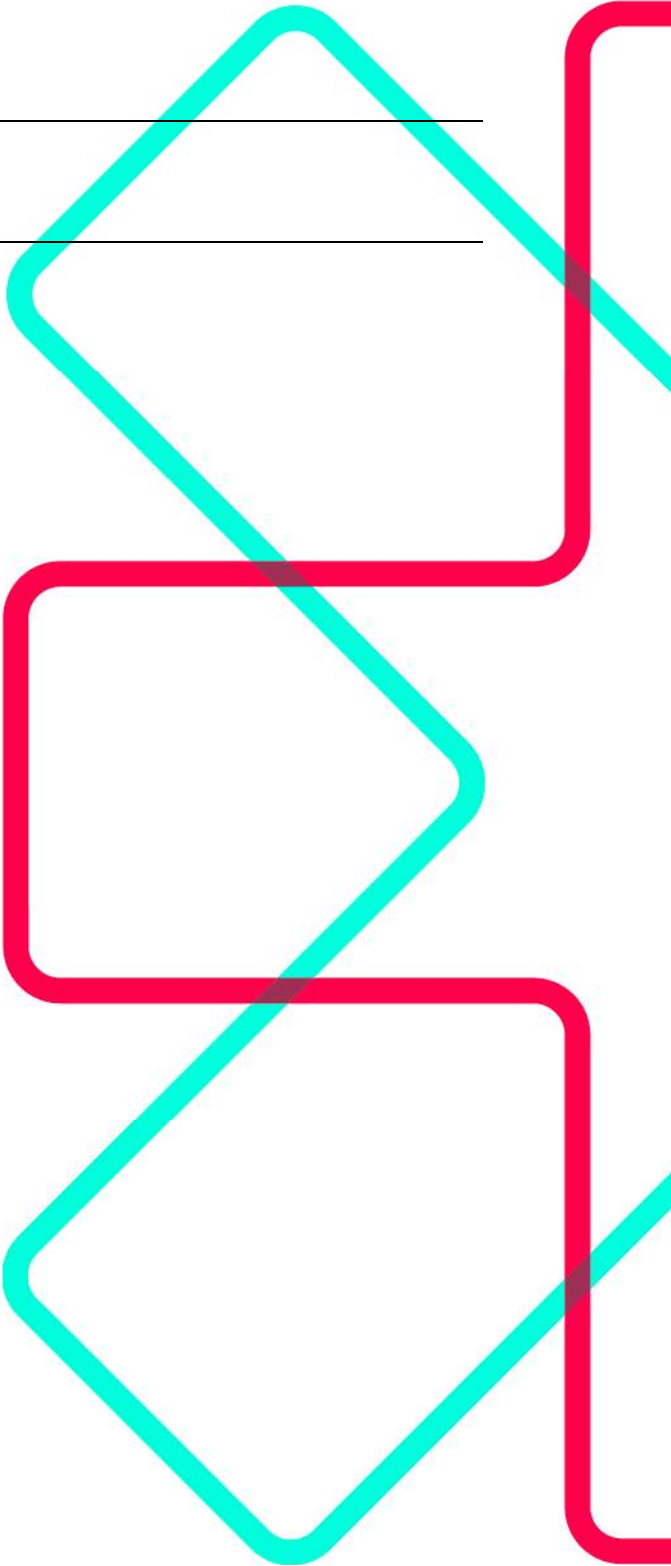


Acronym	Meaning
OECD	Organisation for Economic Cooperation and Development
RBI	Rural broadband initiative
RGS	Regional Growth Study
RTO	Regional Tourism Organisation
SMC	Skilled Migrant Category
TACC	Total allowable commercial catch
TPP	Tai Poutini Polytechnic
TWC	Tourism West Coast
UFB	Ultra-fast broadband
VDSL	Very-high-bit-rate digital subscriber line
WCRC	West Coast Regional Council
WCTA	West Coast Trades Academy
WDC	Westland District Council



SECTION ONE

Executive Summary



EXECUTIVE SUMMARY

Introduction

The West Coast region has resourceful people, a rich history, a spectacular natural environment, and abundant resources. The same factors that have shaped its history and its people are what make the West Coast a challenging place to live and work.

The West Coast is sparsely populated and is isolated from the rest of New Zealand. It covers a large land area, a significant proportion of which is in the conservation estate. With a strong dependence on two commodity sectors – minerals and dairy – the fortunes of the West Coast rise and fall with international prices for coal, gold or dairy. A third key sector, tourism, is highly dependent on the flow of international travellers to New Zealand visiting the West Coast as part of their experience.

The West Coast experienced solid growth for many years but is currently facing the double threat of low coal and dairy prices. Tourism has grown over the last few years, although this has largely been limited to the south of the region.

This study identifies opportunities that can address the challenges and leverage the underlying strengths of the West Coast, supporting jobs and incomes that can enable it to be a thriving community.

Objective and scope

Objective

The objective of the Tai Poutini West Coast Regional Growth Study is to identify significant economic opportunities in the region to increase employment and incomes.

The Regional Growth Study consists of two key outputs – an opportunities report and an action plan.

This opportunities report details, for local stakeholders and Government, where the region's significant future economic opportunities lie, and identifies proposals that will stimulate economic development, help to future-proof the region against commodity market shocks, and increase incomes and jobs in the region over a short- to medium-term horizon (0–10 years).

The action plan will specify how priority opportunities will be achieved by articulating key actions, milestones and timeframes, and identifying lead organisation(s) and partners involved, the resources required, and how progress will be measured and overseen.

Scope

The study covers the economic region of the West Coast in the South Island. The West Coast region is split for administrative purposes across three districts - Buller, Grey and Westland. The West Coast Regional Council (WCRC) covers the entire West Coast region. Analysis is presented for the region as a whole, with more detailed analysis at a district level where relevant.



The findings of the opportunity report are based on an extensive review of data and prior research, interviews and workshops with regional representatives from a range of sectors and institutions.

Identified opportunities have been prioritised through our selection criteria and agreed with the Governance Group. Opportunities have been tested with relevant stakeholders, government agencies and expert advisors.

Economic context

In 2015, the West Coast generated \$1.87 billion¹ in regional gross domestic product (GDP) and employed close to 17,000 people. The population was estimated to be 32,700 in June 2015.

The region accounts for less than 1.0 percent of national GDP (0.85 percent), employment and population (both 0.7 percent).

Buller is estimated to make the most significant contribution to GDP in the region, at around 40 percent of the economy, followed by Grey (36 percent) and Westland (24 percent). In terms of employment, Grey accounts for 45 percent of filled jobs, followed by Buller (29 percent) and Westland (27 percent).

The West Coast's GDP and employment is heavily concentrated in just a few sectors, with minerals, dairy, construction and tourism making up over 50 percent of the value of output and 40 percent of jobs.

The region has performed well over the long-term on the back of these sectors and experienced relatively high growth over 2000–2012, even after the global financial crisis. The economy is estimated to have been growing at 2.2 percent per year over the last decade, compared with 1.9 percent nationally.

However, the small domestic economy and reliance on a few sectors makes the West Coast economy vulnerable to economic shocks, for example, the significant impact of lower international coal, gold and dairy prices over the last 3 years.

¹ All GDP is in 2010 dollars. Growth in GDP is real, i.e., accounts for change in prices (inflation).



Largely as a result of the decline in dairy and minerals prices over the last 3 years, GDP and employment (filled jobs) have contracted by -2.3 percent per year and -0.6 percent per year respectively.

The three West Coast districts have performed significantly differently. Buller has been hit hard by the contraction in minerals activity while Grey, as the main service centre, has seen activity drop in the minerals, dairy and support services sectors.

Although Westland has been affected by the contraction in dairy, growth in tourism has offset this. Westland has grown at the fastest rate over the last 5 years (3.9 percent per year GDP growth). Buller has achieved more moderate growth (2.0 percent per year) over the last 5 years, although this captures the tail end of the mining growth. GDP in Grey has declined over the last 5 years (by 3.4 percent per year).

The region is performing below national averages on some indicators of prosperity.

Median household income on the West Coast was well below the national average when last measured and also below several comparator regions (annual median household income in 2013 was \$55,000 compared to \$63,800 nationally). Annual average earnings on the West Coast in 2014 was also lower than the New Zealand average (\$50,700 compared to \$54,300), but was towards the middle of New Zealand regions. The average earnings level in Buller in 2014 was relatively high (\$57,200), while it was relatively low in Westland (\$46,500).

The region's labour force participation rate declined between 2007 and 2015 (from 75 percent to 66.2 percent). The region's employment rate also fell over the period (from 73.1 percent to 65.4 percent). However, these rates are now similar to those for New Zealand as a whole (which had a labour force participation rate of 68.7 percent and an employment rate of 64.5 percent in 2015).

The West Coast performs better than many regions on several measures of wellbeing.



Based on OECD regional wellbeing indicators, the West Coast ranks higher than the New Zealand average on measures related to education, environment, safety and life satisfaction. However, the West Coast ranks lower on measures of health (life expectancy, mortality rate) and community (proportion of people with friends and relatives to rely on in case of need). Positively, housing is much more affordable on the West Coast than in other regions.

The region has experienced limited population growth and, more recently, a decline in the population.

Between 2006 and 2013, population growth on the West Coast (0.37 percent per year) was half the national rate (0.74 percent per year) and lower than for many other regions. The population in Buller grew strongly over that period (1.1 percent per year) while the population in Grey grew very slowly (0.16 percent per year). Westland experienced a decline in population (-0.16 percent per year). All of the West Coast's population growth over the 7 years has been due to natural increase (more people being born than dying), with a net migration outflow (more people leaving than arriving).

Between 2013 and 2015, the West Coast's population is estimated to have declined by 390 people. At a district level, Westland's population is estimated to have grown, while the population in Buller and Grey is estimated to have declined.

A much higher proportion of the West Coast's population identifies as European (84 percent) than nationally (67 percent) and a smaller proportion identifies as Māori, Asian or Pasifika. Similarly, a much smaller proportion of the population was born overseas (11 percent) than across New Zealand as a whole (25 percent). This may limit the international connections of the region and its ability to attract a more diverse population.

While accounting for a relatively small proportion of the population (11 percent), Māori are playing an increasing role in the West Coast economy. Ngāi Tahu has several commercial interests and is a key player in tourism and forestry in the region. Māwhera Incorporation has strategic commercial assets in Greymouth and is actively looking at investing in the region. As tangata whenua of the West Coast, Māori have an important role as kaitiaki of the region, including its large conservation estate.

Looking ahead, although dairy and coal prices are expected to recover somewhat, the coal industry is unlikely to be as significant as it has been in the medium term and, possibly, in the long term. Tourism is likely to grow in significance.



Not surprisingly, the West Coast's economy is forecast to grow relatively slowly under a business-as-usual scenario. Employment in the region is estimated to grow by only 0.9 percent per year over the 5 years to 2020, compared to 1.5 percent nationally. Employment in both Grey and Westland is forecast to grow by more than 1 percent per year but employment in Buller is expected to be relatively static and grow by only 0.3 percent per year over the 5 years.

This forecast is not particularly positive, emphasising why it is important that opportunities for growth are identified and pursued.

Sector Opportunities

Tourism

Tourism is one of the largest and fastest growing sectors on the West Coast. In 2015 it accounted for over 2,000 jobs, 12 percent of the region's jobs. The sector's GDP grew by 2.2 percent annually over the last 5 years. Visitor expenditure has grown by 3.1 percent per annum over the last 5 years, reaching \$417 million in the year to May 2016. Over the last 2 years, guest nights in the region have been growing at 8.8 percent per year, the second fastest in the country, and visitor expenditure has grown by 7.2 percent per year.

Growth is currently driven by international visitor spending in Westland. There has been relatively poor growth in domestic visitor spending across the region and visitor expenditure has declined in Buller over the medium term.

The West Coast has excellent potential to sustainably grow the visitor economy. It has a large range of visitor attractions that include major natural assets, heritage assets, adventure-based attractions, and cycle and walking trails. These attractions span the entire length of the region.

But the sector does face some significant challenges. It is distant from visitor markets. Potential visitors are not aware of the range of attractions beyond the icons of Pancake rocks and the glaciers and tend not to stay long in the region. There is a high level of seasonality. There are infrastructure pressures resulting from a combination of visitor growth and natural hazards, including at Punakaiki and Franz Josef. It can be difficult to extract value from many attractions, which are currently free to access and use. There has also been a fragmented approach to promoting and developing tourism in the region.



Opportunity

With an array of inter-connected challenges, the major opportunity is to deal with these in a cohesive and coordinated way through a regional strategy and action plan.

The strategy and plan should focus on capturing greater value from visitors and improving:

- marketing and promotion, i.e., implementing a regional marketing plan with clear target markets, including domestic markets
- tourism product development and maintenance, including developing a larger set of iconic attractions (e.g., Oparara Arches at Karamea, Hokitika Gorge, Lake Brunner) and products, particularly in Buller (e.g., a penguin viewing and rehabilitation centre; establishment of the Charleston to Westport cycle way) that encourage visitors to travel across the region and stay longer
- the quality of infrastructure and amenities at key locations, with Franz Josef as an initial priority.

Delivering these priorities will require:

- a new promotion and marketing entity that better coordinates (and rationalises) district and regional promotional resources, and
- a new mix of funding options and mechanisms, such as the potential for charging visitors for experiences on conservation land.

Minerals and related processing

Although the minerals sector in the region has contracted in recent years, it still is, and will continue to be, a large scale and high value industry.

The West Coast has significant advantages in the minerals sector given the volume of minerals, the local infrastructure and capability. There are strong local mining businesses as well as supporting businesses in machinery and equipment manufacturing, engineering, surveying, and construction. There is an experienced labour force and a well-functioning industry body.



The minerals sector generated \$418 million in GDP, or 22 percent of the value generated on the West Coast in 2015, and supported 1,180 jobs, or 7 percent of employment. The minerals sector has extremely high productivity (\$354,500 of GDP per filled job) and generates high incomes.

There has been large-scale downsizing and commencement of care and maintenance activities in relation to export-focused mines (e.g., Escarpment, Spring Creek, Roa) in response to coal and gold prices. Employment in the sector on the West Coast has fallen from 1,660 in 2012 to 1,180 in 2015, or a fall of 11 percent per year on average during that period. The closure of Holcim will see a further large drop in employment this year. Domestic coal producers remain profitable, with West Coast coal being used in a range of industries on the South Island.

The current sale of Solid Energy assets provides the most significant opportunity to maintain West Coast coal production at scale. However, international coal prices are forecast to only slightly recover over the medium term and hence only limited growth in coal mining in the region should be expected.

The prospects for a rebound in gold mining are more positive, with international prices expected to recover over the medium term. Alluvial gold mining has remained an important industry in the sector for the West Coast with up to 60 active operations occurring from South Westland to Northern Buller.

Companies are continuing to look for investment, development and exploration opportunities.

Rangitira Developments Ltd and Stevenson Mining have applied to the Department of Conservation (DoC) for access to a conservation area for an open-cast coal mine at Te Kuha. Companies are also exploring the potential of 'non-traditional minerals' including garnet placer deposits, ironsands, coal-seam gas development and petroleum. Sector feedback suggests that at least one of these is likely to be developed in the next 2–3 years.

Other than the impact of international market conditions, the sector faces several challenges to growth in the region including:

- long timeframes for processing exploration permits
- added complexity in obtaining access agreements for exploration on land in the conservation estate
- duplication of regulatory approval processes
- lack of clarity about the status of stewardship land. Some areas of stewardship land may have low conservation value and minerals potential
- difficulties and costs faced by companies in obtaining consents for new mines.

Opportunity

The opportunity is to create the conditions that allow current mineral developments to proceed efficiently and to encourage new investment in response to pricing signals.



Three proposals are recommended:

- Clarifying areas of stewardship land with development potential in the conservation estate that are of low conservation value and making appropriate determinations on whether to reclassify, swap or dispose. This would improve certainty over the potential opportunities for the use, development or conservation of land. This will require a well-resourced process with a clear timeframe to survey the land appropriately and enable appropriate consultation, including with Ngāi Tahu.
- A 'single window' for dealing with applications and consents, comprising a co-located team with the expertise and capability to jointly assess applications for resource consents, concessions and access agreements. It would provide coordinated processes for pre-application meetings, set out information requirements, review information requests and documents such as assessments of environmental effects. It could also provide coordinated processes for public notifications, community and iwi consultation and engagement, and undertake all support services for combined district/regional resource consent hearings. This would not only streamline the regulatory processes but also aid in ensuring the consistency and quality of assessments.
- Creating a Collaborative Planning Process to facilitate mining and environmental protection in the Buller Coalfield area. The idea would be for all relevant parties (minerals companies, environmental groups, iwi, relevant community groups, and local and central government agencies) to determine the conditions under which mining could be a permitted activity in specific areas of the Buller Coalfield and for this to be incorporated in the District Plan. For example, it might be that if mining companies can demonstrate upfront the economic benefits and costs of the project and that they can meet specified tests for the management, rehabilitation and compensation for environmental effects, then the mining activity would be permitted in specific areas and consents would not be required. Additional areas of the Coalfield could also be identified for protection as part of the process.

In addition, organisations suggested that an opportunity that should be considered in future is the potential for the region to share in the royalties paid by the minerals sector to central government. The issue is that the Councils in the West Coast provide infrastructure and services that enable mining but they cannot rate sufficiently to recover this as the majority of mining occurs on the conservation estate. This is a preliminary proposal and requires policy consideration at a national level.

Creative and ICT

The West Coast is well known for a range of creative capability in arts, craft and design but has a smaller base of ICT capability. The creative and ICT sector is currently small in scale in the region (contributing around \$17 million in GDP and just over 300 jobs) but it is growing. Industries that are growing particularly strongly in the region, albeit from a small base, are photographic services, computer systems design and specialist design services.

A strong creative and ICT sector underpins growth in other sectors in the economy, and leads to innovation and productivity improvements. Digital literacy and the increased use of ICT products and services improves business efficiency. It enables online sales, improved marketing and logistics, and better quality control. Increasing the digital capability of youth and broader communities will enable local people to make the most of new employment opportunities in a variety of sectors.



The region faces several challenges in attracting and developing ICT enterprises. The West Coast's remoteness, scale and more limited urban amenity options may put off some entrepreneurs. In addition, although high-speed broadband has been rolled out, and fibre has been established in Greymouth and selected locations in Hokitika and Westport, there is still poor internet accessibility in many areas of the region. Entrepreneurs in the sector that are likely to come to the region will be attracted to the West Coast lifestyle, its affordability and the natural amenities.

The establishment of EPIC Westport is proving that the region can attract and grow ICT firms when it presents a clear value proposition.

Over 2016, EPIC has attracted five new businesses to the region and generated 12 new jobs. Tech Space in Greymouth is also raising the profile of ICT and improving the capability of local residents.

Opportunity

Small investments to extend EPIC's services and presence in the region, to co-fund new ICT/creative start-ups, and expand programmes to develop the ICT competence of youth and businesses in key sectors could ensure that the number of enterprises and jobs in this sector increases quite quickly.

Forestry and wood processing

The forestry and wood processing sector is also relatively small, contributing close to \$40 million in GDP and 460 jobs (close to 3 percent of the region's jobs) but it is estimated to generate around 6 percent or \$40 million of the region's exports. The sector's real GDP and exports have grown strongly over the last 5 years (3.5 percent and almost 9 percent per year respectively), although employment growth has been more moderate. Growth has been driven by log sawmilling and veneer and plywood manufacturing, likely in response to rising demand for the Christchurch rebuild.

The region's wood processors largely process radiata pine, but the region has several disadvantages in doing this type of processing, including low forestry growth rates, limited local log supply, higher transport costs and small scale operations.

The majority of the West Coast's forests are indigenous and within the conservation estate, but the sector has been restricted from processing this. Local processors have had to rely on supply from private land. However, special legislation that came into effect in 2014 has allowed operators to remove and process indigenous timber from the conservation estate that was damaged by Cyclone Ita.

This has sparked the revival of a small indigenous processing industry in the region.



The operators have proven that there are reasonable economic benefits to be made from indigenous timber and that it can be removed with minimal damage to the environment.

In addition, DoC receives stumpage fees for conservation efforts.

The revival may be short-lived. The quality of the available timber is deteriorating and the legislation that allows the removal of the timber is to be repealed in 2019. There is limited incentive for owners of indigenous forest on private land to increase supply due to current limited processing capacity, market restrictions and poor marketing efforts.

Opportunity

The opportunity is to amend the legislation to allow windblown timber on the conservation estate to be removed by approved processors after any major weather event or at the discretion of the Minister. This will allow operators to extract such timber on a broader basis and post-2019. Aligned with this, a more significant and longer-term opportunity is to incentivise the expansion of indigenous timber forestry and processing from production plantations on the West Coast by reviewing and reducing current market barriers, such as export restrictions and building standards.

Horticulture, food and beverage

This sector is of moderate-large scale in the region, contributing \$80 million in GDP and 760 jobs in 2015. It is a relatively large exporter, producing an estimated \$98 million in exports in 2015. Sector GDP has grown quite strongly over the last 5 years (3.4 percent per year), although employment growth has been low.

The largest industries, by far, are related to meat, including beef cattle farming, deer farming, meat processing, and cured meat and smallgoods manufacturing, which together account for over 60 percent of the sector's GDP and employment. Several smaller segments have a strong concentration of employment in the region, suggesting advantages exist for growing a variety of products, such as vegetables (under cover), beekeeping, and beer manufacturing.

The West Coast has some natural advantages for this sector, with reliable rainfall and relatively few frost days providing good conditions for pasture and crop growth. Karamea's coastal land is regarded as ideal for horticulture due to lower rainfall averages and a marine climate which prevents low temperatures at nights. On the other hand, adverse weather events can have a significant impact on the sector. Industry representatives provided examples of major storms that destroyed more than 50 percent of crops.



Other than in the meat industry, most food and beverage industries in the region are effectively cottage industries, with businesses run by people as a part-time venture and/or who have moved to the region for lifestyle reasons and have no ambition to grow their business. Despite this, several are exporting nationally and/or internationally, including in tomatoes, lettuce, tea tree oil, sphagnum moss, cranberries and honey. There is also some further processing in the region, with Monteith's and Blackball Salami well recognised in New Zealand.

The livestock and meat sector is not expected to grow significantly. However, there is potential to sustainably increase horticulture production, which could result in increased employment as well as providing some diversification.

Opportunity

The opportunity is to support incremental growth in the sector through a combination of activities. The proposed activities include:

- a) Piloting a social enterprise approach to develop the sector in Buller.

The characteristics of the West Coast region (scale, isolation but close-knit communities) and the characteristics of many of the horticulture, food and beverage operators (lifestyle operators) suggests that social enterprises could play an important role.

Using a similar approach to the development of social enterprises in the Far North, Gisborne and Manawatu, this would involve a programme over several months for individuals or teams to explore new prospects for horticulture, food and beverage while also pursuing social and/or environmental objectives. For example, this might result in a food cluster in Karamea to produce, add value, market and distribute locally grown food, supporting local employment and healthy lifestyles.

- b) Supporting scoping work and research on the potential development of new niches, e.g., harakeke, and expansion of niches with potential, e.g., honey.
- c) Holding fielddays/demonstration days on horticulture as a business opportunity.
- d) Developing a West Coast brand for horticulture, food and beverage. A new tourism brand has already been developed and a horticulture brand could be aligned with this. Efforts to grow visitor numbers and expenditure and having a strong local food and beverage offering and banner are mutually beneficial. The benefits and costs of such a brand will need to be assessed.



Education

The education sector on the West Coast is of moderate to large scale, contributing almost \$50 million in GDP and around 1,100 jobs in 2015. Over the last decade, the sector in the region has grown faster than the sector nationally, but growth has been quite modest (1 percent per year GDP growth and 1.6 percent per year employment growth over 2005–2015). The strongest growth has been in the technical and vocational education and education support service industries.

There are perceptions that there is lower quality and a limited range of educational opportunities on the Coast. Several primary schools in the region have faced management challenges and difficulties recruiting staff. Tai Poutini Polytechnic (TPP) is the only tertiary education institution in the region, so tertiary options are limited. However, it does offer a large variety of courses and qualifications relevant to key sectors in the region, including civil construction, mining, outdoor education and hospitality.

International education in the region is currently limited. It was estimated that the value of exports generated by the education sector on the West Coast was \$2.4 million in 2015. However, it has the potential to grow on the back of TPP's investment in developing its international offerings.

TPP has partnerships with Wharton Business School and in South America and Asia, and is working with institutions in China to develop exchange programmes. It has been running a leadership programme for MBA students from Wharton Business School for 3 years and demand for the programme has exceeded available places. TPP also recently led local tourism operators on an international tour into China to improve their understanding of the servicing requirements of that market.

Opportunity

The West Coast has the opportunity to at least double the size of education exports through the expansion of experiential leadership programmes focused on regional specialties of outdoor education, environmental management and eco-tourism.

This would include:

- a) providing international MBA students and business representatives with experiences in the region on outdoor education, environmental management, tourism etc. (building off the programme that TPP runs with Wharton School of Business).
- b) training New Zealand leaders in relevant fields (e.g., conservation management) and bringing leaders to the West Coast for practical experience (e.g., short course executive programmes)
- c) in-bound and out-bound study tours - providing West Coast businesses with international experience and expertise to prepare them for meeting international demands. This could include travel into markets and bringing international expertise to the West Coast.



In addition, given the many challenges facing the education sector in the region, in our view it is quite possible that the current mix of education and training options in the region is not appropriate for the limited resources and capabilities that exist. It is clear that schools and training providers are under pressure in the face of falling rolls and resources. It may be a good point in time for education organisations on the West Coast, in partnership with relevant government agencies, to work together to assess what the future of education delivery and resourcing should be in the region.

Fishing and aquaculture

This is a small, growing sector in the region. The sector contributed around \$16 million to the West Coast economy and supported 130 jobs in 2015 (around 1 percent of the economy). The sector has achieved strong value growth over the last 5 years (around 3 percent per year growth in GDP, with the value of exports growing at 5 percent per year), although this is from a low base.

The West Coast has both natural and capability advantages to support growth in the sector. The West Coast fishery is regarded as being abundant due to protection provided by weather and sea conditions. There are two relatively large commercial fishing companies that are investing in product development. While there has been investment in value add and improved processing capability, growth is likely to be incremental as volumes are constrained by the availability of quota.

The West Coast has a strong reputation and capability in recreational fishing and whitebaiting. Commercial freshwater fishing and aquaculture are currently very small in scale, with only a few whitebait commercial operators and a boutique salmon farm in South Westland. There is, however, interest in growing the potential of whitebaiting and salmon farming.

The whitebait potential, both recreational and commercial, may be constrained by available whitebait stocks and limited information about the management of the stocks. Industry feedback suggests that whitebait stocks in the region have declined as a result of changes to waterways and spawning sites. Sites and key waterways have been adversely affected by a combination of erosion, expanded coastal towns, and dairy farming. DoC has been doing restorative work on some sites but is limited by resource constraints.

Opportunity

The main opportunity is to develop a sustainable wild whitebait fishery.

The key activity that will need to be undertaken is a programme to develop, restore, monitor and protect more spawning sites (and this may need to extend beyond the West Coast). This will need to be supported by research to ensure that the work is undertaken in the right places, although an assessment of 136 sites on the West Coast has already been undertaken and has identified their enhancement needs.



Additional investigations could also be undertaken into options to enhance adult whitebait habitats, on the state of the stocks and the effectiveness of the network of closed areas, and on the value of the whitebait fishery to the West Coast.

There is also commercial interest in assessing the feasibility of and developing salmon farming in the region. A concept is being developed and an assessment of a potential site has commenced.

Other sectors of importance: dairy, construction and health services

Three additional sectors were identified as important for growing jobs and incomes in the region over the long term, but the research and consultation process did not reveal any specific opportunities for these sectors at this time.

Dairy and related processing

Dairy and related processing is significant on the West Coast, contributing \$282 million in GDP (15 percent of the economy), 1,640 jobs (10 percent of employment), and \$390 million of exports (56 percent of regional exports) in 2015.

There is strong processing capability embedded in Westland Milk Products, with its major processing factory in Hokitika. Westland Milk Products is New Zealand's second largest dairy co-operative and has a significant international presence with exports to 50 countries.

Although the sector has grown relatively strongly over the long-term (e.g., employment has grown by 2.5 percent per year over the last 10 years), the sector is going through a challenging time due to the substantial drop in international prices since early 2014. Employment growth and milk solid production in the region have slowed over the last 2 years.

The dairy pay-out is expected to only slowly recover over the next few years. Forecasts suggest that employment in the sector in the region will fall over 2016–17, before recovering slowly from 2018.

Stronger resilience to commodity dairy product price shocks will be possible in future through Westland Milk Products' investment in value-added products (infant nutritional products, EasiYo, UHT milk and cream), redesigned branding and market development in China.

Growth over the longer term will be driven by Westland Milk Products as it continues to build on its higher value products and market development strategies.



No specific opportunities for the sector have been identified that could be progressed through the study and action plan beyond what Westland Milk Products and industry groups are already doing. However, a range of opportunities suggested for other sectors and cross-cutting issues will benefit this sector, including improving road resilience (transport delays add to the cost of sourcing milk across a long geographic area and in moving the output to other regions) and accelerating the roll-out of broadband and dealing with mobile blackspots (poor or no broadband connectivity in locations limits the use of technology to improve farm monitoring).

Construction and related services

The construction and related services sector is large, representing about 9 percent of the region's GDP and 12 percent of jobs in 2015 (\$165 million GDP and close to 2,000 jobs). The sector has developed a range of capabilities in project management, infrastructure and building services off the back of the minerals and dairy sectors.

The sector has experienced relatively strong GDP and employment growth in the region over the last 10 years (around 4 percent per year each). However, growth has slowed over the last 5 years, with employment growing by less than 1 percent per year over the period. This is significantly slower than growth experienced by the sector across New Zealand. Construction activity, particularly residential and commercial, has fallen off in Buller and Grey following the decline in the minerals sector and in the local populations.

No specific opportunities for facilitating growth in the construction sector were identified during this study. The initial district workshops suggested that the study test the potential for construction businesses in the region to pool their resources and undertake joint marketing and collaborative work in other regions. However, sector feedback suggested that this had been previously attempted with the West Coast Construction Alliance and had not been successful. The costs of transport (e.g., for transporting heavy construction machinery) limits the markets that can be serviced from the West Coast to Nelson-Tasman and Christchurch, and these markets have proven to be highly competitive.

Sector feedback suggests that a combination of local government and central government work (e.g., road maintenance, water and waste infrastructure, the new hospital in Greymouth and expansion of the aged care facility in Westport) and tourism related work (e.g., development and maintenance of trails such as Pike 29, West Coast Wilderness Trail, Old Ghost Road) will sustain civil construction companies in the region. There is also a pipeline of private construction work, such as new subdivisions and the redevelopment of the Beachfront Hotel. Other hotel proposals may bring additional work in the medium term.

Health services and aged care

The health services and aged care sector is also significant (\$80 million in GDP and 1,500 jobs in 2015) and some industries within it, namely hospital services and aged care residential services, have grown relatively strongly over the last decade (achieving around 2.5 percent per year growth in employment).

Two developments will support further growth in this sector's employment in the region:



- The population of older aged people in the region is expected to grow relatively fast (e.g., another 1,000 people aged 75 years plus over the next decade), which will increase demand for aged care services and home care. Based on relatively conservative assumptions, there will be demand for an additional 100 aged care beds over the next 10 years. There is an existing plan for and work underway to upgrade and extend the aged care facility in Buller (including a proposed retirement village).
- The Government is investing around \$78 million in a new hospital and integrated family health centre in Greymouth, with an increase in beds, operating theatres and services. The facility is expected to open in 2018.

The initial district workshops suggested that the study test the potential to develop the region as a centre for health services for retirees. However, sector representatives suggested this would be unrealistic, given that retirees tend to locate close to family and because the region does not have a full range of specialist care available.

Other than the projects noted above, there does not appear to be any other specific opportunities for growing jobs and incomes in this sector that could be progressed through this study and action plan. However, opportunities suggested for other sectors and cross-cutting issues will benefit this sector, particularly accelerated roll-out of broadband and dealing with mobile blackspots. A lack of broadband connectivity in several locations limits the use of health ICT solutions and improved services in the sector. A lack of connectivity is also clearly a risk in ensuring health services can respond promptly to emergency situations.

Cross-cutting opportunities

Transport

The West Coast's remoteness and distance from the main employment and business centres in the South Island and elsewhere in New Zealand means it is very dependent on having safe and reliable transport links.

There is one major rail link and four main road links providing connections to the rest of the country. There are limited air services in Hokitika and Westport and two river ports in Greymouth and Westport.

Despite the region having a population of less than 1 percent of the New Zealand total, the state highway network within the region accounts for 8 percent of the total length of the national state highway network. State highways comprise over 30 percent of the length of the total road network in the region, almost three times as high as the national average. The performance of the state highways is therefore particularly important for the West Coast.



Key road transport challenges for the region include long distances and lengthy travel times, route security, network resilience and road safety. There are also many one-lane bridges throughout the region (36 on SH6 alone) and some of these are approaching the ends of their useful lives and will need to be replaced.

A large number of hazards can give rise to disruptions across the road network, including ice and snow, falling trees, rockfalls, flooding and landslides. Disruptions or closure can result in considerable increases in the travel distances between key locations because of the limited number of routes into the region. For example, for much of SH6, diversion distances are in excess of 500 kilometres.

The road conditions and the high number of visitors to the region relative to the size of the population contribute to the region experiencing the highest rate of road fatalities and serious injuries per capita nationally. Between 2011 and 2015, 21 percent of road crashes on the West Coast involved overseas licence holders, compared to only about 6 percent of crashes nationally.

Despite these issues, the routes within and serving the West Coast are given a low resilience prioritisation in the State Highway Activity Management Plan 2015–2018. The expenditure proposed for the West Coast in the 2015–18 National Land Transport Programme is less than 1 percent of total expenditure nationally. This is broadly in line with the population, and also reflects the relatively low traffic flows, but it provides limited resources to address safety and resilience issues, especially given the length of the State Highway network in the region.

Because of the length of the road network, the multiple and unpredictable hazards potentially affecting it, and the limited resources available, the main approach of NZTA is to respond to problems as they occur rather than prevent them occurring in advance. This includes having resources and plans to meet possible disruptions, especially if these can be anticipated. One problem that the region faces in identifying and responding to disruption on the network is in the south of the region, where there is a 200 kilometre section of SH6 without cellphone coverage.

Although there are resource constraints, NZTA is investing in a range of work to improve the road transport network including:

- the construction of the Mingha Bluff to Rough Creek realignment project
- finalising the investigation and consenting for the replacement of the Taramakau Bridge
- responding to the washouts on the Waiho River at Franz Josef, including lifting the bridge
- identifying roads in the north of the region for the next tranche of high productivity motor vehicle routes
- implementing the Visiting Drivers Project to improve road safety with a focus on visitor education and signage
- increasing the number of slow vehicle bays on key routes.

There are no plans at this stage to invest in increasing rail or flight capacity in the region. Any changes will be dependent on commercial decisions which, in turn, are influenced by demand from industry, visitors and local residents.



Opportunity

Given the road transport challenges the West Coast faces, further investment is required to proactively manage resilience across the region's road network and to accelerate some planned projects.

Expanding funding could include bringing forward priority projects identified in the Regional Land Transport Plan that are currently proposed for 2018–2021, such as additional bridge strengthening and replacement projects.

In addition, the case for investment in upgrades on routes to key visitor icons should be assessed. The roads to be assessed would depend on the priorities determined through the tourism strategy and plan.

There are two road proposals that could have a significant impact on jobs and economic development in the region but which require feasibility assessments and cases to assess their technical and commercial feasibility and the full range of costs and benefits. These are the Haast to Hollyford road and the Wangapeka road link proposals. Given their significance and the divergent views on their merits, the feasibility studies and cases need to be robust, using resources, advice and information from a combination of industry, local government and central government. The aim should be for decisions on whether to progress the projects any further to be definitive, based on the best quality information.

Access to natural resources

The West Coast has an extensive range of natural resources and amenities, which underpin key sectors such as tourism, minerals and dairy.

The region has 1.9 million hectares of public conservation land, including five national parks, and part of the South West New Zealand UNESCO World Heritage Area. It has unique landscapes, wetlands of international significance, a rich marine eco-system, and a range of mineral deposits. There are relatively few significant water-use pressures and water and air quality is generally good.

These natural resources can also create risks and hazards which need to be managed and that can be costly to mitigate. Several hazards result from the very steep topography and climatic conditions, including coastal erosion, flooding and landslides. Many areas of the West Coast are susceptible to more than one of these hazards, such as Franz Josef.



There are clear tensions between economic development and the management of natural resources impacting on many of the key sectors. Tensions associated with the use of natural resources in some areas will only grow as pressures on the resources increase in spite of their relative abundance. For example, the nationally significant natural landscapes and wilderness experience that are key to West Coast's tourism offering are potentially in conflict with extractive industries. Managing this tension and attempting to achieve the highest combination of social, cultural, environmental and economic benefits through the use and protection of natural resources is one of the greatest challenges facing the West Coast.

The region and central government are investing heavily in several areas to improve the management of natural resources including in protection works and RMA processes.

Opportunity

Opportunities for improving the management of natural resources in the region have been noted in relation to key sectors and other cross-cutting issues, including identifying and assessing stewardship land of low conservation value, the development and enhancement of tourism icons, future proofing infrastructure at key locations, and developing a single window for dealing with permits, land access applications and consents.

Another opportunity is to take a more strategic and regional approach to decision-making on the use of natural resources through a spatial plan.

The spatial plan would lay out how and where the West Coast region is expected to grow over the long-term, the location and form of future development, and the transportation routes and amenities needed to facilitate such growth.

There are several benefits to a spatial plan, particularly that it would provide more certainty for investment by showing what types of investments should and can be made and where. It could also be used to improve the coordination of investment with central government on priority issues such as transport. However, it is likely to be time consuming and costly to develop.

In the absence of having statutory status, ensuring effective implementation may also be difficult. It may be better to make progress towards a spatial plan in stages by initially improving the evidence base and adopting other options for improving resource management decision-making, such as a single unitary plan and joint planning processes.

Telecommunications

There is limited availability of Ultra-Fast Broadband (UFB) on the West Coast. UFB is available in Greymouth, most schools and hospitals/health centres. Rural Broadband Initiative (RBI) phase 1, which aims to connect 90 percent of homes and businesses outside UFB phase 1 areas with broadband, is 87 percent complete on the West Coast.



Census 2013 showed that a smaller proportion of households in the region had internet access than most other regions. Almost 70 percent of households in the region had internet access in 2013, while nationally close to 77 percent of households had access.

There is limited mobile coverage on the West Coast, particularly in South Westland, where there is a 200 kilometre black spot between Fox Glacier and Makarora.

Household access to mobile phones is more limited on the West Coast than in other regions, with 73 percent of households reporting in Census 2013 that they had access to a mobile phone compared to close to 84 percent across New Zealand.

Surveys in the region have found that the lack of an available service, or a very slow service, are the main reasons why people are not connected to broadband. All sectors consulted with through this study expressed concerns about limited broadband, Wi-Fi and telecommunications access.

West Coast councils put together the West Coast Digital Enablement Plan as part of an application for UFB, RBI and mobile black spot extension funding in 2015. DWC supported this application by offering a further \$1 million of funding. The objectives of the plan are: 100 mega-bits per second (Mbps) in all areas of 300 people or more; 100 Mbps in areas within reasonable reach of the main trunk services; the installation of 4G, wireless or VDSL service providing a minimum 20 Mbps where the cost of fibre is prohibitive due to distance or the number of users; and provision of mobile phone coverage across the State Highway network, including special purpose roads.

Opportunity

The key opportunity is for the West Coast to secure funding support for the extension of UFB/RBI and mobile network coverage and for the roll-out of the extension and digital enablement initiatives to be undertaken as soon as feasible. This will need to occur once the commercial negotiations between Crown Fibre Holdings (CFH) and potential suppliers has been completed and policy on RBI and mobile black spot funding has been finalised (scheduled for the end of 2016).

Energy

The West Coast electricity load is mostly supplied from the National Grid through the longest transmission route in New Zealand, via Canterbury, Kikiwa and Inangahua. Local generation is provided by a range of hydroelectric power stations.

There are two electricity distribution companies in the region – Buller Electricity and Westpower. Buller Electricity supplies Karamea in the north to Meyville Bay near Punakaiki in the south. Westpower services from Lyell in the north to Pāringa in the south.



Electricity demand on the West Coast increased over the 2000s on the back of growth in dairy and minerals and key customers such as Westland Dairy, Pike River mine, Solid Energy and Holcim. As a result, Transpower, Westpower and Buller Electricity commenced work on projects to increase supply capacity on the West Coast. Following the decline in the minerals sector, demand for electricity on the West Coast has fallen significantly and there is now plenty of capacity, particularly in Buller.

There are efficiency and security of supply issues. On average, it is estimated around 8.5 percent to 13 percent of electricity is lost transmitting electricity from the national grid to the West Coast's distribution companies' networks. The transmission distance also has an impact on the cost of power and presents a risk to the security of supply if transmission problems occur along the route. Major disruptions can also result from significant weather events in the region.

Westpower proposes to build, own and operate another hydro scheme in the Upper Waitaha catchment. Westpower lodged its application for concessions for the scheme with DoC in 2014 and the application has recently been approved in principle, subject to submissions and a final decision. It is estimated that around 80 percent of the \$80–\$100 million construction costs will be spent on the West Coast and that the project will generate 20 jobs over the construction period. It should also reduce transmission losses and improve the security of supply in the region. The proposal is a commercial one and Westpower has not sought any support through the study process.

The Ngakawau Restoration hydro scheme has also been proposed to divert acid mine drainage from coal mines on the Stockton Plateau to an ocean outfall. The proposal is to develop a 24MW hydro scheme. The scheme will restore water quality in the Ngakawau River, reduce the costs of rehabilitating the mine and provide water management facilities for future mines. The project will cost around \$165 million for constructing diversions, hydroelectric generation facilities and for rehabilitation over 4 years. The scheme proponents have sought Crown funding from the indemnities the Crown has provided for rehabilitation of Stockton mine. It is not clear whether the proposal will be commercially viable even with this support.

Opportunity

There is a proposal to establish a waste-to-energy plant in Buller that would generate 60 Megawatts of energy annually from 300,000 tonnes of waste.

The facility would take a combination of local feedstocks (e.g., solid municipal waste) and import solid waste from around New Zealand. A new company, Waste Energy (WC) Ltd, has been formed to manage the project and an advisory board has been formed involving Buller District Council (BDC) and Buller Electricity. The rationale for establishing the facility in Buller is to have ready access to waste coal, which will help to ensure minimum energy levels are generated.



A feasibility assessment and business case is underway. It has been estimated that construction of the facility will provide 1,000 jobs over 12–18 months and that operation of the facility will initially require 65 jobs. Although the potential impacts are significant, there are still key questions about its validity and practicality to be answered. The assessment and case should be finalised so that the viability of the project can be determined, including key risks and how they might be managed, the full range of costs and benefits, as well as whether there is any role for local or central government in facilitating the project.

Skills and talent

The overall picture of skills and educational attainment suggests a region where there is a relatively high level of early childhood, industry and adult education and training but relatively low attainment of formal qualifications.

The proportion of the West Coast's children who participate in early childhood education prior to starting school is high, relative to the New Zealand average and most comparator regions. Participation across the West Coast has increased over time.

The proportion of the West Coast population undertaking industry training and apprenticeships is higher than the New Zealand average. Industry trainee and apprenticeship enrolments are broadly aligned with sectors of strength in the region. For example, high numbers were enrolled in agriculture, food and hospitality, building, marketing and engineering in 2014. There is also a better than average proportion of the population participating in adult and community education.

However, the West Coast population underperforms on several key indicators of educational achievement and participation, although there is variation between districts. In particular, the region has a lower proportion of people with a bachelor degree or higher, and a higher proportion of people without a qualification, than nationally. Lower proportions of school students in the region achieved 'at' or 'above' the national standards for reading, writing and mathematics than across New Zealand as a whole.

There was consistent feedback from sector representatives that it can be difficult to hire management and technical skills in the region (e.g., in wood processing, health services, manufacturing, construction, fisheries). This is due to a combination of factors, including the smaller working-age population in the region, difficulties in attracting staff from other regions due to a perceived lack of education opportunities for children and job opportunities for partners, and perceived lack of career opportunities. Workers that have lost jobs in the minerals sector have often not been regarded as suitable for other sectors (i.e., they have different skills) or are not attracted to jobs in other sectors, which tend to pay less than they were getting. Some sectors (e.g., wood processing, fisheries) also face problems in attracting and retaining lower-level skills due to attitudinal issues such as aversion to hard work or long hours, and drug-related problems.

There were also comments from several businesses that it is difficult to access R&D expertise in the region, due to the lack of research institutes and tertiary organisations.



Opportunity

Despite the challenges, no specific interventions were suggested by sector representatives or education and training organisations to improve business access to skills to fill job opportunities. There is already a range of education and training programmes offered in the region, not only through schools and TPP, but also through WestREAP, BullerREAP, MSD, the West Coast Trades Academy and others. These include initiatives to help youth and the unemployed connect with job and training opportunities.

There is a proposal to develop an applied research centre in the region to improve business access to R&D expertise.

This would involve researchers, students and other experts working with key industries (e.g., minerals, dairy, tourism, ICT, horticulture) on the West Coast to assist them in dealing with real-world problems and opportunities. For example, this could involve experts working with farmers on how they can comply with health and safety requirements in practical ways or working with minerals companies to improve the gold recovery process. Such a concept would be best developed in partnership with other institutions from outside the region to leverage additional resources and to bring expertise into the region in areas where TPP has existing gaps. The first step would be to test the potential demand for such a centre and possible projects through workshops with relevant sector representatives.

Economic development arrangements

Effective economic development arrangements can support businesses and sectors in a region to more productively and effectively access resources and respond to opportunities.

The set of economic development functions on the West Coast is currently spread across a number of agents, including councils, DWC, Tourism West Coast (TWC), town promotional agencies, community organisations and a regional economic development manager.

The region is relatively unique compared to most other regions in having economic development functions distributed across so many agencies. The West Coast is also unique in that it has DWC, providing the community with access to potentially significant funding support for business growth opportunities and economic development projects. The West Coast has also lacked a clear regional economic strategy or set of economic development priorities for some time.

Overall, economic development functions on the West Coast are fragmented and have evolved in a rather ad hoc way.



It is not readily apparent that the current set of arrangements (both governance and delivery) is the most appropriate or cost effective, provides for an appropriate level of oversight and accountability, or aligns with clear economic development priorities.

In addition, almost all industry representatives and stakeholders consulted with as part of this study had questions or concerns about DWC's investment and funding role. These included questions about the scope of investment that was possible or not possible through DWC; whether DWC had a clear investment strategy or was reacting to opportunities; whether 'business as usual' activities were being funded in some cases; and about the length of time it can take to make decisions on applications for funding (with some examples taking more than 12 months).

Opportunity

To ensure that the region has appropriate arrangements in place to support economic development and the implementation of the growth study and action plan, it is timely to review current arrangements (across TWC, DWC and councils) with a view to implementing an improved approach. The review would identify: the range of functions that should be delivered; strengths and weaknesses of the current model; opportunities to improve the model; the benefits and costs of alternative options; appropriate funding arrangements to deliver the preferred model; and a clear set of output and outcome indicators to monitor performance.

Concurrently with this review, it is also timely to review the way that DWC's objectives are being interpreted and the investment approach of DWC. The aim would be to develop an investment strategy, which set out the rationales for DWC's investment and the general priorities for that investment. The priorities would be informed by the outcomes of this growth study and the subsequent action plan. DWC's investment processes should also be assessed and clearer guidelines adopted for decision-making timeframes.

Māori engagement

Māori are playing an increasing role in the West Coast economy. Ngāi Tahu Holdings has several commercial interests and is a key player in tourism and forestry in the region. Māwhera Incorporation has strategic commercial assets in Greymouth and is actively looking at investing in the region.

Te Rūnanga o Ngāi Tahu has a number of social and regional development projects throughout the South Island that can be leveraged on the West Coast.

The two Ngāi Tahu Papatipu Rūnanga on the West Coast – Ngāti Waewae and Makaawhio – are engaged in social development projects and are important investors in the region, with significant landholdings in Greymouth and Westport, and interests in forestry, minerals, tourism, fishing, property, food and beverage, health, telecommunications and natural resources.



There are opportunities for Māori engagement across most sector and cross-cutting opportunities identified in this study. Involvement may be through Ngāi Tahu Holdings Limited, Papatipu Rūnanga and associated businesses or initiatives, or through whānau development and involvement in local business.

The opportunity is to understand the investment focus of Ngāi Tahu subsidiaries, Māwhera, and Papatipu Rūnanga, and to then identify and encourage investment opportunities on the West Coast.

Priorities for action

The opportunities identified during the growth study were assessed and rated against a range of criteria, including validity, potential impact, practicality, regional significance, and consistency with local or national priorities. The Governance Group then debated the list and used their local and sector expertise to identify the following short-list of the highest priorities:

1. Developing the tourism strategy and action plan to improve marketing, enhance and develop tourism products, and invest in visitor infrastructure and amenities at key locations. This includes determining the appropriate mix of funding options.
2. Reviewing economic development arrangements in the region with a view to recommending a new governance, funding and delivery approach.
3. Reviewing the objectives and investment approach of DWC, including developing a clear investment strategy that aligns with the outcomes and objectives of the growth study.
4. Identifying the region as a priority for extension of UFB, RBI and mobile networks and accelerating the roll-out and implementation of West Coast digital enablement initiatives.
5. Developing a single window regulatory processing hub to deal with permits, land access arrangements and consents in a streamlined way.
6. Identifying areas of stewardship land with development potential that are of low conservation value.

Table 2 summarises the highest priority proposals for the West Coast, including potential benefits, organisations that should be involved, the current status of work on the opportunity, further work required, and our assessment.

These opportunities are priorities for the action plan. The other opportunities rate more moderately on the criteria for various reasons. Several will also be worth progressing but can be regarded as lower priorities if there are resource constraints



Table 2. Key economic development opportunities

Opportunity	Potential benefits	Who's responsible	Current status and further work required	Assessment
Developing the tourism strategy and action plan	<ul style="list-style-type: none"> Effective delivery of tourism promotion and support. Potential to grow visitor expenditure to \$530 million by 2020 (\$114 million increase). A range of flow-on benefits to other sectors, social and community development, and environmental benefits. 	TWC, Economic Development Manager, DWC, councils, DoC, iwi	Initial work is being led by the Economic Development officer and TWC to develop new branding and a tourism strategy for the West Coast.	High – scored high on validity, potential impact, regional significance, leveraging existing activity and consistency with national priorities.
Reviewing economic development arrangements in the region	<ul style="list-style-type: none"> Greater alignment of economic development and marketing priorities and outcomes. Better opportunity to leverage the resources of all to achieve common goals. Improved measurement of economic development performance and impacts. Increased flexibility/agility. The potential for a more effective partnership with central government. Reduced costs (e.g., reduced overheads, potentially reduced governance). Potential to attract higher levels of expertise to well-resourced agency with a greater scope of activities. 	Councils, DWC, MBIE, NZTE, DWC, TWC	<p>This is a new initiative and will be instigated as part of the action-planning phase.</p> <p>Should be completed in conjunction with the review of the objectives and investment approach of DWC and assessment of tourism marketing and promotion needs.</p>	Medium-high – scored high on validity and regional significance. Scored medium-high on practicality and medium on potential impact, leveraging existing activity and consistency with national priorities.



Opportunity	Potential benefits	Who	Current status and further work required	Assessment
Reviewing the objectives and investment approach of DWC	<ul style="list-style-type: none"> Improved alignment of the investment strategy with the region's economic development priorities Clarity on the investment approach will result in better projects being funded and savings due to only relevant proposals being submitted. 	Councils, DWC, MBIE, NZTE, DWC, TWC	<p>This is a new initiative and will be instigated as part of the action planning phase.</p> <p>Should be completed in conjunction with the review of economic development arrangements in the region.</p>	Medium-high – scored high on validity and regional significance. Scored medium-high on practicality and medium on potential impact, leveraging existing activity and consistency with national priorities.
Identifying the region as a priority for extension of UFB/RBI and mobile networks and accelerating the roll-out	<p>Direct impact on jobs may be small in the first instance. Enables opportunities for improved productivity, innovation and connections. Based on previous research, regional GDP could increase by around \$30 million if UFB was available to 10 percent more employees in the West Coast region.</p> <p>Will benefit several key sectors, including:</p> <ul style="list-style-type: none"> Tourism – improved marketing, online booking and customer feedback systems. Dairy – improved farm monitoring, use of fertiliser and irrigation, benchmarking and communications with suppliers and customers. Health services – more options for telemedicine and tele-health. Improved response time to emergencies in remote locations. Education – online education opportunities and improved teacher-parent-student interaction. 	Councils, DWC, MBIE, NZTE, telecommunications providers	The West Coast has put together the West Coast Digital Enablement Plan as a part of its bid to extend UFB/RBI and mobile networks. DWC has offered a further \$1 million to support the efforts.	High – scored high on validity, potential impact, regional significance, international orientation, ability to leverage local/regional work and consistency with national priorities. Rated medium in terms of practical implementation.



Opportunity	Potential benefits	Who	Current status and further work required	Assessment
Identifying areas of stewardship land with development potential that are of low conservation value	<ul style="list-style-type: none"> Will improve certainty over the potential opportunities for the use, development or conservation of this land. Will also free up DoC resources being used on low value land. Low conservation value stewardship land could be swapped for high conservation value private land, delivering long-term conservation benefits. 	DoC, iwi, councils, MfE, West Coast Conservation Board	The Parliamentary Commissioner for the Environment has recommended that DoC identify areas of significant conservation value. The regional Conservation Board has been identifying high-value areas. The opportunity would build on this to look at areas of low conservation value and which have development potential as well.	Medium-high – rates high in terms of its validity, regional significance and ability to leverage existing work. Rates medium-high in terms of its potential impact and consistency with national priorities. Rates lower on practicality and its international orientation.
Developing a single window regulatory processing hub to deal with permits, land access arrangements and consents in a streamlined way	<ul style="list-style-type: none"> Should accelerate the development of minerals projects by speeding up the application process. Reduced costs to applicants. 	WCRC, councils, iwi, NZPAM, DoC, MfE	WCRC have promoted this concept as have Ngāi Tahu.	High – rates high on validity, potential impact, regional significance, ability to leverage local resources and consistency with national priorities. Rates more moderately on practicality and international orientation.



Next steps

The second stage of the project is to develop an Action Plan for the West Coast. The Action Plan will specify how priority proposals will be achieved by articulating key actions, milestones and timeframes, identifying lead organisation(s) and partners involved, the resources required, and how progress will be measured and overseen.

Delivering the Action Plan will involve the following steps:

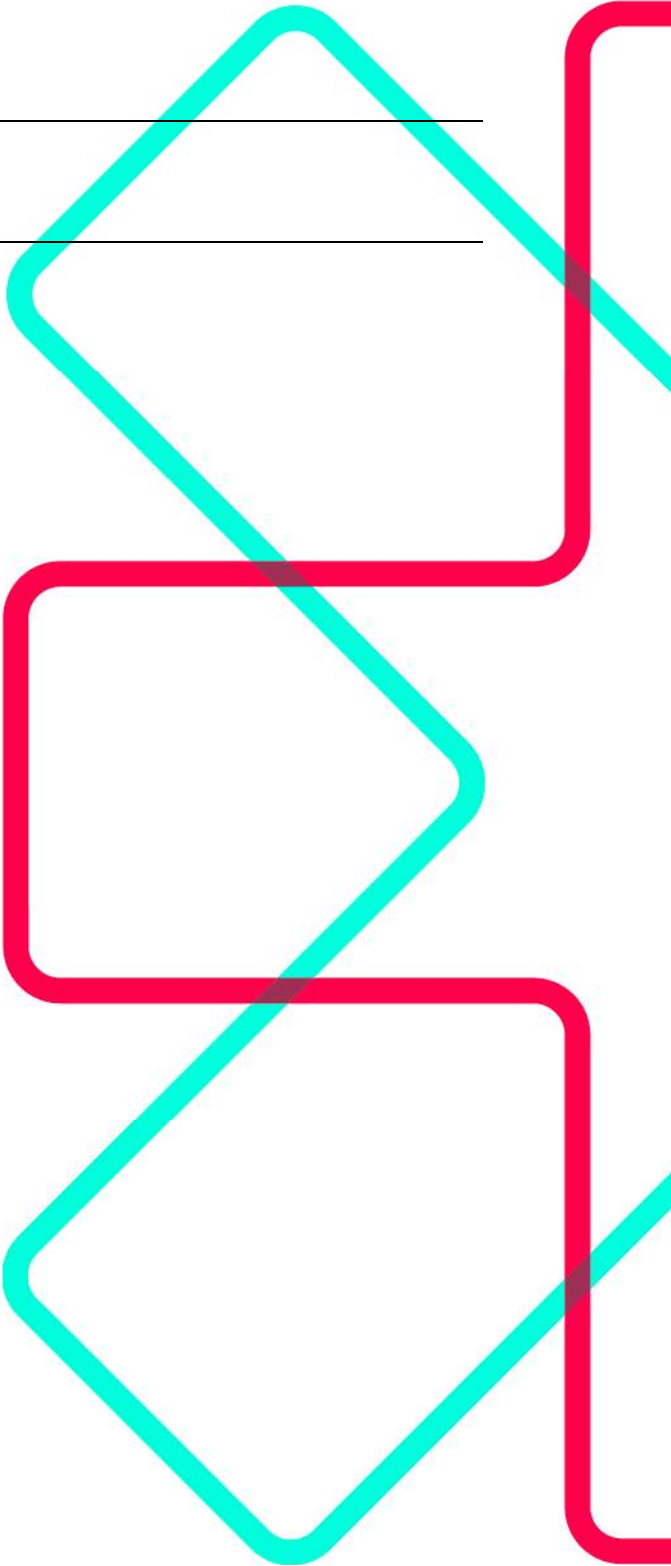
- Step 1 – Prioritising the list of opportunities
- Step 2 – Project planning, including identifying project leads who will work with teams of relevant agencies and stakeholders to develop a project plan for each priority, identifying key actions. Output and outcome indicators for measuring progress against actions will also be identified.
- Step 3 – Identifying governance and delivery arrangements for overseeing and implementing the action plan
- Step 4 – Drafting the Action Plan

The goal is to agree and deliver a final Action Plan by February 2017.



SECTION TWO

Scope and Approach



SCOPE

The Ministry of Business, Innovation and Employment (MBIE), in partnership with the Ministry for Primary Industries (MPI), commissioned MartinJenkins and Crowe Horwath to undertake a Regional Growth Study (RGS) of the Tai Poutini West Coast region.

Purpose of the growth study

Regional growth studies are based on the recognition that the regional context and economic make-up matters for growing local economies. Population, geographical features, resources, industries and institutions affect the ability of regions to attract, retain and grow businesses and entrepreneurs. National policies and interventions can affect different regions in different ways.

The purpose of the Tai Poutini growth study is to identify opportunities and related actions in the region that have the greatest opportunity to sustainably grow investment, employment and incomes.

This study aims to help the West Coast region to better understand how it differs to other regions and, based on this understanding, identify opportunities that can increase jobs and incomes over the next decade. The study identifies two types of opportunities:

- sector based – opportunities that relate to specific major or emerging sectors
- cross-cutting – opportunities that affect a range of sectors and relate to skills, innovation, infrastructure, natural resources and investment.

Opportunities report

This opportunities report presents the analysis and the findings of the Tai Poutini West Coast RGS. It describes the current state of the West Coast economy, identifies opportunities for growth, and recommends how to realise those opportunities.

We will follow up this opportunities report with an action plan in early 2017. The action plan will further prioritise the opportunities identified in this report and describe how to implement them, including key milestones, responsibilities and resources.



Scope of the growth study

MartinJenkins and Crowe Horwath were asked to do the following four things:

1. Identify, challenge and validate opportunities.

We uncovered a large range of opportunities through the study process. A key part of the study was to determine which opportunities could be practically implemented and which would have the largest impact.

2. Prioritise actions that will catalyse the opportunities or remove constraints to growth.

Resources are always limited, so it was important to identify a small number of actions to implement well, rather than stretching resources across every conceivable action.

3. Focus on raising the growth of the region as a whole.

The opportunities we identified had different levels of relevance to and impact on the Buller, Grey and Westland districts. However, we focused on identifying opportunities that would be regionally significant.

4. Identify opportunities to coordinate business, iwi, central government and local government efforts and resources.

The study was not focused on identifying projects for central government funding or on improving the effectiveness of local government in the region. The opportunities with the largest potential are those that require action from a range of stakeholders and that use a combination of public, private and non-government resources.



Study area

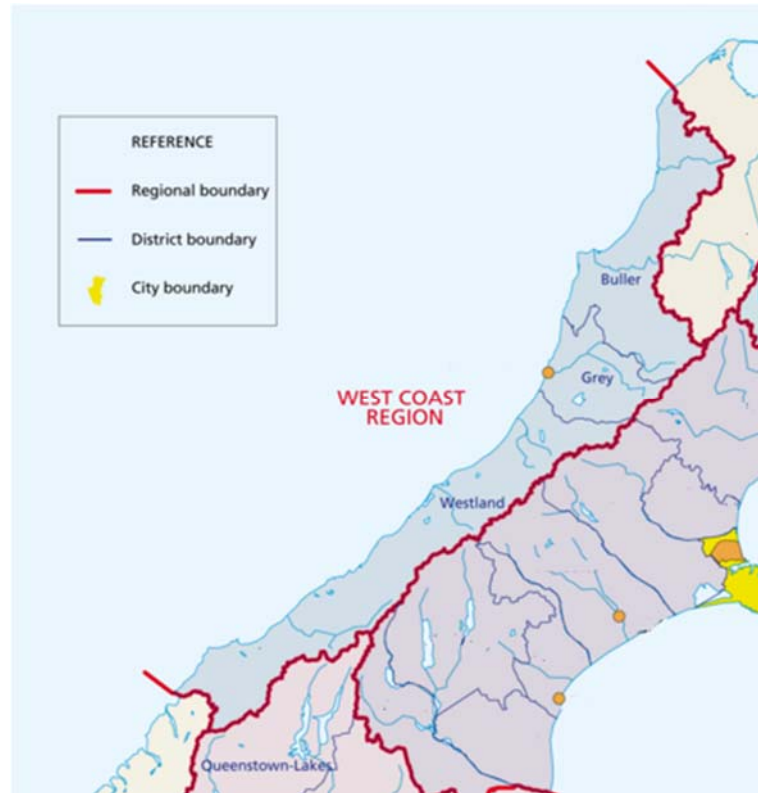
The Tai Poutini or West Coast region is in the South Island and sits between the Southern Alps and Tasman Sea.

The West Coast covers 23,000 square kilometres, or 8.5 percent of New Zealand's land area. It is less than 70 kilometres wide at its widest point.

The West Coast is the longest region in New Zealand, spanning more than 600 kilometres from Kahurangi Point in the north to Awarua Point in the south. As such it borders four regions, Nelson/Tasman, Canterbury, Otago and Southland.

The geographic boundaries of the West Coast region are split into the Buller, Grey and Westland district boundaries.

Figure 1. Area of the West Coast Growth Study



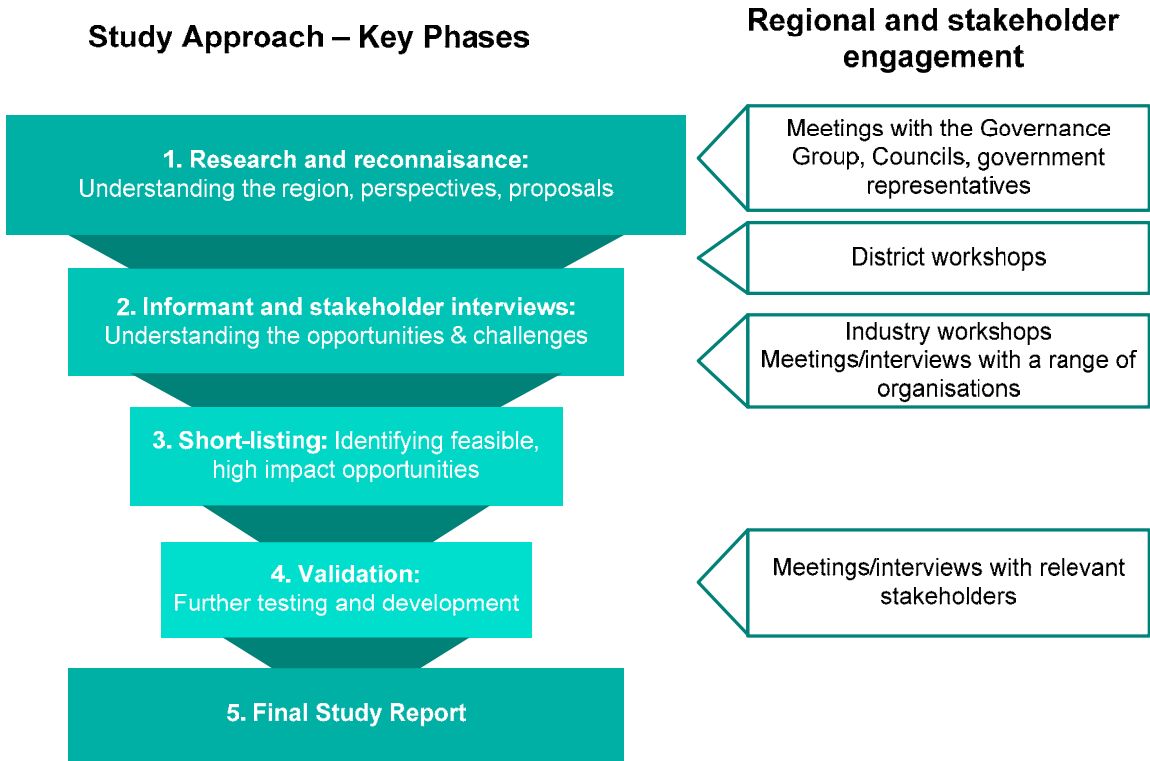
Source: Map adapted from www.lgnz.govt.nz



APPROACH

Our approach in developing this report was a process made up of five key phases. This approach is depicted in Figure 2.

Figure 2. Our broad approach for the West Coast Regional Growth Study



Source: MartinJenkins

The overall process can be likened to a funnel – initially, we gathered information to understand the West Coast region and created a long-list of opportunities and challenges facing the region. Each subsequent phase focused on testing and refining that long-list to identify the most significant opportunities. Each phase of the study involved consultation with businesses, local government, central government and stakeholder organisations.

The process was overseen by a Governance Group comprising representatives from key sectors, iwi, local government and central government. A support crew, comprising central and local government representatives, provided advice and access to people and information throughout the process.

Each of the phases is described in more detail in Table 3.



Table 3. Details of our process for the West Coast Regional Growth Study

Phase	What we did
<p>Research and reconnaissance</p>	<p>We held initial meetings with representatives from each of the councils in the region, key government agencies and the Governance Group. This helped us to identify major issues, opportunities and projects as well as drivers of growth. This also provided us with a perspective on the position and expectations of key influencers.</p> <p>At the same time, we reviewed all available data and research on the economy. This included analysing key indicators of prosperity and underlying drivers for the West Coast region (e.g., GDP, GDP per capita, population, employment, productivity) to understand the broad challenges the region was facing. We also analysed sector value chains to identify sectors currently driving or likely to drive future growth, where there are underlying or emerging strengths, and which are the best candidates for further work. Finally, we reviewed research on Business Growth Agenda themes as they applied to the West Coast, including skills and education, infrastructure and connectivity, and natural resources. This review enabled us to identify major cross-cutting issues or opportunities.</p> <p>In reviewing the data and research, we drew on over 150 studies and research reports, including existing economic strategies in the region, local government annual and long-term plans, industry strategies and research reports.</p> <p>The third part of the reconnaissance phase involved three district workshops. Workshops were held in Westport, Hokitika and Greymouth, involving a cross-section of stakeholders and sectors (around 80 people attended the three workshops). The purpose of the workshops was to:</p> <ul style="list-style-type: none"> • communicate the purpose and process for the study and action plan • gather a wide-range of perspectives from each community on the major economic and sector development opportunities and challenges facing the region • identify where further testing, exploration and consultation is required. <p>The bulk of the workshop time was spent on gauging participant feedback on three sets of questions:</p> <ul style="list-style-type: none"> • How do you see the West Coast economy changing over the next 10 years? • What are the key opportunities for growing jobs and incomes in the region and district? • What major constraints does the region face in growing incomes and jobs? How might they be overcome?
<p>Key informant and stakeholder interviews</p>	<p>This phase involved a combination of meetings and workshops to find out more about the issues, opportunities and initiatives identified in phase 1, and to uncover any further issues, opportunities and initiatives not previously identified. Around 40 meetings/workshops were held with representatives from business, education, local government and community groups.</p>
<p>Shortlisting opportunities</p>	<p>We then assessed the long-list to identify a shorter set of potential opportunities to test further. This included analysing and synthesising the findings, assessing opportunity areas against key criteria, and testing the opportunities and our assessment with the Governance Group.</p>



Phase	What we did
Validation of short-listed opportunities	This phase involved a final round of consultation and interviews. These helped us to confirm the validity of the shorter list of opportunities, provide estimates of the benefits associated with each, and to sketch out next steps on elements such as resources, stakeholders and key implementation tasks. This round of testing involved meetings with and feedback from industry representatives, relevant central and local government representatives, stakeholder groups and the Governance Group. Around 25 additional meetings and teleconferences were held.
Study report	Finally, we integrated all of the research and analysis into drafts of the study report. We detailed where the region's significant future economic opportunities lie and which proposals will allow the region to realise those opportunities. Government, local government, support group and Governance Group representatives provided peer review and input into the drafts.

Our criteria for assessing potential proposals

During the research and consultation, we identified a long-list of sector-based and cross-cutting opportunities and challenges. We identified a range of proposals to enable the region to take-up those opportunities or to overcome the challenges. We assessed each of the proposals against the criteria in Table 4.

Table 4. Criteria for assessing proposals

Assessment Criteria	Questions for consideration	Assessment rating
Validity	Will the proposal overcome clear problems impacting on sector performance or enable sector/s to take up opportunities for growth that would not otherwise be the case (or enable opportunities to be taken up faster or better)? Is there clear evidence about the problem/opportunity or reasonably well-researched or worked-up proposals?	Low: based on conjecture and limited evidence. Medium: based on what appears to be a clear issue or opportunity, but more evidence is needed (not yet definitive). High: based on systemic problems or opportunities and clear evidence.
Potential impact	To what extent will the proposal have a sizable impact on the economy, i.e., will it improve productivity, incomes and jobs (given the focus of the study) and have flow-on impacts to the wider economy (e.g., skills development, market connections, reputational effects)?	Low: expected <\$5m in value add over 10 years and/or <50 jobs; limited wider economic benefits; or impacts not really known. Medium: expected \$5m-\$25m in value add over 10 years and/or 50-250 jobs; some wider economic benefits. High: expected >\$25m in value add over 10 years and/or >250 jobs; significant broader economic benefits.
Practicality and manageability	Is the proposal realistic and able to be implemented?	Low: likely to be difficult to implement. Medium: somewhat complex to implement but achievable. High: relatively easy to implement.



Assessment Criteria	Questions for consideration	Assessment rating
Regional significance	Is the proposal important to and/or likely to benefit a broad cross-section of the region (e.g., multiple locations, districts or communities of interest)?	<p>Low: specific to one district, location or community of interest; limited if any impact on other parts of the region.</p> <p>Medium: impacts on a few locations or communities of interest.</p> <p>High: will impact on the larger region; or impact across several locations and communities of interest.</p>
International orientation	Does the proposal have the potential to increase export earnings, overseas investment and/or attract international skills?	<p>Low: limited impact on foreign direct investment, overseas skills attraction and/or exports.</p> <p>Medium: some impact on foreign direct investment, overseas skills attraction and/or exports.</p> <p>High: directly attracts foreign investment and/or overseas skills and/or creates exports.</p>
Ability to draw on local and regional priorities and investment	Does the proposal build on previous or current work and investments and hence will be able to draw on local resources?	<p>Low: is a new project to the region; has not been scoped.</p> <p>Medium: some existing work, e.g. scoping or research undertaken; is related to a priority in a local or regional strategy or plan.</p> <p>High: a range of research, scoping, market assessment etc. has been undertaken; is consistent with a priority in a local or regional strategy or plan.</p>
Consistency with national priorities	To what extent is the proposal consistent with existing strategic priorities of central government such as those delivered under the Business Growth Agenda (and hence to what extent will it be able to draw on central government resources)?	<p>Low: not related to a priority.</p> <p>Medium: indirectly related to one or more priorities.</p> <p>High: directly related to one or more priorities.</p>

Depending on the level of information available, our assessment often reflected judgement and background from related or similar proposals we were aware of in other areas of New Zealand. In many cases, specific information about the potential benefits, costs and reach of a proposal was not available.

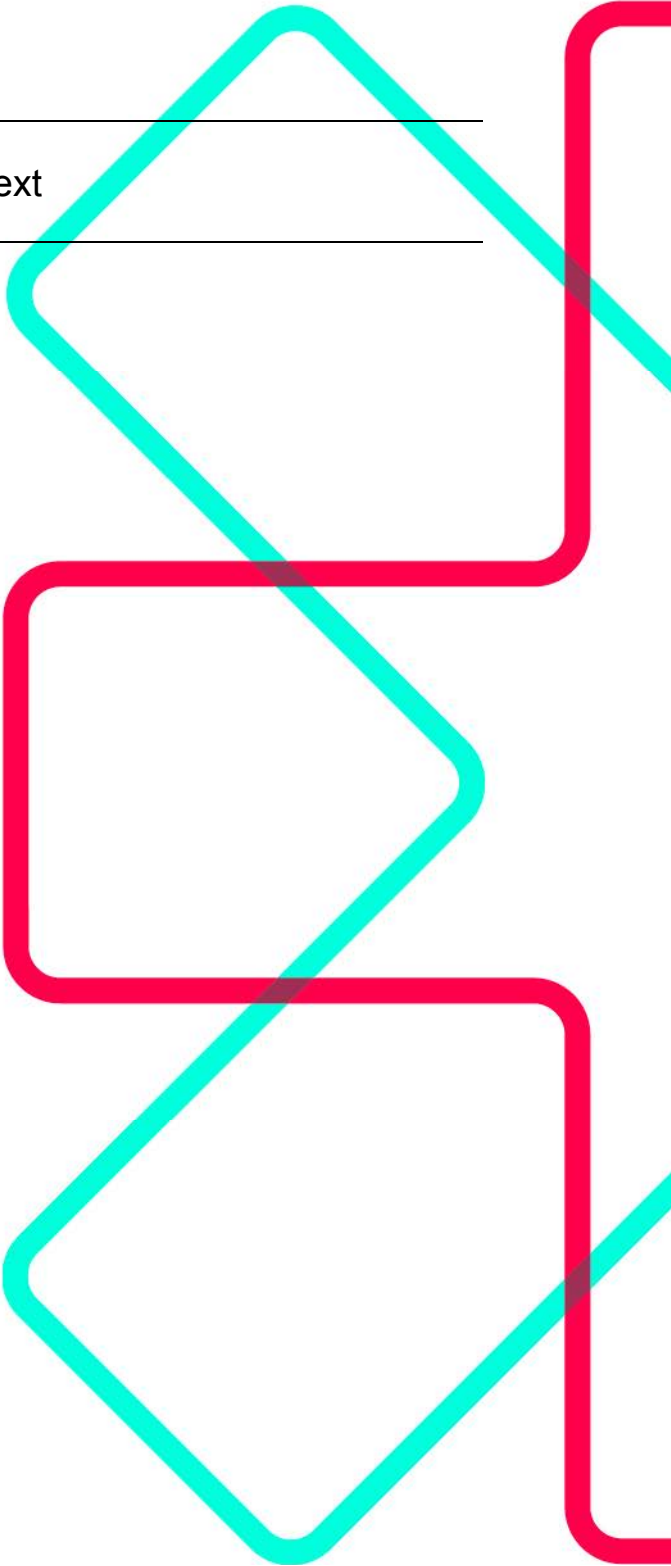
Based on our assessment we identified a list of what we regarded as the highest-rating proposals. Our assessment was then considered and debated by the Governance Group, who used their local and sector expertise to identify a shorter list of the highest-priority proposals for the region.

The assessment of each opportunity area and related proposal is provided in *Section 4* and *Section 5* of this report.



SECTION THREE

Tai Pounamu West Coast – Economic Context



ECONOMIC CONTEXT

Introduction

This section presents an overview of the regional economy and summarises historical trends. A more detailed review of economic indicators is provided in *Evidence Report 1 – Economy*, which is available online.

The West Coast makes up less than 1 percent of the New Zealand economy. In 2015, GDP was \$1.87 billion² and there were close to 17,000 filled jobs in the region. The population was estimated at 32,700.

Over the last 5 years, the West Coast economy has been going through significant structural change, brought about by an extended period of low commodity prices and an upturn in international visitors.

GDP in the Tai Poutini West Coast

The region's gross domestic product (GDP) is currently heavily concentrated in just a few sectors. (Figure 3). Minerals accounts for 27 percent of GDP, followed by dairy, at 18 percent, then construction and related services (11 percent). These three sectors account for 56 percent of the region's GDP.

Figure 3. GDP by sector, West Coast, 2015



Source: Infometrics regional database

² In 2010 dollars.



The West Coast has performed well over the long-term on the back of these sectors and experienced relatively high growth over 2000–2012 and, unlike the rest of New Zealand, appeared unaffected by the global financial crisis (Figure 4).

Figure 4. GDP growth, West Coast and New Zealand, 2000–2015



Source: Infometrics regional database
 Note: Indexed, real GDP growth.

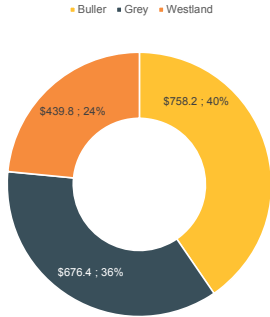
However, the reliance on a few sectors makes the economy vulnerable to economic shocks, for example, the impact of lower international coal, gold and dairy prices over the last 3 years. This has resulted in lower rates of GDP and employment growth, with flow-through effects on the population.

Buller has been hit hardest by the contraction in minerals activity, while Grey – as the main service centre - has been hit by reduced activity in both the minerals and dairy sectors. Although Westland has been affected by the contraction in dairy, growth in tourism has offset this.

Despite the downturn in the minerals sector, Buller still makes the most significant contribution to GDP in the region, at around 40 percent, followed by Grey (36 percent) and Westland (24 percent) (Figure 5).

The shares are different for employment, where Grey accounts for 45 percent of filled jobs, followed by Buller (29 percent) and Westland (27 percent).

Figure 5. GDP by West Coast district, 2015



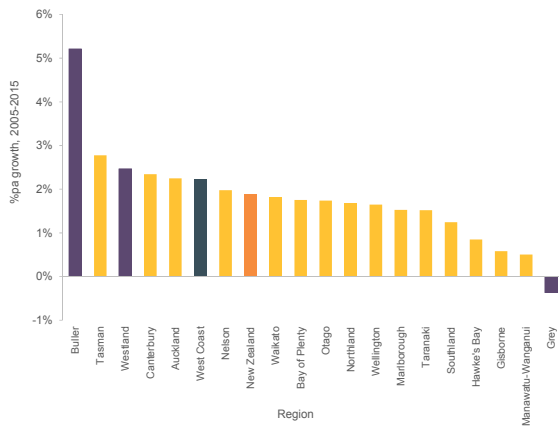
Source: Infometrics regional database
 Note: 2010 prices, \$m



In real terms, the region's GDP increased by 2.2 percent per year over the last decade, compared with 1.9 percent nationally (Figure 6). However, GDP growth in the region has slowed significantly over the last 5 years as a result of lower coal, gold and dairy prices, to 0.2 percent per year. This is in contrast to the New Zealand economy, which grew by 2.5 percent per year.

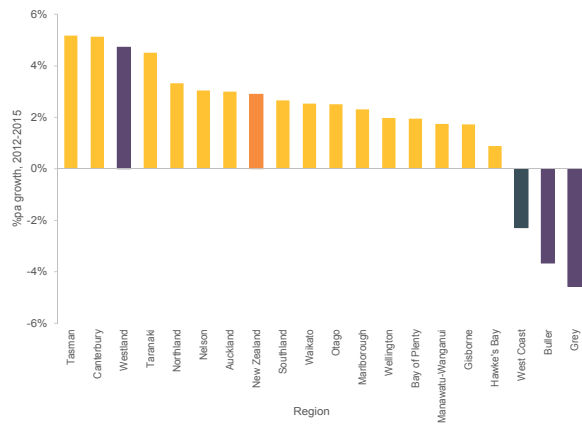
Over the last 3 years, GDP declined by 2.3 percent per year, whereas the New Zealand economy has been growing by 2.9 percent per year (Figure 7).

Figure 6. GDP growth, 2005–2015



Source: Infometrics regional database
Note: Real GDP growth in 2010 prices

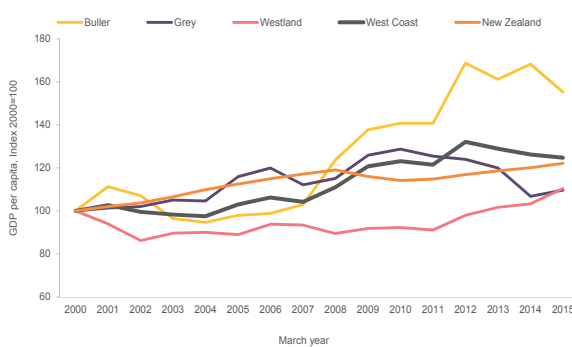
Figure 7. GDP growth, 2012–2015



Source: Infometrics regional database
Note: Real GDP growth in 2010 prices

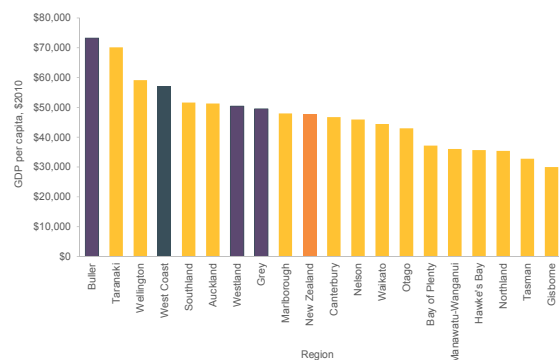
GDP per capita in the region has followed a similar trend. It grew very strongly on average over 2005–2015, at 1.9 percent per year (compared with 0.8 percent per year nationally). It grew at a much slower rate over the last 5 years at 0.3 percent per year (Figure 8). In 2015, real GDP per capita on the West Coast was \$57,300, higher than nationally (\$47,800) (Figure 9).

Figure 8. GDP per capita, by region, 2015



Source: Infometrics regional database; Statistics New Zealand subnational population estimates
Note: Indexed

Figure 9. GDP per capita growth, 2000–2015



Source: Infometrics regional database and Statistics New Zealand subnational population estimates



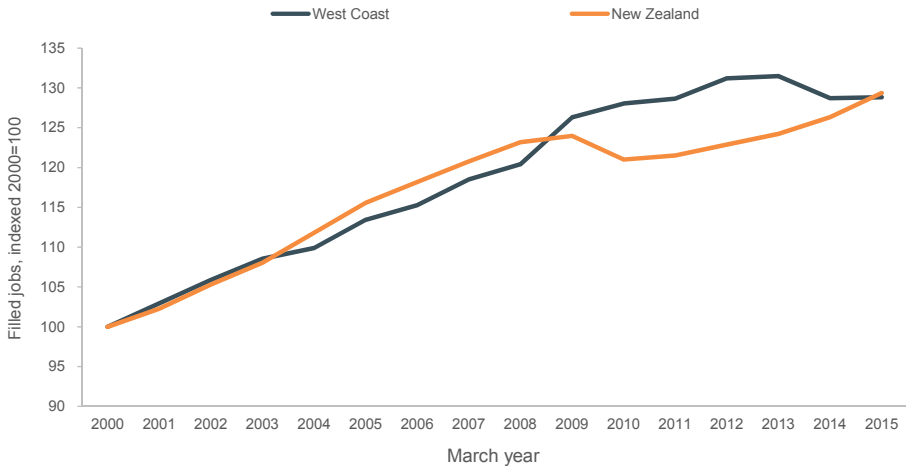
The three West Coast districts have performed very differently. Westland’s GDP has grown at the fastest rate over the last 5 years (3.9 percent per year) and even faster over the last 3 years (4.7 percent per year) reflecting its strong visitor focus. Buller’s GDP growth has been more moderate (2.0 percent per year), although this captured the tail end of the mining expansion. Over the last 3 years, GDP in Buller has declined by 3.7 percent per year. GDP in Grey has also declined, by 4.6 percent per year in the last 3 years.

Employment and productivity in Tai Poutini West Coast

Employment

Employment on the West Coast grew at a slightly higher rate than nationally over the last decade (1.3 percent per year compared with 1.1 percent per year). However, employment grew by just 0.1 percent per year over the last 5 years, which is much lower than the 1.3 percent growth per year experienced in New Zealand as a whole (Figure 10).

Figure 10. Filled jobs growth, West Coast and New Zealand, 2000–2015

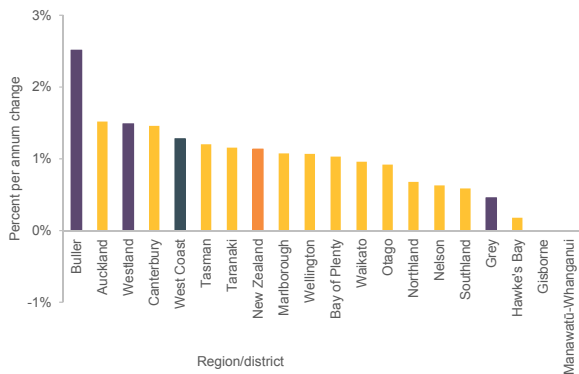


Source: Infometrics regional database
 Note: Indexed

Over the last 3 years, employment has declined by 0.6 percent per year (Figure 12). As with GDP, Westland saw employment increase over the 10-, 5- and 3-year periods. Both Grey and Buller saw employment decline over the last 5- and 3-year periods.

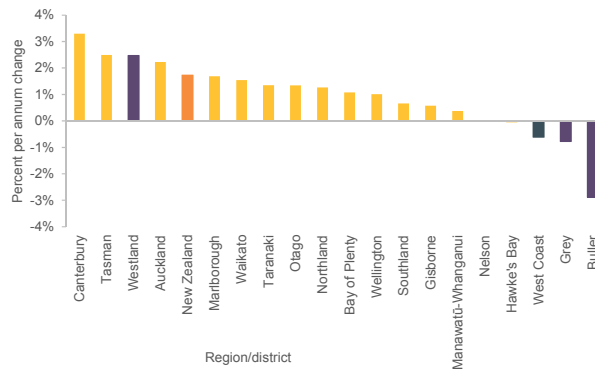


Figure 11. Filled jobs by region and district, change 2005–2015



Source: Infometrics regional database

Figure 12. Filled jobs by region and district, change 2012–2015

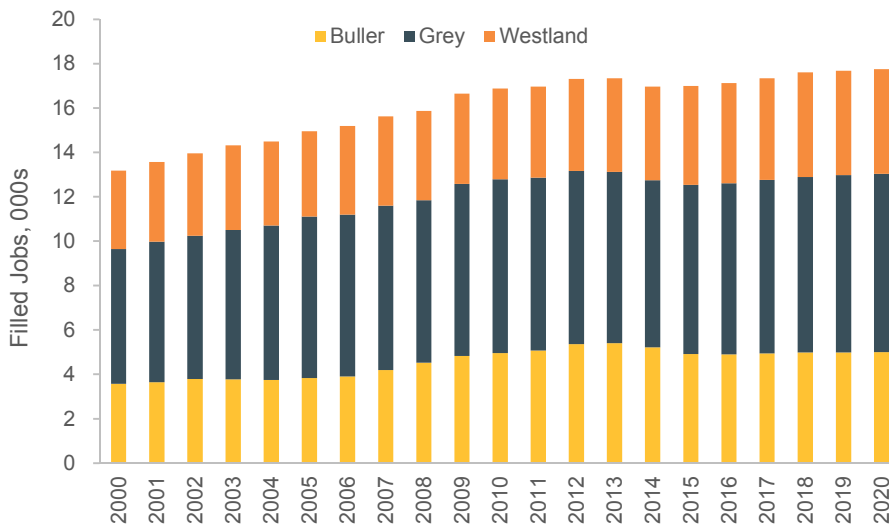


Source: Infometrics regional database

Projected employment growth

Employment on the West Coast is projected to grow by 0.9 percent per year over the 5 years to 2020, slower than the 1.5 percent projected nationally. Employment in Grey and Westland is projected to grow by more than 1 percent per year, whereas employment in Buller is expected to be relatively static, growing by only 0.3 percent per year over the 5 years to 2020 (Figure 13).

Figure 13. Employment by West Coast district, historical and forecast, 2000–2020



Source: Infometrics regional database
 Note: Shaded area is forecast

This forecast is not particularly positive, emphasising why it is important that opportunities for growth are identified and pursued.



Participation and employment rates

As shown in Table 5, the region's rate of labour force participation declined between 2007 and 2015 (from 75 percent to 66.2 percent). The employment rate also fell over the period (from 73.1 percent to 65.4 percent). Both are now around New Zealand's levels (68.7 percent for labour force participation and 64.5 percent for employment).

Table 5. Key labour market data for the West Coast region, 2007, 2014 and 2015

Indicator	West Coast			New Zealand		
	2007	2014	2015	2007	2014	2015
Persons employed in labour force	16,800	17,670	18,360	2,231,700	2,356,300	2,425,200
Participation rate, annual average	75%	69%	66.2%	68.0%	68.0%	68.7%
Employment rate, annual average	73.1%	65.9%	65.4%	65.3%	63.4%	64.5%

Source: MBIE, Regional Activity Statistics

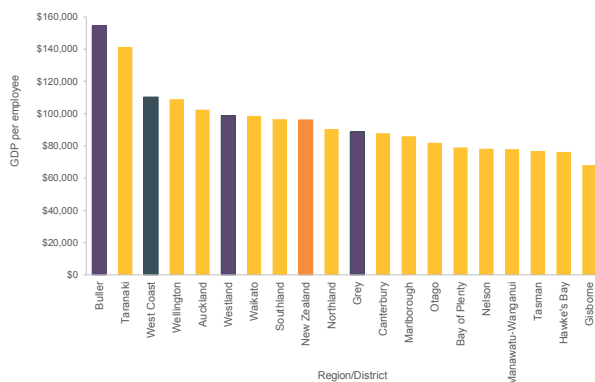
The decline in activity in the minerals sector has resulted in an increase in the number of job seekers in Buller relative to the working-age population, from 5.7 percent in December 2013, to 7.2 percent in December 2015. In December 2015, the West Coast's number of job seekers as a proportion of the population was above the national average (5.1 percent compared with 4.1 percent nationally). The proportion of job seekers in Westland was relatively low (3.1 percent).

Labour productivity

The region's estimated labour productivity is much higher than New Zealand's (\$110,350 compared with \$95,951 in 2015, as shown in Figure 14). This is largely due to the scale of the highly productive minerals sector. Because of the high productivity per filled job in that sector, labour productivity for the region is expected to rise or fall on the fortunes of minerals.

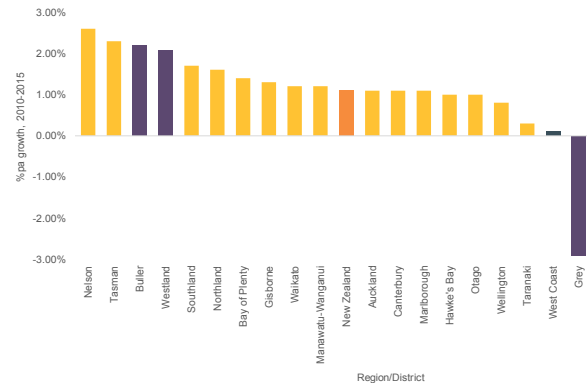
Productivity growth was similar to the New Zealand average over 2005–2015, although productivity growth over 2010–2015 was at the lower end of all the regions (Figure 15).

Figure 14. GDP per employee, 2015 (\$2010)



Source: Infometrics regional database

Figure 15. GDP per employee, change 2010–2015



Source: Infometrics regional database



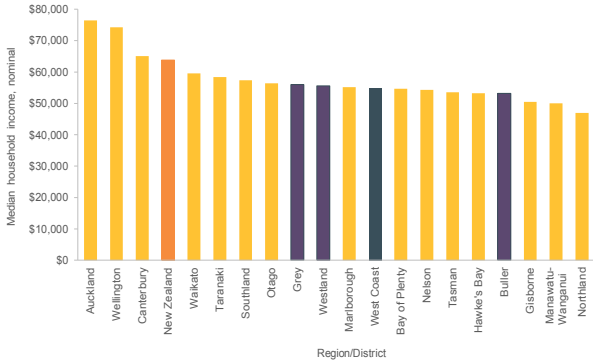
Incomes and wellbeing in the Tai Poutini West Coast

Incomes

The West Coast is performing below national averages on some indicators of prosperity. Annual median household income in 2013 was \$55,000 on the West Coast, well below the \$63,800 nationally. It was also below several comparator regions (Figure 16).

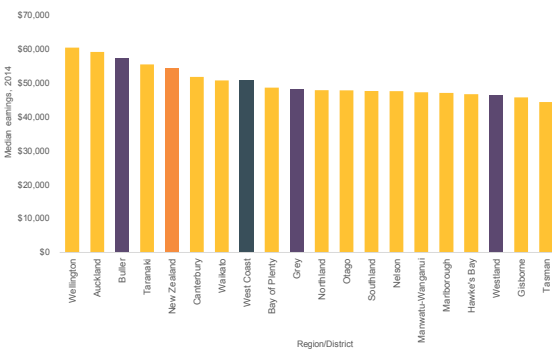
Mean annual earnings on the West Coast in 2014 was also lower than for New Zealand (\$50,700 compared with \$54,300), but was towards the middle of New Zealand regions (Figure 17). Mean earnings in Buller in 2014 was at that time relatively high (\$57,200), but in Westland was relatively low (\$46,500).

Figure 16. Median annual household income by region and West Coast district, 2013



Source: Statistics New Zealand, Census 2013

Figure 17. Mean annual personal earnings by region and West Coast district, 2014



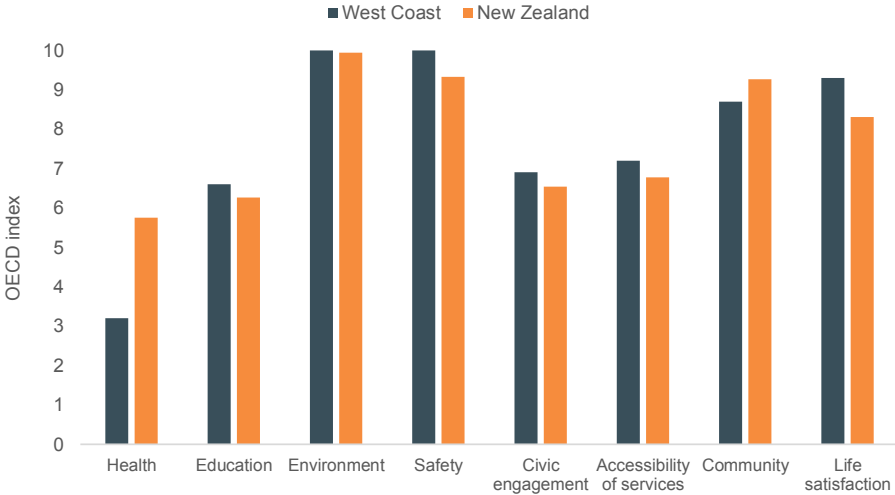
Source: Infometrics regional database

Wellbeing

The West Coast performs well on several measures of wellbeing. Based on the OECD regional wellbeing indicators, the region ranks higher than the New Zealand average on measures related to education, environment, safety and life satisfaction. However, the region ranks lower on measures of health (life expectancy, mortality rate) and community (proportion of people with friends and relatives to rely on in case of need) (Figure 18).



Figure 18. OECD wellbeing indicators, West Coast and New Zealand

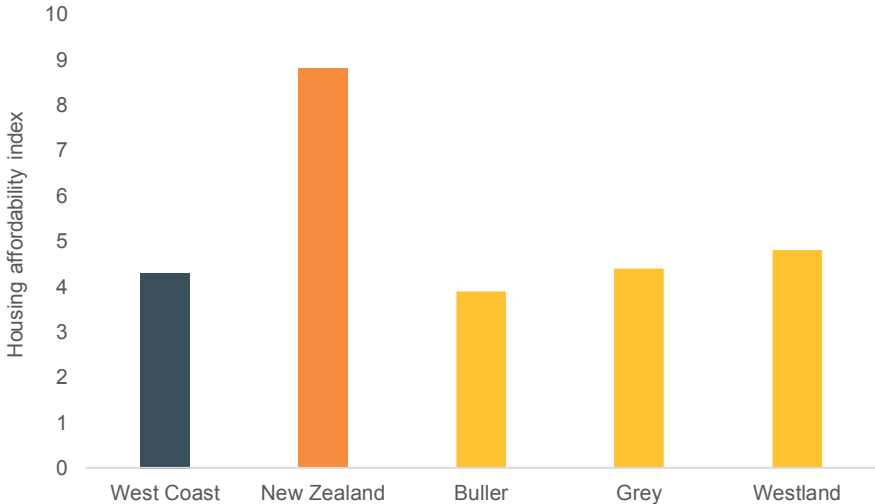


Source: MartinJenkins using data from OECD, 2016

Housing affordability

Housing on the West Coast is very affordable. In 2014, it took just over four times the average earnings level to buy a house at the average price on the West Coast. This was much more affordable than in New Zealand as a whole, where the average house price was nearly nine times average earnings (Figure 19).

Figure 19. Housing affordability index, 2014



Source: Infometrics regional database.
 Note: Housing affordability index is calculated by dividing average house prices by average annual earnings.



The West Coast is also more affordable in terms of rentals than New Zealand as a whole, although the gap is not as large. In 2014, the average rental in the region was a quarter of average weekly earnings, compared with a third of average weekly earnings across New Zealand.

Population in Tai Poutini West Coast

Population

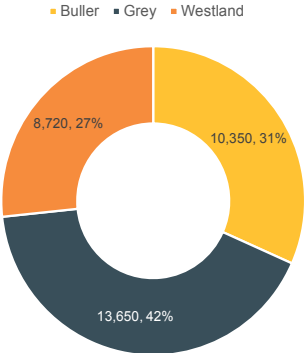
As at June 2015, the West Coast population was estimated at 32,700.

The West Coast population contributes about 0.7 percent of the total New Zealand population.

The region's population was relatively well spread across the three districts.

The largest district in the region was Grey, with an estimated population of 13,650 (42 percent of the region's population), followed by Buller with an estimated population of 10,350 (31 percent). Westland had the smallest population, estimated at 8,720 (27 percent).

Figure 20. Population by West Coast district, 2015



Source: Statistics New Zealand, Subnational population estimates
Note: June year 2015

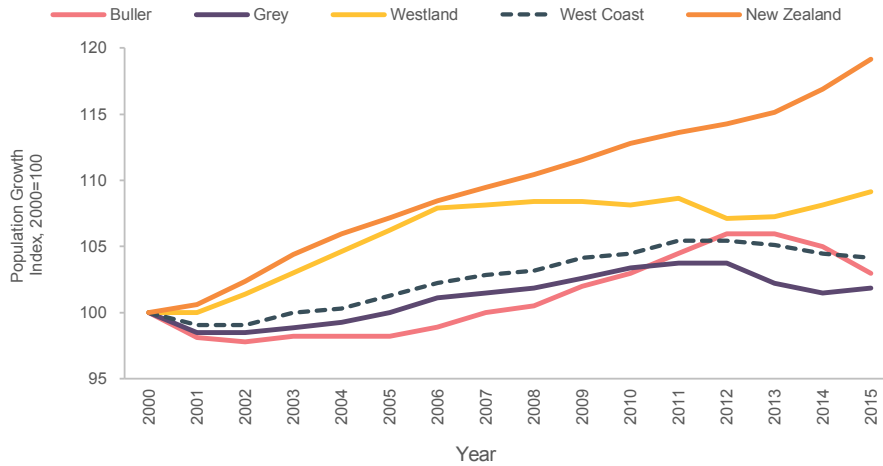
Population change

The West Coast population grew at half the national rate between 2006 and 2013 (0.37 percent per year compared to 0.74 percent per year) and was lower than many other regions. The population in Buller grew strongly over that period (1.1 percent per year) while the population in Grey grew very slowly (0.16 percent per year). Westland experienced a decline in population (-0.16 percent per year) (Figure 21).

All of the West Coast's population growth over the 7 years has been due to natural increase (more people being born than dying), with a net migration outflow (more people leaving than coming) over the same period.



Figure 21. Population change, West Coast districts and New Zealand, 2000–2015



Source: Statistics New Zealand, subnational population estimates
 Note: Indexed, 2000 = 100

Between 2013 and 2015, the West Coast population is estimated to have declined by 390 people. At a district level, Westland’s population is estimated to have grown, while the population in Buller and Grey is estimated to have declined.

Population projections

The population on the West Coast is expected to remain relatively static over the next 20 years (projected at around 0.02 percent per year) whereas New Zealand’s population is expected to grow by 0.9 percent per year). The projections suggest slight declines in the populations of Grey (-0.1 percent per year) and Westland (-0.03 percent per year), and limited growth in Buller (0.2 percent per year) (Figure 22).

Figure 22. Population projections to 2043, West Coast region and districts

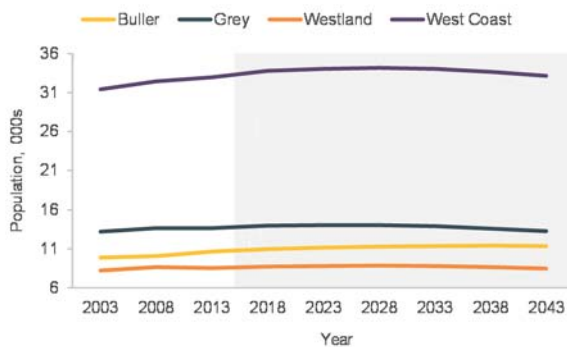
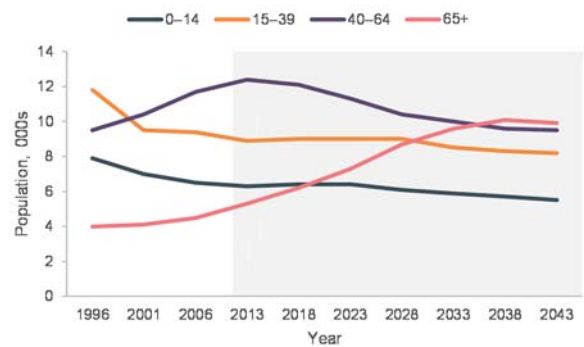


Figure 23. Population projections to 2043 by age group, West Coast



Source: Statistics New Zealand, subnational population projections 1996-2043 (2013-base) medium projection
 Note: Shaded area is projected change



Compared with the rest of New Zealand, the West Coast has a greater proportion of people in older age brackets (over 65). It also has a lower proportion of people in younger age brackets (0–19 years) and prime working and childbearing age brackets (20–39 years). This has labour market implications. Higher proportions of people are likely to leave the labour market as they reach retirement age, and the working-age population will hollow out as youth leave the region.

Population projections show the potential decline in the younger and working age groups (down 2,000 people by 2043), and a large expected increase in the population aged over 65 (up 4,650 people by 2043) (Figure 23). This will also result in higher demand for health and social services.

Ethnicity

The West Coast is not very ethnically diverse, with European and Māori being the two main ethnicities. A much higher proportion of the West Coast population identify themselves as European than nationally (84 percent compared with 67 percent) and a smaller proportion identify themselves as Māori, Asian or Pasifika (Figure 24 and Figure 25). Similarly, a much smaller proportion of the population were born overseas (11 percent) than across New Zealand as a whole (25 percent). This may limit the international connections of the region and its ability to attract a more diverse population.

Figure 24. Ethnic population on the West Coast, 2013

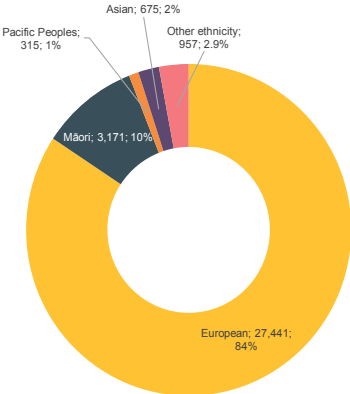
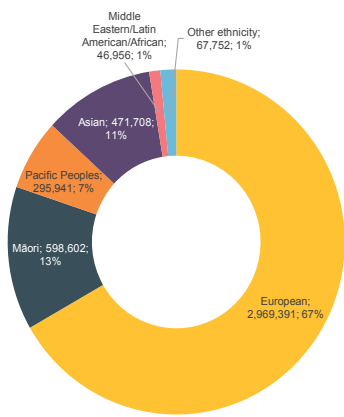


Figure 25. Ethnic population in New Zealand, 2013



Source: Statistics New Zealand, Census 2013
 Note: Other includes “New Zealander”

Māori

The Māori population as a share of total population is increasing. In 2001, Māori accounted for 8.7 percent of the West Coast population. This increased to 9.7 percent in 2006. In 2013, around 10 percent of people in the region identified themselves as Māori, compared with 15 percent nationally.

The majority of Māori in the region are of Ngāi Tahu descent. Of those who identified themselves as Māori on the West Coast in Census 2013, 54 percent indicated they were affiliated with Ngāi Tahu, 19 percent with Ngāpuhi and 13 percent with Ngāti Porou. There are two Ngāi Tahu Papatipu Rūnanga on the West Coast – Ngāti Waewae and Makaawhio.



According to the Infometrics regional database there are 506 Māori employed on the West Coast. Close to half of Māori employed are in the Westland district (231). A further 40 percent are employed in Grey (196), with the remaining 15 percent (79) employed in Buller. In Census 2013, a higher proportion of Māori in West Coast iwi were employed and in the labour force compared to Māori in iwi across New Zealand.

The majority of Māori are employed in the key West Coast sectors of minerals (mining), tourism (accommodation and food services), agriculture, forestry and fishing, as well as manufacturing.

The most common occupations in which Māori are employed across the three districts are plant operators, factory process workers and labourers. In relation to higher-skilled occupations, the key occupations for Māori are specialist managers, health professionals and education professionals.



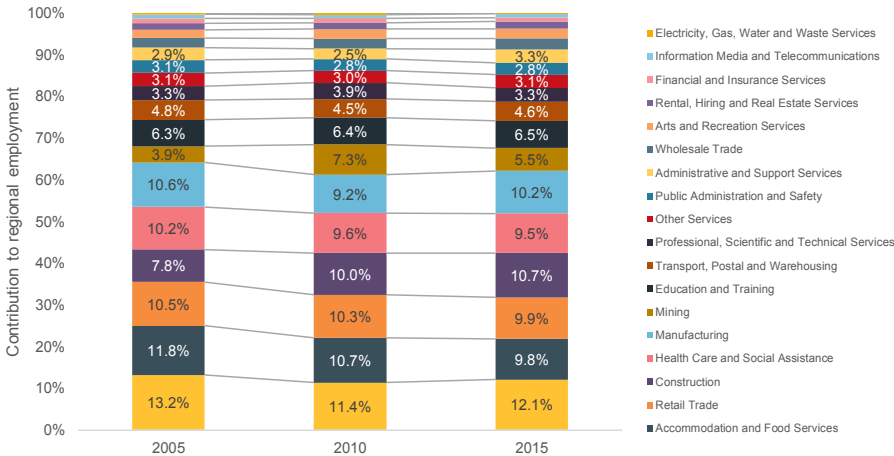
KEY SECTORS IN TAI POUTINI WEST COAST

A region’s economic performance is underpinned by major sectors that the region has an advantage in. These sectors can usually be identified by their absolute and relative share of economic activity, both within the region and against other regions. Productivity, and therefore incomes, in a region are linked to concentrations of activity, where similar businesses share knowledge and innovation and pools of specialist labour. These specialist areas help to attract further investment and labour.

At the same time, a resilient economy needs to maintain some industrial diversity. The more diverse the region’s economy, the more scope there is for varied interactions between firms and innovation. Diversity also provides a broader economic base to protect against economic shocks.

The composition of sectors on the West Coast has altered over the last decade and particularly over the last 5 years (Figure 26). Many of the largest industries – agriculture, forestry and fishing; accommodation and food services; retail trade; and health care – contributed a smaller proportion of jobs in 2015 than they did in 2005. Construction contributed a higher proportion of jobs in 2015 than it did in 2005. The contribution of mining grew strongly between 2005 and 2010 and then contracted between 2010 and 2015.

Figure 26. Employment contribution of industries to West Coast economy, 2005, 2010, 2015

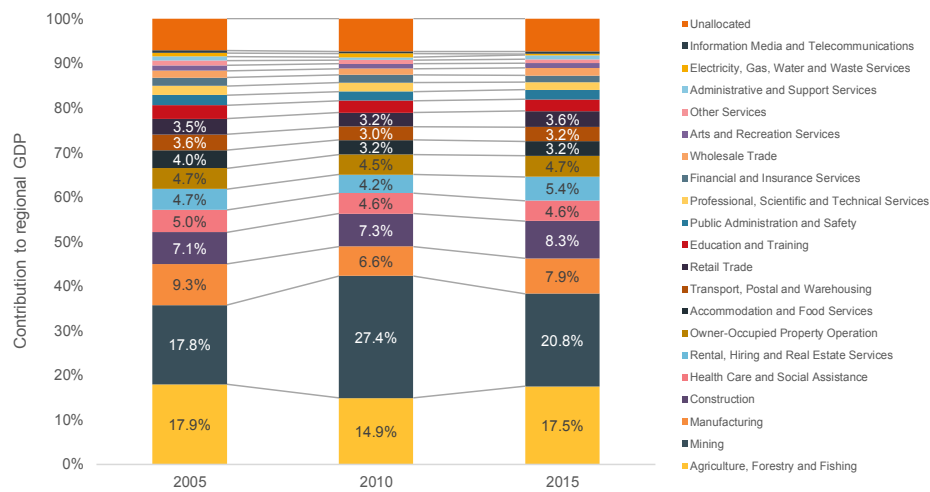


Source: Infometrics regional database.

In terms of GDP, manufacturing represented a slightly smaller proportion of the economy in 2015 than it did in 2005. Mining represented a much smaller proportion of the economy in 2015 than it did in 2010 (Figure 27). The construction industry and the rental, hiring and real estate services industry both contributed a slightly higher proportion of GDP in 2015 than they did in 2005.



Figure 27. GDP contribution of industries, 2005, 2010, 2015



Source: Infometrics regional database.

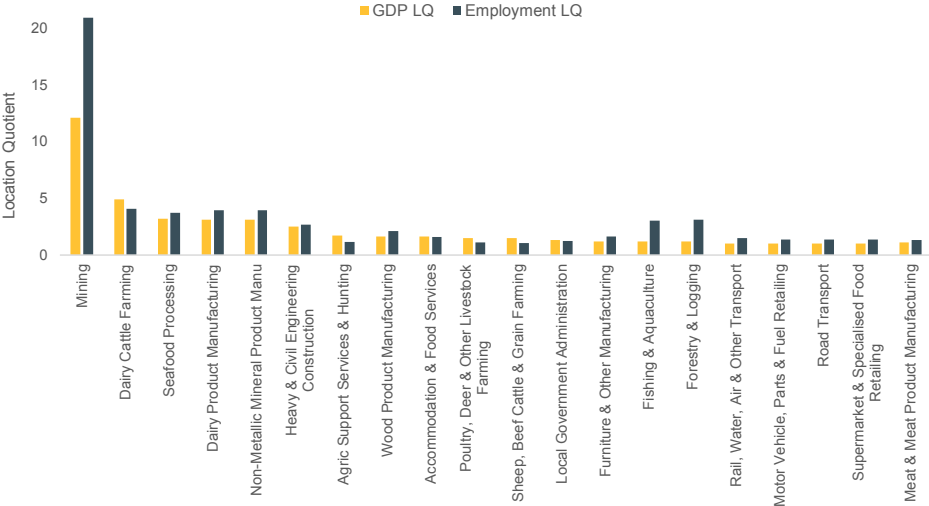
The West Coast has comparative advantages in several sectors. The following industries are particularly over-represented³ on the West Coast relative to New Zealand (Figure 28).

- Mining
- Dairy cattle farming
- Seafood processing
- Dairy product manufacturing
- Non-metallic mineral product manufacturing
- Heavy and civil engineering construction
- Wood product manufacturing
- Accommodation and food services
- Furniture and other manufacturing
- Fishing and aquaculture
- Forestry and logging.

³ Employment and GDP location quotients over 1.2



Figure 28. GDP and employment location quotients, by West Coast sector, 2015



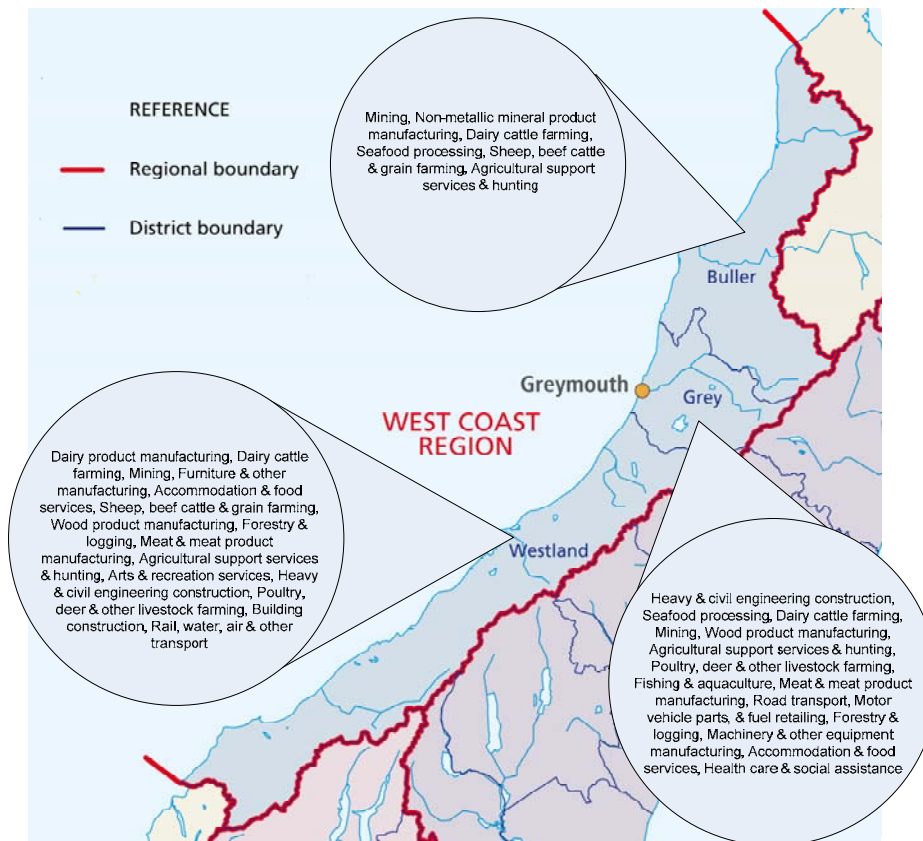
Source: Infometrics regional database.
 Note: Sectors shown are those with GDP and employment location quotients greater than one.

The West Coast's various industries are not distributed evenly across the three districts. Figure 29 shows the top ranked industries by GDP location quotient (over 1.2) for Buller, Grey and Westland:

- Buller has advantages in mining; non-metallic mineral product manufacturing; dairy cattle farming; seafood processing; sheep, beef and graining farming; and agricultural support services.
- In addition to key primary industries, Grey has advantages in a larger range of service and manufacturing industries, including heavy and civil engineering construction; seafood processing; agricultural support services; road transport; motor vehicle parts and fuel retailing; forestry and logging; machinery and equipment manufacturing; accommodation and food services; and health care and social assistance.
- Westland has advantages in dairy and dairy product manufacturing; mining; wood product and furniture manufacturing; accommodation and food services; meat and meat product manufacturing; arts and recreation services; construction; and transport.



Figure 29. Industry concentration in West Coast districts



Source: Map from www.lgnz.govt.nz. Industry specialisations from MartinJenkins

Determining key sectors in Tai Poutini West Coast

An important part of the study was to define and identify sectors that have the greatest potential for growth on the West Coast. These will be the sectors that support job and income growth in the future.

How we defined a ‘key sector’

We use the terms:

- ‘sector’ to refer to large groupings of common production activities
- ‘industry’ to refer to specific segments of activity within sectors.

The Australia New Zealand Standard Industrial Classification (ANZSIC) lists 19 separate sectors at the most aggregated (combined) level (there are 504 separate industries at their most disaggregated, or separated, level). However, in several cases, these 19 industries are not consistent with value chains, especially in agriculture and manufacturing.



Our first step in defining sectors for the West Coast was to review the focus of research in previous regional economic strategies and industry research in the region. We used this research to group the 504 ANZSIC level 4 industry classifications into 22 sector value-chains. In selecting industries to include in value chains we considered both:

- a industry scale and growth in the region
- b common sets of activities (i.e., whether the industries contribute to the delivery of similar sets of products).

We also refined the sector value-chain definitions to reflect those used nationally or in other regions to allow for comparisons.

Sector value-chains were defined by the core production activity and immediate downstream processing or service activities. So, for example, dairy and related processing includes dairy farming, dairy product processing industries and dairy support services.

We didn't consider upstream inputs and more distant downstream services, as an endless number of industries could contribute inputs and services to each sector value-chain. For example, for the dairy and related processing value-chain, we could have included industries within minerals (e.g., fertiliser); machinery and equipment; materials; transport equipment; ICT; business and professional services (e.g. farm consulting); freight and logistics; energy, water and waste.

In some cases, we considered new groupings of industries in a sector, reflecting the underlying groups of capabilities in the region associated with those sectors (e.g., metals, machinery and equipment manufacturing and services). In two cases, we grouped the remaining industries into 'other' sectors (e.g., other agriculture and other manufacturing).

A summary of the definitions for sector value-chains we arrived at is presented in Table 6. Details of the industries that make up the sectors are included in an online technical evidence report (*Evidence Base Report 2 – Key Sectors*).

Table 6. Summary of definitions for sector value-chains

Sectors	Definition
Dairy & related processing	Dairy cattle farming; milk and cream, ice cream, cheese manufacturing; part of agriculture support services.
Horticulture, food & beverage	Fruit and vegetable growing; eggs; beekeeping; fruit and vegetable processing; oil, preservative, cereal, pasta, bread, biscuit, sugar, confectionary, chips, soft drink, beer, wine, spirit manufacturing; sheep and beef farming, grain, poultry, deer and pig farming; meat processing; part of agriculture support services.
Forestry & wood processing	Forestry, logging, sawmilling, wood chipping, wood product manufacturing, pulp and paper manufacturing.
Aquaculture, fishing & related processing	Aquaculture, line fishing, trawling, seafood processing.
Other agriculture production & services	Nurseries, turf, floriculture, shearing.



Sectors	Definition
Metals, machinery & equipment manufacturing and services	Iron, steel, aluminium, other metals, tank and container, spring and wire, nut, bolt and screw, metal product manufacturing; Photographic, medical and surgical, white ware appliance, heating, cooling and ventilation, agriculture machinery, mining and construction machinery, machine tools and parts, lifting and handling equipment manufacturing, repair and maintenance; Tyre, motor vehicle, vehicle parts, aircraft, rail, interior manufacturing, repair and maintenance; shipbuilding and repair services.
Other manufacturing	Chemical manufacturing, pharmaceutical and medicine manufacturing, cosmetic and toiletry manufacturing, textile manufacturing, clothing and footwear manufacturing, polymer product manufacturing, paints and coatings.
Minerals & related processing	Oil and gas exploration, coal, iron ore, copper, gold ore, mineral sand, silver, other metal mining; quarrying, fertilizer manufacturing, glass, ceramic, brick, cement, concrete manufacturing.
Construction & related services	House, building, road, bridge, civil engineering construction; land development, bricklaying, plumbing, roofing, installation services, plastering, carpentry, tiling, carpeting, landscaping, hiring of construction machinery, architecture, surveying, engineering design services.
Health services & aged care	Hospitals, general practice services, specialist services, dental services, optometry services, physiotherapy services, chiropractic services, ambulance services, aged care residential services.
ICT & Creative	Publishing, recording, motion picture production, post production services, broadcasting, photographic services, museum operation, performing arts; electronic and communications equipment manufacturing, software, telecommunications, internet services, data processing, computer system design services; specialist design services.
Business, finance & professional services	Printing, research services, testing and analysis services, legal services, accounting services, advertising services, management advisory services, recruitment services, call centre operation, building cleaning services; banks, credit unions, life insurance, health insurance, superannuation, financial and investment services.
Property & real estate services	Property operators and real estate services.
Education	Primary, secondary, technical, vocational, sports and recreational, adult and community education.
Freight & logistics	Road and rail freight, air freight, water transport, postal services, customs services, freight forwarding, warehousing and wholesaling services.
Public transport	Interurban and rural bus transport, taxis, rail and water passenger transport.
Retail	Vehicle, furniture, floor, houseware, manchester, computer, electrical goods, hardware, fuel, supermarket, liquor, food, sport, toy, clothing, book, jewellery, cosmetic, stationery, flower, antique and other good retailing
Hospitality	Accommodation, cafes and restaurants, takeaway foods, pubs, bars and clubs.
Personal & recreational services	Libraries, museums, gardens, reserves, parks, performing arts, sport clubs and facilities, racing, amusement parks, gambling; Other rental and hiring services, funeral services, laundry services, child care services.
Government	Central and local government administration, defence, police, fire, correction and other public services.
Tourism	Proportions of accommodation, food services, passenger transport, scenic and sightseeing transport, travel agency services, vehicle rental, museum operation, gardens, parks and reserves, sport venues and facilities, amusement parks, casinos, retailing, education.
Energy, water & waste	Electricity generation and distribution, gas supply; water supply, sewerage, waste collection, waste treatment and disposal.



How we identified the key sectors on Tai Poutini West Coast

For the purpose of this study, we defined the key sectors as those value-chains that offer the greatest potential for output and employment growth on the West Coast. Consistent with previous regional growth studies, potential was determined based on three criteria:

1. **Competitive strengths** – the current or potential strength of the sector value-chain on the West Coast. We considered employment and value added (GDP) scale and growth, estimated productivity and growth and the concentration of the sector (based on location quotients).
2. **Market opportunities** – sector value-chains with large and growing demand for their products or services and hence potential for investment, talent and business attraction and development. We considered:
 - national growth (i.e., GDP and employment trends and forecasts of GDP and employment nationally) – this is particularly relevant for service-based sectors that are predominantly selling domestically (and hence growth suggests growing national demand).
 - export demand potential based on trends in regional export estimates and trends in the value of New Zealand’s exports worldwide.
3. **Broader impacts on the economy** – the extent to which the sector value-chain impacts on other industries and incomes. We assessed broader economic impacts by considering:
 - whether the sector has been identified as an important driver for the region or districts in previous research
 - sector earnings
 - forecast growth in employment.

These broader impact factors were only considered for sector value-chains that rated highly on competitive strength or market opportunities.

Table 7 provides a summary assessment of each sector value-chain against the range of competitive strength, market potential, and broader economic impact measures (green – highest ranking on the criteria, yellow – moderate ranking, red – low ranking).



Table 7. Competitive strength, market potential and broader impact ratings of sector value-chains, West Coast

Sector value chain	Competitive strength								Market Potential					Broader economic impacts			
	GDP rank	Empl rank	Labour productivity rank	GDP LQ	Empl LQ	GDP growth	Empl growth	Exports rank	Export growth	NZ GDP growth	NZ Empl growth	NZ Export growth	Identified previously as a key sector	Forecast Empl growth	Earnings	Earnings growth	
Other agriculture	22	22	6	0.7	0.5	4.4%	2.7%	18		-2.0%	-2.6%						
Food & beverage cultivation and processing	6	12	5	0.9	0.8	2.5%	1.3%	3	3.4%	0.1%	-0.2%	4.5%		-0.8%	45,935	3.7%	
Dairy & related processing	2	5	3	4.6	3.9	2.5%	1.9%	1	10.2%	2.4%	1.6%	9.8%	yes	-1.0%	49,281	4.2%	
Aquaculture, fishing & related processing	19	19	12	2.4	3.3	-0.5%	0.2%	6	5.9%	-2.1%	-1.5%	2.0%		-2.3%	51,984	3.1%	
Forestry & wood processing	15	15	8	1.2	1.9	-2.6%	-4.0%	4	8.9%	0.7%	-2.1%	5.3%		0.3%	55,645	3.2%	
Minerals & related processing	1	7	2	9.3	9.0	3.6%	4.1%	15	-4.4%	2.2%	1.1%	-4.1%	yes	-0.9%	79,895	4.7%	
Other manufacturing	20	20	13	0.2	0.3	1.8%	3.5%	10	6.7%	-1.2%	-3.5%	3.0%					
Business, finance & professional services	10	9	14	0.3	0.4	0.4%	1.6%	12	-4.1%	2.4%	1.5%	1.5%					
Creative & ICT	18	16	15	0.2	0.4	2.3%	1.4%	13	8.2%	3.8%	2.3%	4.9%		-0.3%	72,719	3.5%	
Metals, machinery & equipment manufacturing & services	16	13	16	0.5	0.7	0.4%	1.6%	9	5.3%	-1.2%	-0.3%	-2.1%					
Energy, water & waste	21	21	4	0.1	0.3	-8.8%	-3.0%	18		1.8%	4.2%						
Construction & related services	3	2	7	1.2	1.1	3.6%	4.3%	17	0.0%	3.1%	2.5%	4.0%	yes	1.9%	59,170	3.9%	
Freight & logistics	8	10	11	0.5	0.7	2.0%	1.3%	7	1.4%	1.2%	0.2%	3.6%	yes	0.6%	61,426	3.6%	
Retail	9	3	21	0.8	1.1	2.4%	0.7%	11	3.1%	2.7%	0.4%	4.9%					
Hospitality	11	4	22	1.6	1.6	0.1%	-0.6%	5	-2.1%	2.3%	1.5%	1.2%					
Public transport	17	17	10	0.8	1.2	1.1%	1.6%	18		2.5%	1.6%						
Personal & recreational services	13	11	17	0.6	0.9	-0.2%	0.2%	8	2.0%	1.0%	1.6%	2.3%	yes				
Government	14	14	9	0.5	0.6	1.8%	0.5%	16	9.9%	4.1%	3.2%	6.7%					
Education	12	8	20	0.6	0.8	1.0%	1.6%	14	-6.7%	0.2%	1.4%	-6.2%	yes	1.3%	54,565	2.9%	
Health & aged care	7	6	18	0.8	1.0	1.5%	0.7%	18		3.5%	2.5%		yes				
Property & real estate services	5	18	1	0.8	0.8	4.0%	3.1%	18		2.2%	0.1%						
Tourism	4	1	19	1.3	1.6	1.7%	0.4%	2	1.8%	1.7%	-0.1%	3.1%					

Source: MartinJenkins, based on Infometrics regional database

The 10 sector value-chains with the greatest potential in Tai Poutini West Coast

Based on our analysis and discussions with stakeholders, we identified 10 sector value-chains as having potential to drive income and employment growth on the West Coast. These sectors were categorised into two groups: key sectors and niche or emerging sectors.

Key sectors

These are sectors that ranked highly on several of the criteria. That is, they are of significant scale, are reasonably concentrated on the West Coast, have demonstrated growth in employment, have large flow-on impacts to other sectors, and have further potential for growth based on what is known about resource availability, national and/or offshore market demand. Key sectors are:

- tourism
- minerals and related processing
- dairy and related processing
- construction and related services
- health services and aged care.

Niche or emerging sectors

These are sectors that meet some of the criteria. For example, they may be currently small-scale but are concentrated in the region, they may have exhibited limited trend growth but are expected to grow more significantly in future. These sectors are:

- horticulture, food and beverage
- aquaculture, fishing and related processing
- forestry and wood processing
- creative and ICT
- education.

The 10 sectors were the focus for subsequent detailed research, analysis and consultation with stakeholders, which is shown in *Section 4*.

More detail industry and sector value-chain analysis is provided online in *Evidence Base Report 2 – Key Sectors*.



Cross-cutting opportunities

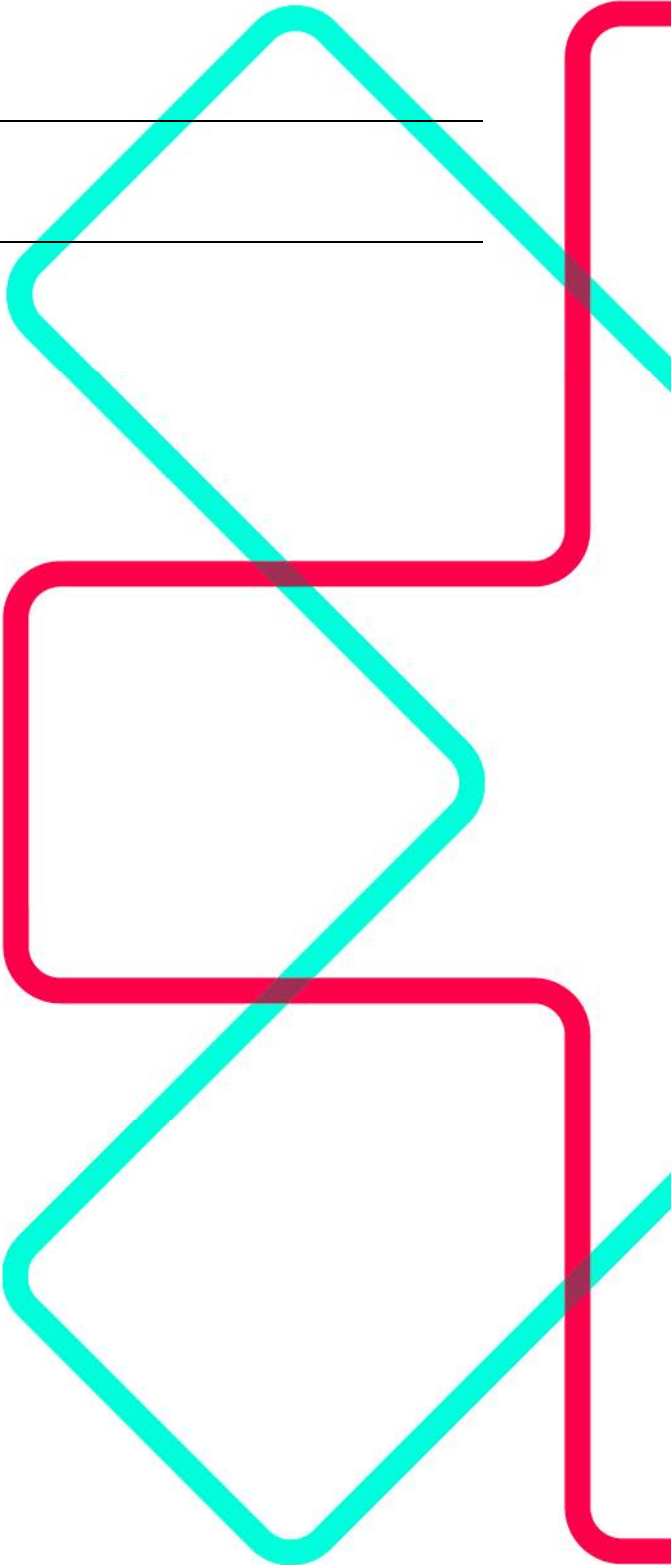
As well as the sector opportunities there were a range of opportunities that cut across sectors. These opportunities do not necessarily directly create jobs, but lift growth potential by enhancing the operating environment for business and enabling investment opportunities to be realised. With a wide range of industries and organisations potentially benefitting from these opportunities, public sector involvement is often required.

Cross-cutting opportunities covered in this study related to transport (particularly focused on roading), access to natural resources, telecommunications, energy, skills and talent and economic development arrangements. These are discussed in *Section 5*.



SECTION FOUR:

Sector Opportunities



TOURISM

Overview

Tourism is one of the largest and fastest growing sectors on the West Coast. In 2015, tourism accounted for over 2,000 jobs – 12 percent of the region’s jobs. The sector’s GDP grew by 2.2 percent annually over the last 5 years. Visitor expenditure grew by 3.1 percent per year over the last 5 years, reaching \$417 million in the year to May 2016.

Over the last 2 years, visitor expenditure grew by 7.2 percent per year. Guest nights in the region grew at 8.8 percent per year, the second fastest rate of growth in the country.

Growth is currently driven by international visitor spending in Westland. There has been relatively poor growth in domestic visitor spending in the region and visitor expenditure has declined in Buller over the medium-term.

The West Coast has excellent potential to sustainably grow the visitor economy with a large range of visitor attractions that include major natural assets, heritage assets, adventure-based attractions, and cycling and walking trails. These attractions span the entire length of the West Coast region.

But the sector does face some significant challenges. These include:

- being distant from visitor markets – the closest domestic markets are around 3 hours away by car and, with limited flights, getting to the West Coast from Auckland can take over 7 hours.
- limited awareness of the range of attractions beyond the icons of Pancake rocks and the glaciers. Visitors to these tend not to stay long in the region but rather do a day-trip, stopping in either Greymouth or Hokitika before heading to the glaciers. Overnighters tend to stay in Franz Josef or Fox and then leave the region from there.
- a high level of seasonality – this is consistent with New Zealand, although with higher peaks and troughs. Combined with a small local population it is difficult for visitor-related businesses in some areas to maintain revenue flows in the winter months. It also creates significant pressure on infrastructure during the peak season.
- infrastructure pressures resulting from a combination of visitor growth (exacerbated during peak season) and natural hazards (flooding, coastal erosion and weather events), including at Punakaiki and Franz Josef. There is limited broadband and mobile phone network access, including an area of some 200 kilometres between Fox and Haast where there is no mobile phone coverage.
- difficulty extracting value from many attractions, which are currently free to access and use as a result of many being on the conservation estate. Similarly, the costs of establishing and maintaining attractions such as cycle trails are difficult to cover through existing funding mechanisms.
- a fragmented approach to promoting and developing tourism in the region, resulting in duplication and gaps in visitor marketing and promotional activities, limited tourism development in some areas, and poorly funded tourism focused organisations that are often competing for funding and for visitors.



Opportunity

Given the array of challenges, many of which are inter-connected, the major opportunity is to deal with these in a cohesive and coordinated way through a regional visitor strategy and action plan. This strategy and action plan should focus on five areas.

- 1 Improving region-wide promotion and marketing, i.e., implementing a regional marketing plan with clear target markets, including domestic markets.
- 2 Tourism product development and maintenance, including developing a larger set of iconic attractions (e.g., Oparara Arches at Karamea, Hokitika Gorge, Lake Brunner) and developing new products in Buller (e.g., a Penguin viewing and rehabilitation centre; establishment of the Charleston to Westport cycle way).
- 3 Future proofing infrastructure and amenities at key locations, with Franz Josef an initial priority.
- 4 Determining the appropriate structure for delivering tourism promotion and marketing across the region in order to better coordinate and rationalise activities across districts.
- 5 Determining the appropriate mix of funding mechanisms for tourism marketing and development, including the adoption of new mechanisms such as charging visitors for experiences on conservation land.

What is the sector’s contribution and make-up?

Tourism is one of the largest sectors on the West Coast. In 2015, it contributed \$94.9 million in GDP (5 percent of the regional economy) and employed 2,015 people (12 percent of the region’s jobs).

Table 8. Tourism key indicators, 2015

2015	Tourism	% of region
GDP (2010 \$m)	94.9	5.1%
GDP location quotient	1.3	
Filled jobs	2,015	11.9%
Employment location quotient	1.6	
Productivity (GDP/filled job) (2010\$)	47,110	43%

Source: Infometrics regional database

An employment location quotient of 1.6 shows that a higher proportion of people work in the tourism sector on the West Coast than nationally, further supporting the importance and relevance of the sector to the region’s economy.

The sector has low productivity, with each worker producing less than half of the region’s average level of GDP per filled job. In part, this reflects the labour-intensive nature of the work.

Figure 30 and Figure 31 show tourism employment split by West Coast district, and then by industry.



Figure 30. Tourism employment, 2015

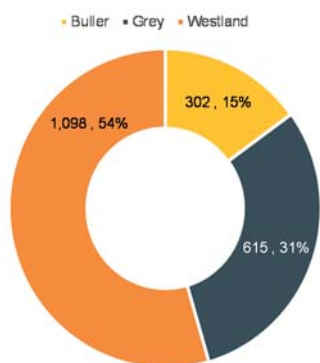
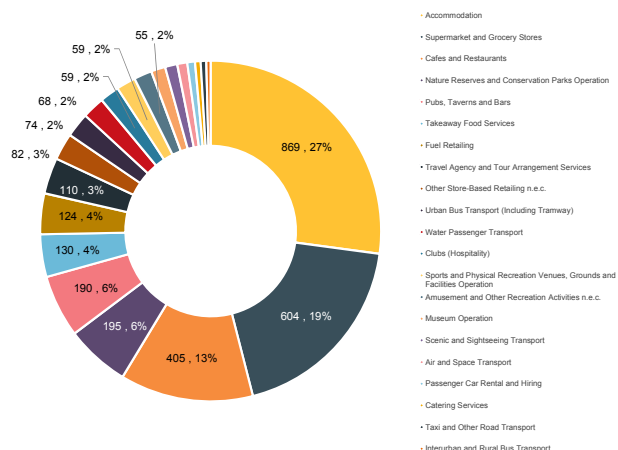


Figure 31. Tourism employment by industry, 2015



Source: Infometrics regional database. Note: employment for each industry is provided for the entire industry. The tourism component of these industries will be smaller than the figures provided.

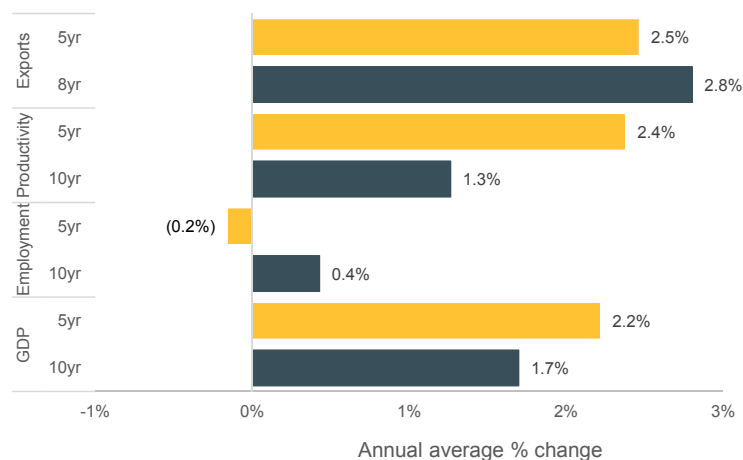
Employment in the sector is concentrated in Westland (54 percent) and Grey (31 percent), and is dominated by accommodation; supermarkets and grocery stores; and cafes and restaurants. Nature reserves and conservation parks; and pubs, taverns and bars are also relatively large contributors to employment.

As shown in Figure 32, the sector's GDP, productivity and exports (visitor expenditure) on the West Coast all grew relatively strongly over the last 5 years (by 2.2 percent, 2.4 percent and 2.5 percent per year respectively).

Employment remained relatively static over 2005–2015 and has declined slightly over the last 5 years (by 0.2 percent per year).

Tourism-related industries that have grown strongly over the last 10 years (over 3 percent per year growth in GDP) include supermarket and grocery stores; takeaway food services; urban bus transport; and scenic and sightseeing transport (Table 9).

Figure 32. Tourism growth rates of key indicators, 5yr and 10yr



Source: Infometrics regional database
Note: Compound annual growth

Industries that declined at a reasonable rate over the last decade included air and space transport; travel agency and tour arrangement services; and other store-based retailing (Table 9).



Table 9. Tourism-related industries GDP and employment, current, 10-year trends and location quotients

	GDP		Employment		Location Quotient	
	2015	2005-2015	2015	2005-2015	GDP	Employment
Accommodation	31.5	-0.4%	869	-1.0%	3.9	3.8
Supermarket and Grocery Stores	22.2	3.2%	604	1.4%	1.1	1.5
Cafes and Restaurants	14.7	0.4%	405	-0.3%	0.9	0.9
Nature Reserves and Conservation Parks Operation	10.3	1.3%	195	4.1%	5.1	8.0
Pubs, Taverns and Bars	6.9	-0.3%	190	-0.9%	1.8	1.8
Fuel Retailing	6.0	1.2%	124	-0.6%	1.6	2.2
Water Passenger Transport	5.1	1.3%	68	1.0%	5.8	7.7
Passenger Car Rental and Hiring	4.9	1.2%	24	0.3%	1.0	1.1
Urban Bus Transport (Including Tramway)	4.8	19.8%	74	18.9%	1.2	1.5
Takeaway Food Services	4.7	4.2%	130	3.7%	0.7	0.7
Air and Space Transport	3.4	-6.2%	30	-6.7%	0.3	0.4
Travel Agency and Tour Arrangement Services	3.3	-5.0%	110	-4.8%	1.2	1.9
Other Store-Based Retailing n.e.c.	3.3	-2.4%	82	-4.0%	0.7	1.0
Pharmaceutical, Cosmetic and Toiletry Goods Retailing	3.2	3.4%	79	1.6%	0.8	1.0
Amusement and Other Recreation Activities n.e.c.	3.1	-0.5%	55	1.8%	1.9	2.7
Scenic and Sightseeing Transport	2.9	6.5%	37	5.8%	2.1	2.6

Source: Infometrics regional database. Note: Compound annual growth. GDP and employment is provided for the entire industry. The tourism component of these industries will be smaller than the figures provided.

Although the region as a whole has a relatively high proportion of employment in the sector compared to the national average, not all industries in the sector are concentrated. Those that are significantly concentrated on the West Coast include nature reserves and conservation parks; water passenger transport; accommodation; amusement and other recreation activities; scenic and sightseeing transport; and fuel retailing.

How is the visitor economy performing?

The West Coast's visitor economy has grown quite strongly over the last few years, although this has occurred largely in Westland, and through international rather than domestic visitors.

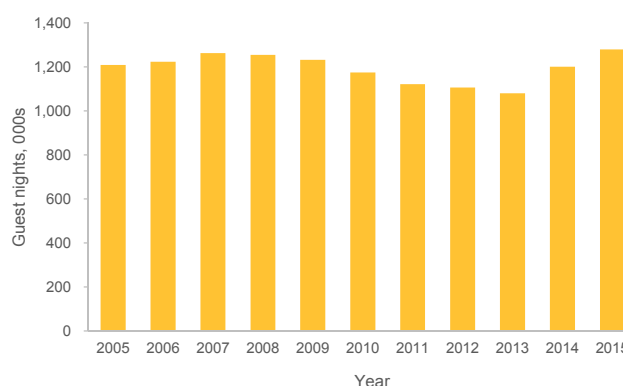
Guest nights

Commercial accommodation guest nights on the West Coast declined post the financial crisis and the Christchurch earthquakes before recovering strongly from 2013 (Figure 33).

Guest nights reached a new peak in 2015 at 1.28 million guest nights. This represented 3.5 percent of New Zealand's guest nights.

Around 60 percent of guest nights were in Westland, compared to 22 percent in Grey and 18 percent in Buller.

Figure 33. Commercial accommodation guest nights, West Coast, 2005–2015



Source: Statistics New Zealand, Commercial Accommodation Monitor
Note: December year



The region experienced relatively slow growth in guest nights over 2010–2015 (1.7 percent per year) compared to several other regions and the New Zealand average (2.4 percent per year). However, it has achieved very strong growth of 8.8 percent per year over the last 2 years, the second highest rate in New Zealand and much stronger than the 5.3 percent per year growth experienced nationally (Figure 34).

Figure 34. Growth in commercial accommodation annual guest nights, selected RTOs, 2005–2015



Source: Source: Statistics New Zealand, Commercial Accommodation Monitor.

Note: December years

Westland and Grey have experienced very strong growth in guest nights since 2013, at close to 9.5 percent per year each.

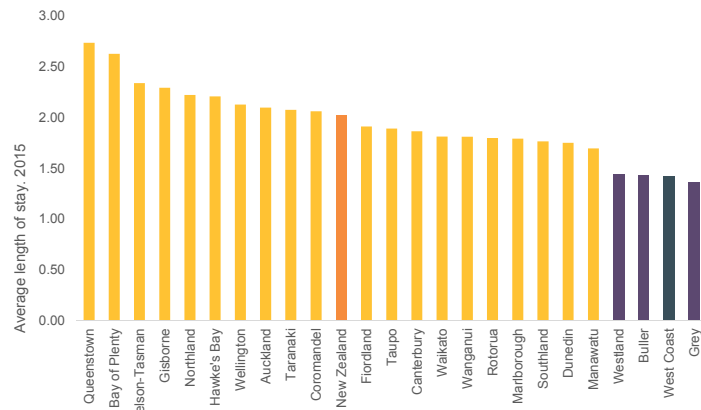


The West Coast and all three districts have relatively low average length of visitor stays.

In terms of commercial accommodation, the average length of stay (days) for Westland (1.44), Buller (1.43) and Grey (1.35) is much lower than the national average (2.0) and lower than comparable regions (Figure 35).

Increasing the average length of stay will be important to generate greater value from visitors.

Figure 35. Average length of stay, selected regions and West Coast districts, 2015

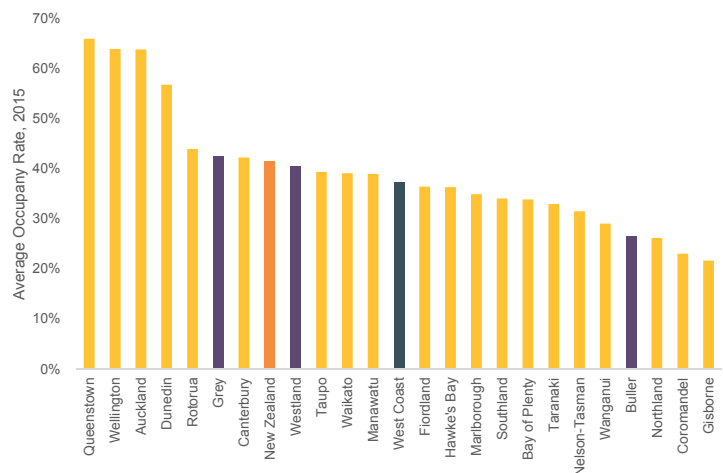


Source: Statistics New Zealand, Commercial Accommodation Monitor
Note: December year

The West Coast achieved a moderate occupancy rate of 37 percent in 2015, slightly below the New Zealand average of 41 percent. However, this was higher than several comparable regions, such as Taranaki, Nelson-Tasman, Marlborough, Northland and Gisborne (Figure 36).

Grey had the highest occupancy rate, at 42 percent. Buller had a very low occupancy rate, at 26 percent.

Figure 36. Occupancy rate, selected regions and West Coast districts, 2015



Source: Statistics New Zealand, Commercial Accommodation Monitor
Note: December year

This suggests a clear opportunity to grow visitation in the north of the region.

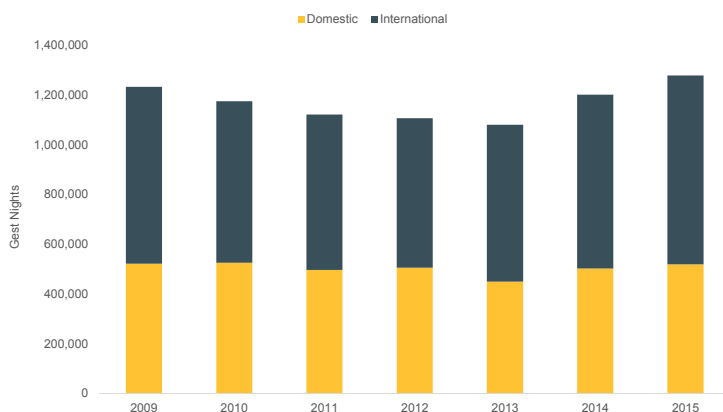
The West Coast attracts a large proportion of international visitors relative to domestic visitors. In 2015, 59 percent of all commercial accommodation visitor nights on the West Coast were from international visitors. This compares to the New Zealand average of 41 percent.



Domestic visitor nights have remained relatively constant at close to 520,000 nights per year over 2009–2015 (Figure 37). Over the same period, international visitor nights have increased by 1.1 percent per year, slightly lower than the 1.7 percent per year experienced nationally.

However, there has been strong growth in international visitor nights since 2012 at 8.1 percent per year.

Figure 37. Guest nights, domestic and international visitors, West Coast, 2009–2015



Source: Statistics New Zealand, Commercial Accommodation Monitor
Note: December years

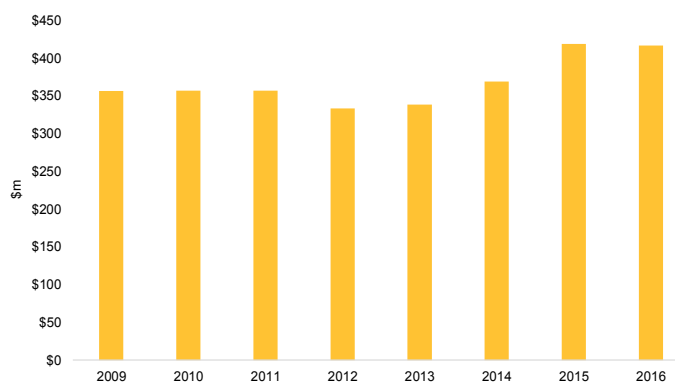
Visitor expenditure

Visitor expenditure in the region has grown from \$356.6 million in 2009 to \$416.5 million in 2016 (2.3 percent per year).

Expenditure was steady from 2009 to 2011, before falling to a low of \$333.7 million in 2012 before growing strongly, peaking at \$418.8 million in 2015 (Figure 38).

In the year ended May 2016, expenditure on the West Coast represented 1.8 percent of total visitor expenditure in New Zealand.

Figure 38. Visitor expenditure on the West Coast, 2009–2016



Source: MBIE, Regional Tourism Estimates
Note: May years

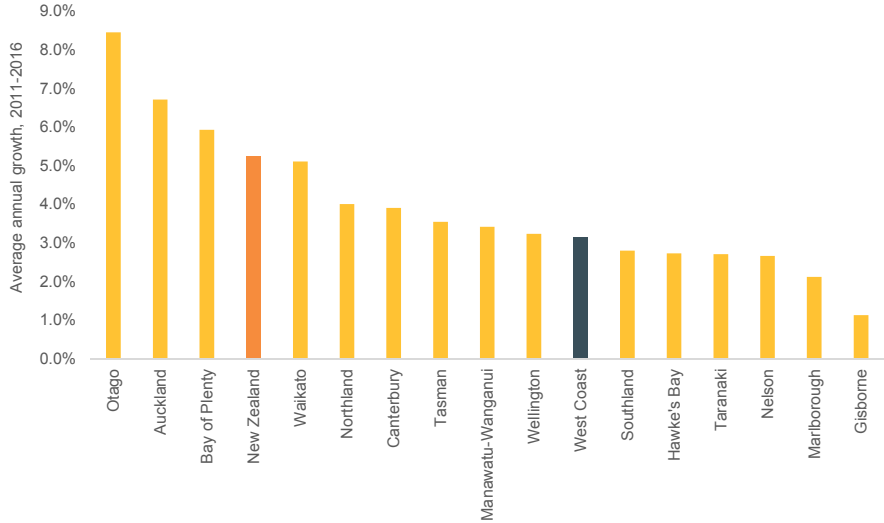
Relative to New Zealand as a whole, a much higher proportion of visitor expenditure on the West Coast is spent on accommodation and food services (19.2 percent compared to 10.8 percent) and retail sales – fuel and other automotive products (20.2 percent compared to 9.3 percent) and a much lower proportion is spent on retail sales - other (10.3 percent compared to 24.6 percent) and other tourism products (3.7 percent compared to 9.4 percent).

Growth in visitor expenditure on the West Coast over the last 5 years (3.1 percent per year) has been slower than the New Zealand average growth rate (5.3 percent per year growth).

However, New Zealand’s average is skewed by Auckland and Queenstown. Considering comparable regions, the West Coast sits around the middle. Visitor expenditure growth in the region has been much higher than in Gisborne and better than Taranaki and Marlborough, but lower than Tasman and Northland (Figure 39).



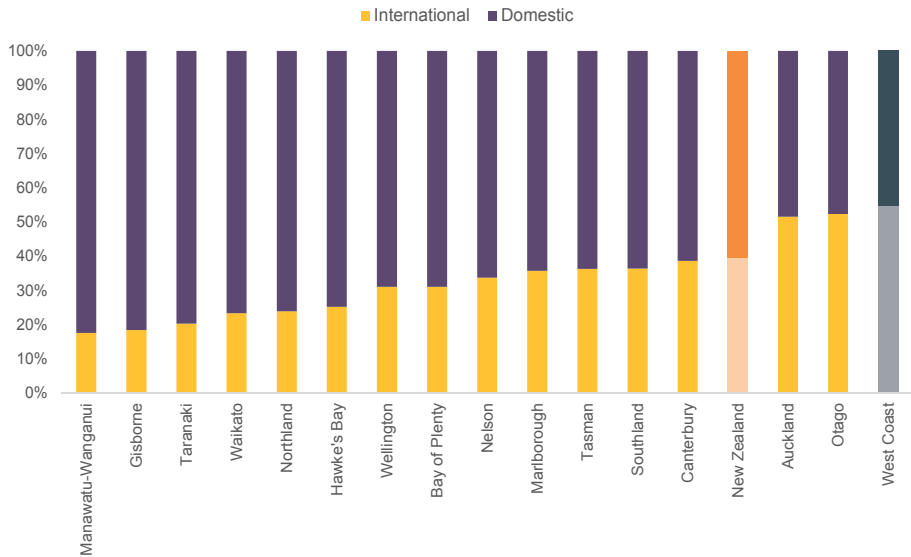
Figure 39. Growth in visitor expenditure, selected regions, 2011–2016



Source: MBIE, Regional Tourism Estimates
 Note: Compound annual growth, May years

Growth in visitor expenditure has been mixed across the West Coast's districts. Westland experienced expenditure growth of 1.2 percent per year over 2009–2015 (visitor expenditure for districts is only available up to 2015 through the discontinued Regional Tourism Indicators series), with Grey achieving limited growth (0.7 percent per year) and Buller visitor expenditure declining by 1.5 percent per year. Growth in visitor expenditure in Westland and Grey was higher than several comparable districts, while the decline of visitor expenditure in Buller was the most significant of comparable districts.

Figure 40. Proportion of international and domestic visitor expenditure, 2016



Source: MBIE, Regional Tourism Estimates
 Note: May 2016



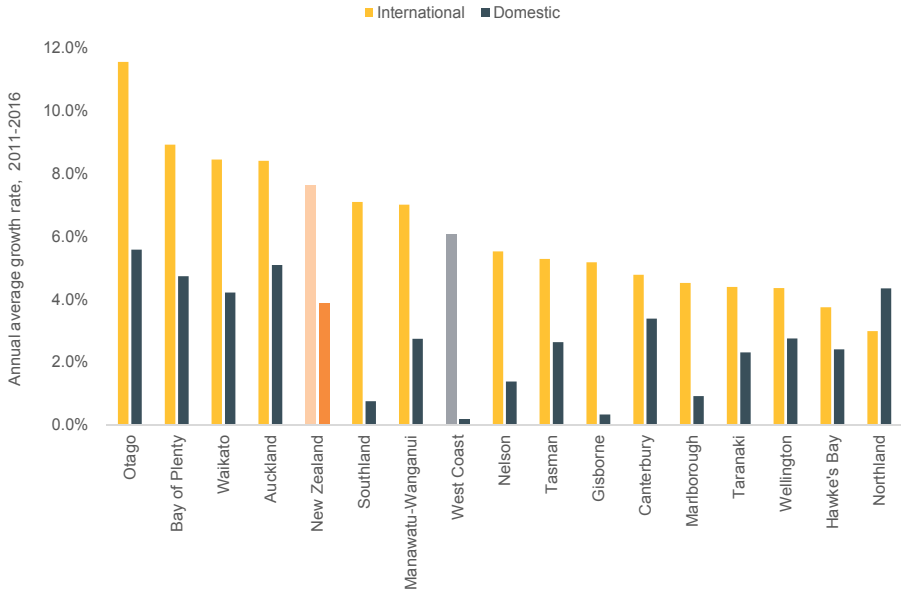
The relatively high proportion of international visitor nights on the West Coast is also reflected in international visitor expenditure. At 55 percent of total visitor expenditure, the contribution of international visitor spending was the highest of all regions in New Zealand in the year ended May 2016, and well above the New Zealand average of 40 percent (Figure 40).

This is largely due to Westland, where international visitor expenditure was estimated to be 79 percent of all visitor expenditure in 2015 (Buller and Grey’s proportion of international visitor expenditure was around the New Zealand average).

The West Coast experienced strong growth in international visitor expenditure over 2011–2016, at a rate of 6.1 percent per year. Although this was lower than the New Zealand rate of 7.6 percent per year, it was higher than several comparable regions, such as Taranaki and Northland (Figure 41).

However, the region achieved very little growth in domestic expenditure, 0.2 percent per year, compared to strong growth in domestic visitor expenditure nationally of 3.9 percent per year.

Figure 41. International and domestic visitor expenditure, New Zealand regions, change 2011–2016



Source: MBIE, Regional Tourism Estimates, 2011–2016
 Note: May years

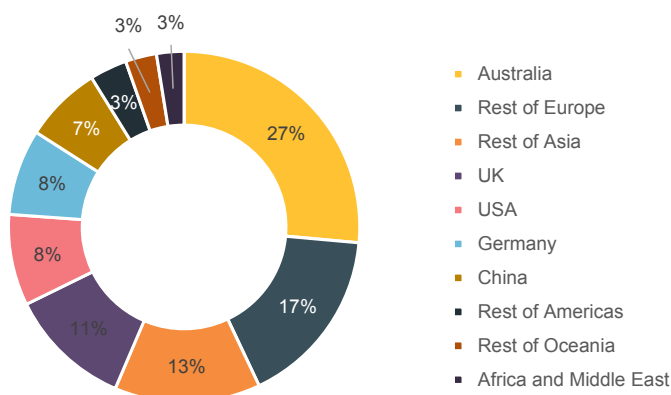


Origin of visitors

In 2015, travellers from Australia accounted for the largest share of international visitor nights on the West Coast at 27 percent, followed by visitors from the rest of Europe (excluding UK and Germany) at 16.5 percent, and rest of Asia (excluding China) at 13.4 percent (Figure 42).

The West Coast attracted a smaller proportion of visitors from Australia compared to New Zealand as a whole (34 percent).

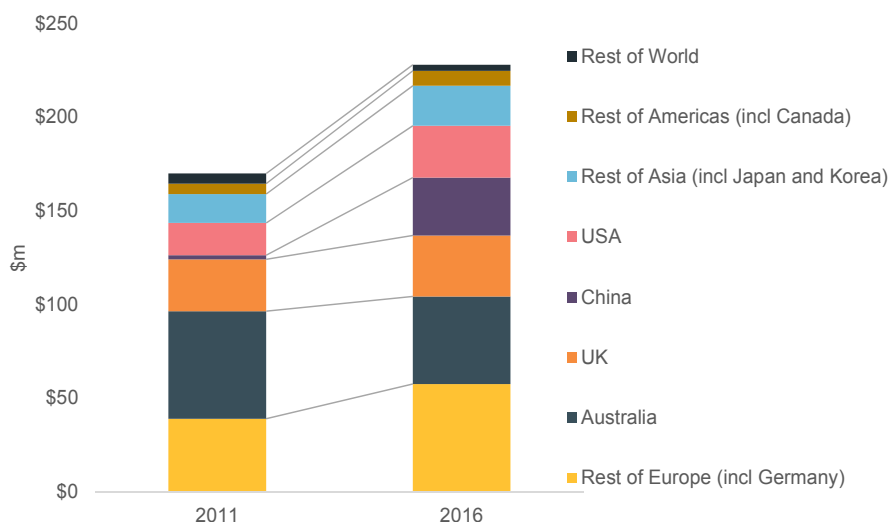
Figure 42. Origin of visitors to the West Coast, 2015



Source: Statistics New Zealand, International Visitor Survey
Note: December year

European visitors are responsible for the greatest proportion of international expenditure on the West Coast, representing 25 percent of all international expenditure in 2016, followed by visitors from Australia (21 percent), the UK (14 percent), China (14 percent) and the USA (12 percent). As shown in Figure 43, spending by visitors from Australia has fallen over 2011–2016 from \$57 million to \$47 million at a rate of -4.0 percent per year.

Figure 43. International expenditure by origin of visitor, 2011 and 2016



Source: MBIE, Regional Tourism Estimates
Note: May years

In contrast, there has been a significant increase in expenditure by visitors from China, from \$2 million to \$31 million, at an average rate of growth of 69 percent per year. There has also been strong growth in expenditure by visitors from Europe (8 percent per year) and the USA (10 percent per year).



As a result, the composition of international visitor expenditure by origin of visitor has changed over the period, with expenditure from Australian visitors falling from over a third to one-fifth of total expenditure, and visitor expenditure from China increasing significantly from just over 1 percent of the total in 2011.

Travellers from Canterbury were responsible for the greatest proportion of domestic visitor expenditure on the West Coast in the year to March 2016, representing 33 percent of all domestic expenditure. This was followed by travellers from within the region itself (24 percent), Wellington (10 percent), Auckland (7 percent) and Nelson-Tasman (7 percent). The highest growth in domestic expenditure over 2011–2016 was via visitors from Waikato and Canterbury. Spending by visitors from Auckland and Nelson-Tasman declined over the period.

What is the current potential for growth?

The lower New Zealand dollar, a gradual recovery in the world economy, and lower fuel prices have all helped boost the number of overseas visitors coming to New Zealand. Growth in demand has also seen new air routes established, leading to significant increases in capacity from North America, South America, China, and other parts of Asia.

MBIE's tourism forecasts for 2016–2022 suggest that New Zealand will experience strong growth in visitor arrivals and visitor expenditure over the period. Visitor arrivals are forecast to grow 5.4 percent per year and expenditure is forecast to grow by 7.5 percent per year (Ministry of Business, Innovation and Employment, 2016). The forecasts note that trends are showing that visitors are spending more per trip.

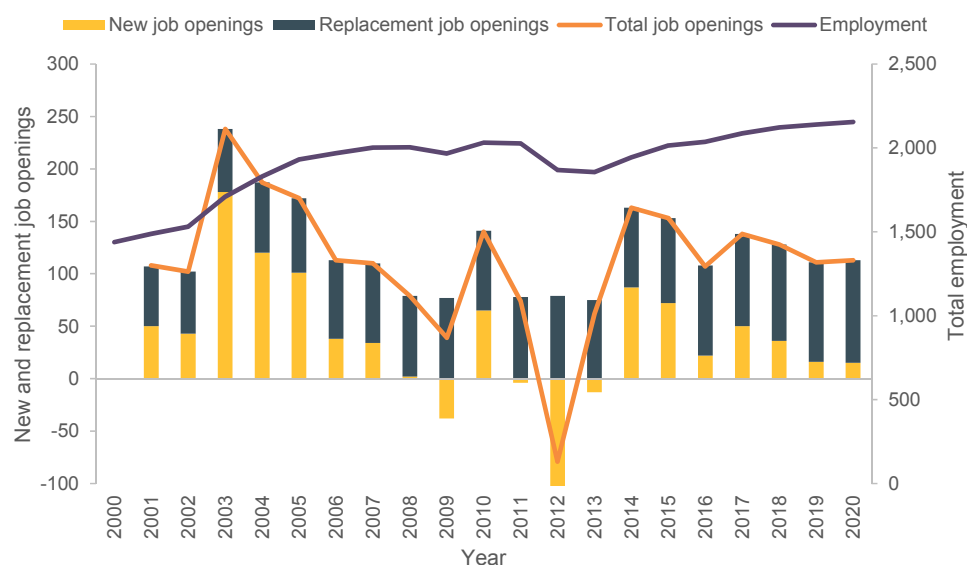
MBIE expects strong growth in visitors from China, over 14 percent per year, and noted that even if growth in the China economy slows they still expect strong growth in visitors from China as it reorients towards higher consumption and services (Ministry of Business, Innovation and Employment, 2016). Previous forecasts suggested that, even if there is a stronger New Zealand dollar, lower oil prices and growth in China and US are likely to keep international visitor arrivals up (Ministry of Business, Innovation and Employment, 2015).

If the West Coast meets MBIE's international visitor expenditure forecasts and domestic expenditure grows by a similar proportional amount (i.e., increases to 2.5 percent per year), total visitor expenditure in the region will increase from the current \$417 million to around \$540 million by 2020. These forecasts are higher than the rate the region has experienced over the last 5 years (6.1 percent per year for international visitor expenditure). Assuming a lower level of growth, consistent with the historical growth rate (business-as-usual), the West Coast could expect just over \$470 million in visitor expenditure by 2020.

Under such a business-as-usual scenario, Infometrics forecasts suggest that tourism sector employment on the West Coast will grow by around 1.3 percent per year over 2016–2020 (139 jobs over the period). Employment growth is expected to be fastest in Westland and Buller at around 1.5 percent per year each (around 17 jobs per year in Westland and 5 jobs per year in Buller), while employment in the sector in Grey is expected to grow by around 1 percent per year (around 6 jobs per year). Historical and projected employment in the tourism sector is shown in Figure 44.



Figure 44. Tourism sector employment forecasts, 2015–2020



Source: Infometrics regional database

Employment growth is forecast to be particularly strong in hospitality industries (accommodation, cafes, restaurants and bars), at around 2.2 percent per year over the forecast period of 2015–2020.

As a comparison, MBIE’s employment forecasts for 2016–2019 predict 2.8 percent per year growth in accommodation, cafes and restaurants nationally, or another 13,670 jobs in the industry (Ministry of Business, Innovation and Employment, 2016a). On the West Coast, they forecast growth of 1.0 percent per year or 46 jobs (noting that this is only one industry within the broader tourism sector). In terms of occupations, MBIE’s occupational forecasts suggest that employment of hospitality workers will grow by 1.4 percent over the period and employment of accommodation and hospitality managers will grow by 1.3 percent per year. This is similar to the Infometrics forecasts.

Overall, the research suggests that there will be moderate to strong growth in the tourism sector on the West Coast over the next 5 years, under a business-as-usual scenario.

What are the existing strengths of the region for tourism?

The West Coast has a large range of visitor attractions, more than are typically recognised by the New Zealand public. In addition to the well-known ‘iconic’ attractions of Franz Josef Glacier, Fox Glacier and Pancake rocks, there are:

- other major natural attractions, such as the Oparara Arches at Karamea (the largest limestone arches in the southern hemisphere), Hokitika Gorge, the Honeycomb Hill Caves at Karamea, the Tauranga Bay seal colony, New Zealand’s only white heron nesting site, two kiwi sanctuaries, Lake Brunner, Lake Matheson and the Blue Pools of Haast Pass.
- the Kahurangi, Paparoa, Arthurs Pass, Westland Tai Poutini and Mount Aspiring National Parks, and the Te Wahipounamu - South West New Zealand UNESCO World Heritage Site.



- a range of cycle trails, including the 85 kilometre Old Ghost Road between Lyell and Mokihinui, and the 135 kilometre West Coast Wilderness Trail between Greymouth and Ross. Others, such as the Charleston to Westport cycle trail and South Westland Wilderness trail are planned (see Cycle Trails later).
- several 'adventure-based' scenic attractions, including the Denniston Plateau experience, the Buller Swing Bridge, Underworld rafting in the Paparoa National Park, the West Coast Treetop Walkway, rafting and kayaking tours, Charleston glow-worm cave tour, adventure caving at Hi Hi Tomo and Te Tahi Cave, and glacier helicopter and hiking experiences.
- a huge range of walkways, tracks and trails including part of the Heaphy Track (one of New Zealand's nine great walks), Cape Foulwind walkway, the Kaniere Water Race Walkway, Ross Historic Goldfields walks, Lake Brunner tramping tracks, Alex Knob track, Copland Valley track, and Mahinapua Walkway, to name just a few. The 45 kilometre Pike 29 Memorial Track, which will be one of New Zealand's great walks, is under development and a Southern Paparoa Coal Heritage Trail is being scoped.
- a significant range of heritage assets and attractions, including the Coaltown museum at Westport, Te Tauraka Waka A Maui Marae, Arahura Marae, Shantytown, Hokitika Museum, Westland Industrial Heritage Park, the historic areas of Reefton and Ross, the Brunner Mine Industrial site, and the Blackball Museum of working class history, as a few examples.

These attractions span the entire length of the West Coast and provide a real opportunity for the region to increase the number of visitors and the length of visitor stays. As noted, the West Coast already has the highest proportion of international visitor expenditure of all regions and hence clearly has the ability to continue to capture higher spending international visitor markets.

Positively, the private sector is investing in amenities and tourism operations to cater for growing visitor numbers on the West Coast. Two hotels (Beachfront in Hokitika and Kingsgate in Greymouth) have recently announced plans for upgrades.

In addition, TWC has just established a cohesive brand for the region to create a consistent image of the West Coast in the mind of potential visitors. This includes a new logo, communication guidelines and advertising collateral, centred on the strapline of "Untamed Natural Wilderness".

What are the challenges facing the sector?

Despite strong international visitor numbers and a range of attractive visitor offerings, the West Coast faces several challenges in growing and maintaining the visitor economy.

Distance and cost of travel

The West Coast is distant from most visitor markets. Close markets of Nelson-Tasman and Canterbury are at least 3 hours away by car. There is the daily scenic TranzAlpine rail connection from Christchurch, which is popular, but takes 4.5 hours. As is discussed in the section on *Transport*, there are limited flights in to and out of the region and it can take visitors from Auckland over 7 hours to get to the region by air.



Limited visitor economy in the north of the region

As was noted, the Buller district gets a relatively limited share of visitor expenditure and is not well connected to the major regional tourism route. It is the only district in the region where visitor expenditure has declined over the medium-term. Most visitors head into Greymouth via road or rail and then travel south into Westland for the glacier experiences (some will head north briefly to view the Pancake Rocks at Punakaiki). The Buller district currently also lacks the range of tourism options (not only attractions, but accommodation and food services) that Grey and Westland provide.

Lack of awareness of the region's broad range of attractions

There is a lack of awareness of the full range of attractions and options for visitors. As noted, visitors to the West Coast don't stay very long. Most visitors to the West Coast stop in Greymouth or Hokitika before heading to the glaciers (and overnight in Franz Josef or Fox). They then leave the region.

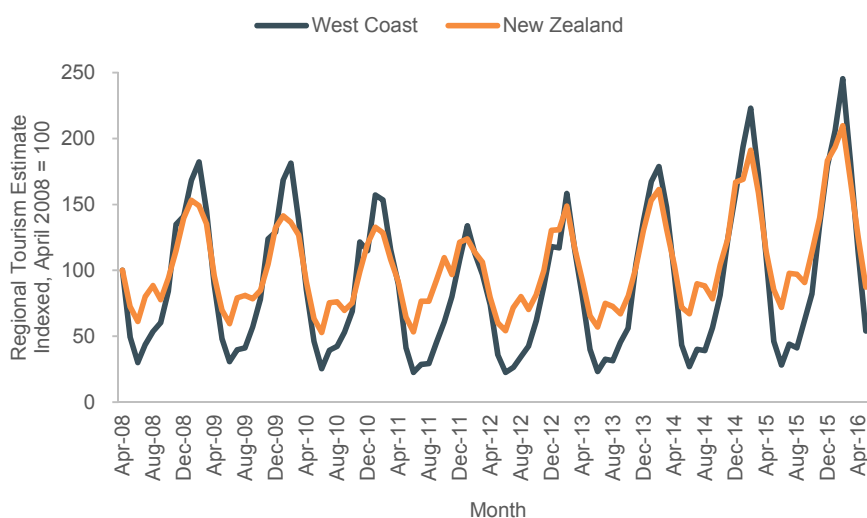
The glacier experience is changing

Although they are the biggest draw cards, the visitor experience associated with the iconic glaciers is changing. The glaciers are retreating and, within the next two decades, it is likely that the only way of seeing them will be by air. This will change the visitor experience and constrain the types of visitors that will be attracted (given the cost of access). A survey of visitors to the glaciers in 2013/14 indicated that more than a third of visitors would not be prepared to take flights to see the glaciers (Wilson et al, 2014).

High level of seasonality

The West Coast is subject to significant visitor seasonality, peaking in summer and reaching a low in winter (Figure 45). Although this is consistent with national trends, the peaks and troughs in international visitor expenditure are higher and lower than nationally.

Figure 45. International Regional Tourism Estimates, West Coast, 2008–2016

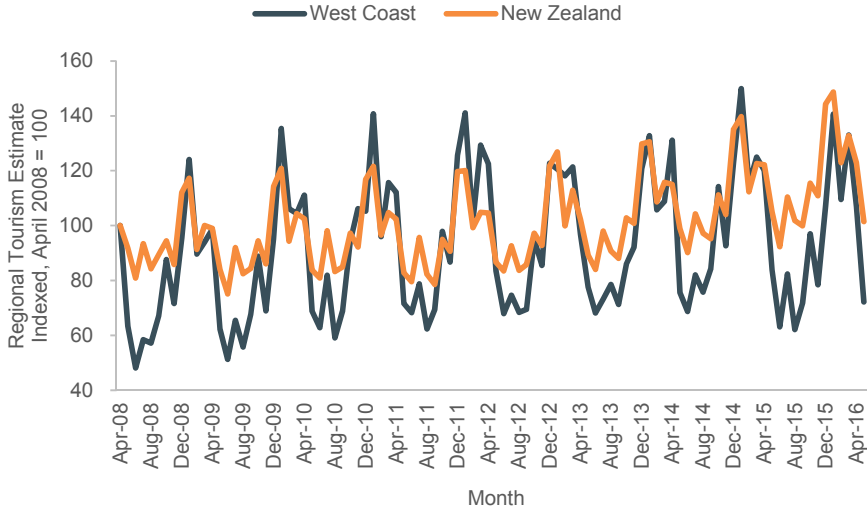


Source: MBIE, Regional Tourism Estimates



For domestic visitors, seasonality also follows national trends although the variability between peak and trough is also higher. Since 2013, the growth in domestic expenditure on the West Coast has also tended to be below New Zealand's.

Figure 46. Domestic Regional Tourism Estimates, West Coast, 2008–2016



Source: MBIE, Regional Tourism Estimates

At the district level, the degree of seasonality in international expenditure is highest in Buller while for domestic expenditure it is highest in Westland.

All of this means that there is significant pressure on meeting visitor demands in summer, including accommodation, car parks, amenities, water resources, waste management, and workloads. There can be traffic and congestion problems in key locations, such as Franz Josef and Punakaiki. Conversely tourism operators in some areas can find it difficult to maintain revenue flows in the winter months. The seasonality results in changing demands for staff over the year and there can be difficulties in retaining skills beyond the high seasons. On the other hand, employees can find it difficult to obtain permanent employment.

The region faces major visitor infrastructure pressures

As noted above, visitors also put pressure on a range of infrastructure and activities, particularly in the high season. There has been tremendous pressure on the locations of key visitor attractions such as Punakaiki (estimated 460,000 visitors per year), Franz Josef and Fox (estimated 600,000 visitors each per year), where there are consequently high demands for water resources, toilets and waste management, car parks, accommodation and food services. On occasions in summer months, visitor demands for bed-nights at Franz Josef, Fox and Hokitika exceed capacity (although this can positively result in an overflow of visitors to other areas).



As is discussed later in the section on *Natural Resources*, several key visitor locations are also susceptible to natural hazards. This was particularly illustrated by the flooding that occurred in Franz Josef this year when the Waiho River burst its banks, which resulted in the destruction of the Mueller Hotel, damage to sewerage ponds and the evacuation of many residents and visitors. Major flooding events occur on average three times a year on the West Coast. Several coastal locations, such as at Westport, Punakaiki and Hokitika Spit, are affected by coastal erosion. More generally, tracks, trails and roads are regularly affected by major weather events, which result in slips, landslides and windblown trees.

Broadband and mobile phone network access is limited in several areas of the West Coast. For example, there is an area of some 200 kilometres between Fox and Haast where there is no cellphone coverage. UFB is largely limited to Greymouth. This impacts on the ability of tourism businesses to service visitors, including remote marketing and sales. The recent MBIE report on visitor infrastructure (Ministry of Business, Innovation and Employment, 2016c) cited Tourism New Zealand analysis, which found that a lack of free Wi-Fi is the main reason that people rate accommodation poorly. Lack of connectivity also presents a risk to visitors, who may find themselves isolated in the event of transport breakdowns or natural hazards. This is discussed further in the section on *Telecommunications*.

Resources are stretched

Marketing and promotion resources

On the face of it, public funding for tourism marketing and promotional activity on the West Coast appears to be relatively limited. The three district councils each contribute \$86,000 to TWC and this is matched by DWC for total annual funding of \$344,000 per year. According to a national benchmarking survey (MacIntyre, 2014b), the councils' contribution is relatively low on a population (\$8 per capita compared to \$10 nationally) and ratepayer (\$11 per ratepayer compared to \$24 nationally) basis. However, industry contributions make up for the shortfall, with TWC having one of the largest proportional contributions from industry out of all RTOs at 31 percent of total funding (in 2014, industry contributed \$156,000 to marketing and promotional activity), which is much higher than the 8 percent average industry contribution across RTOs nationally.

Moreover, the councils in the region also fund visitor centres (\$238,000 in 2014) and local promotional roles and activities (\$390,000 in 2014). Once this funding is accounted for, the West Coast actually has a relatively high level of tourism funding support (\$28 per capita and \$39 per ratepayer).

So the issue is not necessarily about the level of investment in marketing and promotion per se. Our observation is that the challenge is more that the resources are spread across a large range of promotional organisations and activities, which limits efficiency, coverage, and the ability of TWC to undertake coordinated regional promotion and marketing.

One way to gauge the efficiency of tourism spend is by assessing the level of guest nights and visitor expenditure on the West Coast against the councils' investment in marketing and promotion activities. In 2014, the West Coast received \$325 of visitor expenditure for every dollar invested by councils and spent \$1.30 for every guest night. Against comparable small regional tourism organisation areas (e.g., Northland, Eastland, Aoraki), the West Coast is underachieving as those regions achieved over \$600 of expenditure per dollar invested and only invested \$0.54 per guest night. This is only a rough indicative measure as visitor expenditure and nights are affected by a range of activities beyond marketing, promotion and events support. However, it does suggest that a better return on investment could be achieved.



There is also a lack of consistency in the way that funding is sourced. Despite the fact that the scale of the tourism sector and visitor expenditure varies across the three districts and that the size of the ratepayer base differs across the councils, all councils contribute the same amount of funding to TWC. This issue came to the fore this year when the BDC considered withdrawing funding from TWC due to the lower level of visitor numbers and expenditure that the district has received. In addition, different rating policies are used by each of the councils to secure ratepayer funding. BDC uses a combination of a general rate and tiered targeted rate based on capital value. WDC uses a targeted tourism rate and a Hokitika promotions rate. GDC uses a targeted rate on commercial and industrial properties and a separate rate for bed and breakfast operators. As a result, the tourism industry and other beneficiaries of the visitor economy make different relative contributions depending on where they are based.

Resourcing to meet visitor demands

Although there is the significant range of attractions across the region, many of these are free to access and use and it is difficult to currently extract value from them or recover the costs of maintenance. The small population and business base in the region means that there is a limited rating base to fund required infrastructure upgrades and maintenance. This is a particular issue in small locations next to the iconic attractions, such as Punakaiki, Franz Josef and Fox. This situation is compounded when the locations are adversely affected by major weather events and subject to erosion, flooding and/or landslips as noted above.

In addition, although DoC does recover costs associated with some experiences (e.g., huts on tracks, campsites), the National Parks Act (1980) and Conservation Act (1987) preclude visitors being charged for access to national parks or conservation areas (the majority of costs are funded through tax). Visitors not only access the 'attractions' but also trails, restrooms, viewing platforms, car parks and visitor information facilities for free. This is a national issue but it is particularly acute on the West Coast given the huge area of land and visitor attractions that are in the conservation estate.

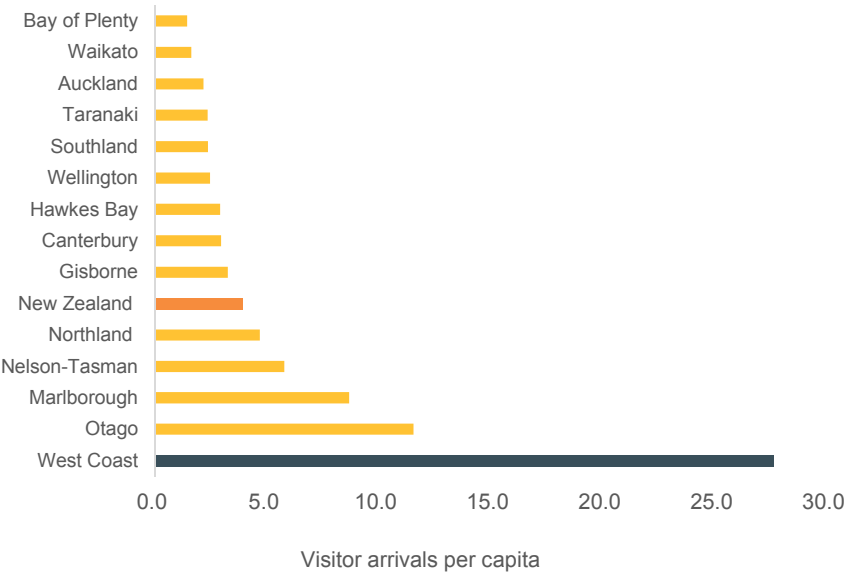
We also observed that, although the region has developed, and is developing, cycle trails as a new product for visitors, it has struggled to fund their construction and support ongoing maintenance and upgrades. Again, this is partly related to the small funding base and the limited ability to charge users of trails when they are on conservation land. There also appear to be capability issues in managing such significant projects (see *Cycle Trails* below). Similar challenges have been identified in relation to the development and maintenance of some walking tracks.

Similarly, the West Coast is also challenged to fund the development and maintenance of heritage attractions. There has been considerable investment into the preservation and interpretation of heritage assets, but ongoing development and marketing has been limited and there is a heavy reliance on volunteer contributions.

The West Coast will continue to struggle with supporting infrastructure demands and use by a growing and significant visitor population. As an example, Franz Josef has around 330 ratepayers, but an average of 1,500 visitors per day to the glacier (and in peak season this is more likely to be around 4,000 per day). The West Coast's ratio of visitors to residents is well above other regions. There are around 28 visitor arrivals (commercial accommodation) per head of population on the West Coast annually compared to the New Zealand average of around four (Figure 47).



Figure 47. Visitor arrivals to population ratio, selected regions, 2015



Source: Statistics New Zealand, Commercial Accommodation Monitor, Subnational Population Estimates
 Note: Visitor arrivals are for the December 2015 year whereas population estimates are for June 2015.

Population and visitor growth will result in the increased use of, and requirements for, infrastructure. The proportion of ratepayers to visitors in the region is likely to decline in future based on what is known about visitor and population and growth. For example, there is expected to be no population growth in the medium-term, while visitor growth could exceed more than 3 percent per year.

Cycle trails – development and maintenance

The region has recently established two major cycle trails and another two are planned (there are a range of other smaller trails on offer or planned). Each cycle trail is facing resourcing pressures.

The **Old Ghost Road**⁴ between Lyell and the Mokihinui River in Buller is an impressive grade 4 (advanced) trail established largely by volunteers over 8 years through the not-for-profit Mokihinui-Lyell Backcountry Trust. It has Great Ride status as part of the New Zealand Cycle Trail. At 85 kilometres it is New Zealand’s longest back country mountain biking and tramping track.

In its first 6 months of operation it had an estimated 5,000 visitors. Based on survey data, over 95 percent of trail visitors came to the region solely for the purpose of using the trail. The Road also hosts an annual mountain bike endurance event and an ultra-distance running event.

It is expected that the trail will have around 9,000 users annually. There have been broader benefits to the district due to the increase in visitation, including increased demand for accommodation and food services and trail-related (e.g., drop-off and pick-up) services. In sum, it is a significant tourism asset for the Buller district and wider region.

⁴ Information in this section was provided by the Mokihinui-Lyell Backcountry Trust.



Cycle trails – development and maintenance

The almost \$6 million of development costs (for the trail, bridges and huts) were met by a combination of central government, Solid Energy, BDC, and public donation funding. The estimated cost to maintain the trail is around \$360,000 per year but, because the road is on conservation land, it is not possible to charge users for the trail. DoC and BDC provide some funding support for maintenance (the Council's support reflects the broader tourism benefits to the district) but the fact is that donations by users will never be sufficient to cover the remaining cost. It recently received close to \$50,000 from the fourth round of the Government's 'Maintaining the Quality of the Great Rides Fund' to continue maintenance but a shortfall remains.

The **West Coast Wilderness Trail**⁵ was opened in November 2014 and is one of New Zealand's Great Trails. It is a grade 2 (easy) trail and spans 136 kilometres from Greymouth to Ross via Kumara, Cowboy Paradise and Hokitika. Establishment costs of \$8.6 million were funded through a combination of central government, DWC, WDC, GDC and public donations.

It is estimated that the trail had 8,000 riders over 2015/16, and will have 10,000 in 2017/18 and 11,000 in 2018/19. As a result of the Trail, tourism operations have become established or expanded, including shuttle businesses, bike hire businesses and accommodation providers.

The establishment of the Trail has not been straightforward and it is not officially fully open. The last part of the trail from Hokitika to Ross has not been completed to MBIE satisfaction and some sections do not meet New Zealand Cycle Trail design standards. Some land access arrangements have been problematic and there are safety issues in some places. MBIE continues to work with the WDC to ensure that these sections are completed to standard before the trail is formally approved as fully open.

The West Coast Wilderness Trail Trust is responsible for ongoing maintenance. Maintenance and development funding is initially to come from WDC, GDC and from business partners in the trail. The Trust is proposing to also develop sponsorship options and a donation system for trail users. We doubt whether the donation system will raise a large proportion of the funding required.

A recent review of the Trail's establishment (Grant Thornton, 2016) found that there have been several limitations, including a lack of a dedicated project manager, lack of oversight and reporting arrangements, insufficient funding and unrealistic project expectations. The establishment costs have exceeded the original agreed funding estimates. Several recommendations have been made to improve project governance, management and resourcing.

The **Charleston to Westport Cycle Trail**⁶ is a planned 45 kilometre grade 2 trail around the coastal area of Buller, crossing Charleston, the Nile River, the Totara River, Okari Lagoon, Tauranga Bay and Cape Foulwind. The proposed trail will have spectacular coastal views, and it is intended there will be information panels at sites of interest related to gold mining and pounamu.

The proposed trail covers 7 kilometres of conservation and private land (e.g., Holcim site, private land owners). Access to land needs to be negotiated. It is estimated that the cost of constructing the trail will be around \$6 million and construction will take 3–5 years to complete. Initial funding of around \$100,000 is required for surveying and engineering assessment, before a business case is made for funding to BDC and central government. Ongoing maintenance costs are estimated to be around \$30,000 per year.

⁵ Much of the information in this section was provided by the West Coast Wilderness Trail Trust.

⁶ Information in this section provided by the Charleston – Westport Cycle Trail Trust



Cycle trails – development and maintenance

A **South Westland Wilderness Trail** has been proposed as a cycle way from Ross to Fox Glacier. The South Westland Wilderness Trail Trust is currently working on identifying the route, land ownership, construction costs and funding. This will be a significant undertaking if it proceeds. Undoubtedly the project will face similar challenges in securing funding for construction, and ongoing maintenance and development, if it becomes established.

There are a range of options available for funding cycle trail development and maintenance. Funding can be, and has been, provided by local government. Some funding is available and has been sourced from central government. DWC is another source. Despite these sources, the Trusts involved in the trails will continue to struggle with meeting the full costs involved in developing, managing and maintaining the trails. Moreover, time and effort needs to be put into ongoing applications for funding. In our view, the users and primary beneficiaries of the trails should have to pay for their use and maintenance, and options for doing this need to be explored. In some cases, this is affected by parts of the trail being on conservation land, as access to these areas cannot be charged for (see *User charges for access to experiences on conservation land* below).

We suggest that funding for the development and maintenance of cycle trails across the region be specifically assessed as part of a broader review of funding for tourism development and promotion. Given there are several smaller cycle ways that are also planned, the proposed tourism strategy and action plan should also identify the mix of cycle trails to proceed with.

Tourism development and marketing can improve

Feedback from stakeholders suggested that marketing and promotional efforts to date have largely focused on international visitors and on the major attractions of the glaciers and Pancake rocks, reinforcing the typical tourism journey of visitors to the region. More fundamentally, many stakeholders do not believe the region has established a clear visitor value proposition beyond these iconic attractions, particularly for domestic visitors. TWC has, however, expanded its promotional activity to include a broad range of attractions (for example, its website has a comprehensive list of journeys and activities right across the region), developed a major domestic marketing campaign and, as noted, established a new brand for the region.

There are some gaps in visitor marketing and promotional activity across the region. A review of the efficiency of tourism activities in the region identified gaps in event funding and coordination, meetings and conference marketing, digital resources development, signage and interpretation, cycleway marketing and touring routes (MacIntyre, 2014a).

We also noticed that there are relatively few major events held in the region, although there is an increasing number of sporting events associated with the new trails and there are several community-based events.

Another observation, reinforced by feedback from industry representatives, was that tourism marketing and development activities are not well coordinated across the region. Although TWC is the regional tourism organisation, there are at least seven other tourism-focused promotional organisations in the region, including: Advance Northern West Coast, Punakaiki Promotions, Reefton Inc, Enterprise Hokitika, Lake Brunner Promotions, Glacier Promotions, and Haast Promotions. Each of these entities promotes and markets its own location and there is some competition across them. The 2014 efficiency review noted there is some duplication of marketing material and promotional activities across the organisations (MacIntyre, 2014a), although since this review took place there is now at least a consistent website that the promotion organisations support.



What are the specific opportunities for growing the sector in the region?

The situation on the West Coast for tourism is one where there is strong international visitor performance but relatively poor domestic visitor trends, and variable visitor growth across the three districts. Visitors are not staying very long in the region and typically only visiting the current iconic attractions.

This is despite a significant range of visitor assets right across the region that should be attractive to domestic as well as international visitors. Action is required to extend the visitor season, spread the visitor load, manage the existing significant infrastructure pressures, and enable further enhancements to the visitor product and infrastructure mix that will be required to support visitor growth.

West Coast Visitor Strategy and Action Plan

Given the array of challenges, many of which are inter-connected, the major opportunity is to deal with these in a cohesive and coordinated way through a **regional visitor strategy and action plan**. TWC and the region's economic development manager have initiated work on a strategy and plan that includes some of the elements we have identified. We consider that additional resources need to be put into the development of the strategy and plan and that some additional elements need to be added.

We recommend that the strategy and action plan focus on five areas.

1. Enhancing existing products and developing new products

To spread the visitor load over the broader West Coast region, particularly to the north, several existing and potential attractions should be developed or enhanced. The visitor strategy and plan should:

- Identify and confirm new icons for major development and promotion in addition to the glaciers and Pancake rocks, such as Oparara Arches in Karamea, the Hokitika Gorge, Lake Brunner and the Blue Pools of Haast Pass, and determine what is needed to increase visitor numbers to these locations.
- Accelerate the case for, and development of, proposed attractions in Buller and Grey (e.g., the business case for the Charleston to Westport Cycle Trail, Pike 29 Trail).
- Consider the role of, and opportunities for, enhancing cultural and heritage products and how they could be better accessed and packaged to meet visitor interests, including creating events and tour company itineraries.
- Identify the best mix of cycle trails across the region and how major cycle ways will be completed and maintained over time.
- Identify additional major event and conference opportunities. An improved product mix and additional accommodation capacity will provide the opportunity to develop new events and host more conferences.
- Identify opportunities to develop a stronger Māori offering, including marae experiences, culturally significant sites, and Pounamu and Aotea stories on Tai Poutini. For example, Makaawhio are currently working through a new project to develop a cultural tourism venture based on pounamu.



2. Improving region-wide promotion and marketing

The region needs to develop and implement a regional marketing plan, that has clear target markets domestically as well as internationally that identifies a clear visitor proposition, aligned with the new 'Untamed Natural Wilderness' brand. The plan should include a focus on:

- marketing a fuller range of key attractions nationally and internationally such as the extended range of icons noted above, and also unique attractions such as the Denniston Experience, Shantytown and other heritage attractions, Underworld rafting, the West Coast Treetop Walk, Pounamu experiences etc.
- reducing the level of visitor seasonality
- ensuring district promotion is consistent with regional marketing.

A major element of this will be increase visitors and spend from the region's major domestic markets of Canterbury, Auckland and Wellington, and the growing international markets of China and Europe.

A review of current methods of providing tourism information has already been undertaken and new channels are being identified.

3. Future proofing infrastructure and key locations

The West Coast needs further investment in, and accelerated improvements to, telecommunications, road resilience, accommodation and hazard mitigation infrastructure. This will require a combination of private sector and central government contributions. The development of the visitor strategy and action plan should include a process for identifying the resource requirements associated with major infrastructure projects and how improvements will be rolled out. This should include:

- Supporting immediate infrastructure requirements in Franz Josef (e.g., flood protection) and Punakaiki (e.g., erosion protection) and assessing the long-term infrastructure needs at Franz Josef.
- Accelerating planned roading improvements in the Regional Land Transport Plan (e.g., passing opportunities) and assessing and progressing road maintenance and related improvements (e.g., signage, parking) to the proposed broader range of potential iconic visitor attractions such as Oparara Arches (see the section of *Transport*).
- Accelerating broadband roll-out and addressing mobile blackspots through the government's UFB2 and mobile black spot funding support (this is discussed further in the section on *Telecommunications*).

Franz Josef – high priority infrastructure

Franz Josef is at a critical time in its development. The flooding in March 2016 demonstrated the vulnerability of the town to heavy rainfall events and the susceptibility of the Waiho River to overflowing. In addition to flooding and landslides, the town is also at risk from earthquakes, being situated on the Alpine Fault.

Although infrastructure improvements are being made (e.g., stop bank repairs, raising of the bridge over the Waiho River), it is recognised that these are actually temporary measures. It is quite possible that a landslide or flood will occur in future and severely damage the road and sections of the town.

Urgent work is required to assess the likelihood and impact of hazards and to identify the costs and benefits of potential infrastructure improvements, including the roading network. This will enable the development of options for managing the hazard risks and for catering for Franz Josef's growth.



The Future Franz Josef Working Group was established last year by WDC and the WCRC to identify future planning and development options. Progress has been slow. A range of government agencies, including MBIE, the Ministry for the Environment (MfE), DoC and NZTA, need to work with this group to undertake the hazard assessment and options development. The outcome of this work should be a recommended set of infrastructure improvements and agreed funding mechanisms.

We consider that this work should be a priority and suggest that the work be scoped and options developed through the action plan process over the next 5 months.

4. Determining the appropriate structure for tourism promotion and marketing across the region

As is discussed later in this report, there is a need to assess options for improving economic development and tourism arrangements in the region and to implement a new approach (see the section on *Economic Development Arrangements*). Options should consider whether economic development and tourism functions should be combined or remain separated, and whether services should be delivered externally or in-house (i.e., through councils).

In addition to the broader delivery model, the appropriate mix of regional and district promotion groups needs to be determined. We are not convinced that the region requires the current number of different promotional organisations. Rationalisation would enable some efficiencies and more consistent marketing. District promotion could also be undertaken through a single tourism organisation but with explicit district or area responsibilities and accountabilities.

5. Determining the appropriate mix of funding mechanisms for tourism marketing and development

All of the above elements of the visitor strategy and plan will require investment. It is apparent that the region needs a more sustainable approach to fund tourism promotion, product development and maintenance, and visitor infrastructure. The approach needs to reflect the West Coast's unique characteristics, such as the high proportion of visitors relative to residents, the high proportion of conservation land and the incidence of costs and benefits.

As part of the development of the visitor strategy, the councils in the region, with TWC and relevant central government agencies, need to identify the long-term funding requirements and undertake a comprehensive review of the feasibility, benefits and costs of a range of funding options to identify the best mix of funding mechanisms for the region.

This should include consideration of the mix and feasibility of industry contributions, sales of merchandise and advertising, general and targeted rates, grants, user charges (including charges to visitors on conservation land (see below) and/or a visitor levy) and central government contributions. It should also include an assessment of opportunities for commercialising a broader range of attractions, such as heritage attractions (e.g., through guiding activities).

Questions that should be considered in assessing options are (MartinJenkins, 2015):

- Are benefits and beneficiaries of the attractions/infrastructure readily identifiable?
- Can the costs be attributed clearly to the beneficiaries?
- Are the beneficiaries able to pay sufficiently?
- Is there one-off, short-term or ongoing funding requirements? Is investment required associated with specific new developments?



- Will the funding approach be understandable and acceptable to the communities affected?
- Should there be a consistent approach to rating policies across the region?
- Will the mix of mechanisms create appropriate incentives on behaviour? Will they promote efficient investment in and use of infrastructure?
- Will the benefits of raising additional funding outweigh the costs of implementing and administering the funding mechanisms?

There is a national research project underway looking at how visitor infrastructure can be funded, which will assist in the consideration of options.

The outputs of this work would be specific recommendations for commercialising some currently free attractions and a long-term funding strategy for tourism promotion and tourism product development and maintenance, which would be used both for shaping long-term planning but also in responding to new proposals that arise. As noted, a specific element of this review should be funding options for cycle trails.

User charges for access to experiences on conservation land

A specific funding option that we recommend be considered is charging for access to attractions on the conservation estate. Work is currently being undertaken on the potential to charge for car parking at key conservation attractions but we consider that additional options need to be assessed (for example, to cater for cycle trails where car park charges may not be possible) such as permits. User fees (e.g., for huts) are estimated to contribute around 5-6 percent of DoC's funding compared to around 20 percent in other countries (Mills, 2012).

In our view, arguments against user charges do not stack up. They tend to be based on the views that conservation land is a public good (i.e., use by a person does not impact on the benefits enjoyed by others and people cannot be excluded from use) and should not (or cannot) be charged for due to concerns about fairness (i.e., the more limited ability of some people to pay), potential administrative difficulties and costs in collecting charges, and/or concerns that charges will reduce visitor numbers.

Most of the West Coast attractions on conservation land do not have public good characteristics. First, it is clear that increasing visitation to some sites does affect the experience enjoyed by others. Second, while people cannot be excluded from the benefits of the general management of conservation land (e.g., we all enjoy the reputational benefits that New Zealand has due to the quality of the natural environment), it is possible to exclude access to some sites, tracks and trails where there is a limited number of access points (Haque, 2006), in much the same way it is possible to exclude access to huts, toilets and car parks.

In terms of equity concerns, these can be managed through providing managed 'free days' or programmes that provide access to different groups in communities (Mills, 2012).

Apart from charges providing for improved maintenance, facilities and experiences at the sites, user charges ensure that those who benefit the most from the attractions pay the most and that they take account of the costs of access. Moreover, charging will help councils and DoC better determine which amenities are more highly valued by visitors and that should be maintained and improved, and those where a lower level of maintenance may be warranted (Haque, 2006).



There are plenty of examples offshore of user charges for natural attractions and parks being applied, such as in Australia, the USA and Canada. Overseas experience shows that administration costs can be kept low, e.g., through permits and subscriptions purchased online or at information sites and petrol stations, that are carried by users or put on car windscreens (Mills, 2012). Demand is not particularly affected by charges, and people are willing to pay where it leads to better experiences and when it is clear that the fees are being used in the local area. Research suggests that it would take very large fees to discourage visitation (Haque, 2006).

We appreciate this is a national issue and not specific to the West Coast. However, as we noted, this issue is particularly acute for the West Coast because of the substantial area of land that is conservation estate and the small local funding base. As such, we believe the West Coast provides a compelling imperative for the work to be undertaken.

Our assessment of the proposal

We consider that if the West Coast takes up the opportunity to spread the visitor load, enhances existing products, grows new tourism products in the north and improves marketing and promotion – supported by a more sustainable funding model – then the region has the potential to meet the Tourism Industry Aotearoa’s ambitious goals of growing international tourism expenditure by 6 percent per year and domestic expenditure by 4 percent per year to 2025 (Tourism Industry Association of New Zealand, 2014).

If the region achieves these targets, visitor expenditure in the region could grow to \$530 million by 2020. Assuming a constant ratio of expenditure to GDP and constant productivity growth, tourism GDP could increase to around \$125 million and employment to 2,380 by 2020. This is significantly higher than the business as usual forecast (\$101 million in GDP and 2,150 employment). We note that the initial work on the tourism strategy in the region proposes an even more ambitious goal of increasing tourism spend to \$1 billion by 2025, which would result in increasing GDP to \$230 million and jobs to 3,200.

Tourism related employment may not be high productivity but it does provide labour market entry opportunities to those with lower qualifications and skills and can be an entry point for the region’s youth or the older-aged workforce looking for different career options (MartinJenkins, 2015).

The enhancement of existing products and development of new products will also result in construction jobs and spending on related and support services in the region. This includes sectors supplying inputs into product development and marketing, such as professional services and ICT (e.g., for website development, virtual displays).

Beyond the expenditure, value and job benefits to the tourism and construction sectors, wider benefits from the successful implementation of the proposal are likely, including:

- **Flow-on economic benefits** to a broader range of sectors as a result of increased visitor spending. Increased visitation to small, remote communities can result in investment in local amenities and services over time.
- **Social and community development** – Cycle trails and cultural and heritage attractions help to bring communities together, encourage volunteerism, and improve quality of life.
- **Environmental benefits** – several of the elements of the proposal could help to resource the maintenance and protection of natural amenities and wildlife.

The type and scale of these impacts will depend on the projects that end up being completed, the inputs used, and the extent of outreach and engagement with local business and community groups.



The process for developing the strategy and action plan can build off existing work by TWC and the regional economic development manager, who have instigated the development of a tourism strategy, including the new brand and associated marketing, the identification of new icons and new channels to market. Our proposal has additional elements and will require extra resources to implement.

The proposal is certainly consistent with national priorities to increase the economic contribution made by tourism at a national and regional level. Through the national Tourism Strategy, the Government is seeking to increase high-value visitation, improve the quality of the visitor experience, provide authentic experiences, improve tourism-related infrastructure and ensure all regions benefit from visitors. It has a range of initiatives underway as part of the strategy that can be leveraged (see *Relevant current Central Government initiatives* below). Research and policy work has been previously undertaken on user charges for access to the conservation estate and on visitor levies. There are also central funding mechanisms that will need to be considered as part of the review of the West Coast's funding mix, including the Tourism Growth Partnership and the Regional Mid-Sized Tourism Facilities Fund.

Relevant current Central Government initiatives

- The Government's Tourism Strategy.
- Tourism Growth Partnership.
- NZ Cycle Trail funding.
- The Regional Mid-Sized Tourism Facilities Fund.
- Work on improving visa settings and visitor facilitation at the border.
- The development of China market research.
- Investment in tourism-related ICT and roading infrastructure.
- Investigation of a regional development approach to public conservation land.
- Review of the use of regulatory levers to manage the impacts of freedom camping on the environment and local communities.
- Programmes to improve overseas driver safety.
- Improvements to tourism data and research.

The proposal is however, complex, and several dimensions will need to be progressed concurrently. For example, it will be difficult to develop new iconic attractions and new products unless the funding model is improved. It will similarly be difficult to improve marketing and promotion without the enhancements to resourcing and promotional arrangements. Some of the components will require national-level policy processes (e.g., the assessment of the potential for user charges on conservation land). Developing the strategy and plan will require the input of a large range of stakeholders, including industry, iwi, community groups, councils and central government agencies. Part of the task of the action planning stage will be to determine those elements of the proposal that can be progressed relatively quickly versus those that will likely take up to 2 years and what that will mean for the implementation of the visitor strategy and plan.

A risk with the proposal, if it is successful, will be managing the tension between growing the visitor economy and maintaining an authentic tourism experience, including the impact on communities and natural attractions.

It is important that Ngāi Tahu and the local rūnanga are engaged from the beginning of the proposed visitor strategy and action plan. They bring a combination of cultural and commercial perspectives to the discussion and also have resources to support agreed developments.



This proposal ranks highly on our criteria. There are clearly identified issues and opportunities that can be addressed, the potential impact is large and the benefits will be region-wide.

As noted, existing local and national work and initiatives can be leveraged. The proposal rates lower in terms of its manageability because of the number of component parts and its complexity.

The Governance Group also assessed this proposal as a high priority.

Table 10. Assessment of the tourism strategy and action plan proposal

Criteria	Assessment
Validity	High
Potential impact	High
Practicality	Low-Medium
Regionally significant	High
International orientation	Medium
Ability to leverage local/regional work and investment	High
Consistency with national priorities	High
Overall assessment	High

What other opportunities will impact on the sector's growth?

Several of the other opportunities discussed in this report will be important for the success of the tourism sector proposal and ultimately sector growth:

- Securing the extension of UFB and RBI and ensuring this is rolled out in a timely manner, given that visitors now expect fast internet access as a given (see the *Telecommunications* section).
- Improving road resilience across the region and the safety of roads for visitor drivers (see the *Transport* section).
- If the cases for the Wangapeka and Haast-Hollyford roads are completed and proven, these northern and southern links will also likely impact on the number of visitors (see the *Transport* section).
- The review of economic development arrangements in the region. As was noted, the proposed review needs to consider the mix of both economic development support and marketing and promotion support (see *Economic Development Arrangements*).
- The review of DWC's investment approach and its role in economic development. As well as providing annual funding for TWC, DWC is continually approached for funding for specific tourism products, such as cycle trails and heritage attractions (either directly or via its funding to councils). It would be helpful for the proponents of these projects, and for DWC, if there was a clear tourism strategy and plan for it to consider funding applications against (see *Economic Development Arrangements*).
- The proposed expansion of experiential leadership programmes (see the section on the *Education sector*). Increasing length of visitor stays and visitor expenditure requires a higher quality visitor experience and excellent customer service. There may be demand for several hundred tourism-related jobs over the next 5 years. Forecasts by NZIER (2015) indicate that if Tourism Industry Aotearoa's ambitious goals are met, there will be significant demand for service managers across New Zealand. The industry will need to work with educational institutions and intermediaries to identify ways of meeting this demand, for example, through improved on-the-job training for new employees. Several regions will be facing similar demands, so the West Coast needs to ensure that it can develop and retain these skills in the region.



What do stakeholders need to do to support the opportunity and growth in the sector?

Industry	<ul style="list-style-type: none"> • Continue to co-fund marketing and promotion through TWC. • Continue to invest in improving the quality and consistency of services and experiences, for example, through investment in training. • Provide advice on the development of the tourism strategy and action plan. • Co-invest in enhancing existing tourism products and in developing new products. • Invest in enhancing existing accommodation and in developing new accommodation.
Communities	<ul style="list-style-type: none"> • Provide support to councils to continue funding tourism promotion and development. • Continue to provide volunteer support for the development of key attractions. • In Franz Josef, contribute to the review of options for managing hazard risks and catering for visitor growth.
Māori/iwi/hapū	<ul style="list-style-type: none"> • Provide advisory and governance support for development of the tourism strategy and action plan. • Co-invest in enhancing existing tourism products and in developing new products. • In Franz Josef, contribute to the review of options for managing hazard risks and catering for visitor growth.
Local government	<ul style="list-style-type: none"> • Provide advisory and funding support for the development of the tourism strategy and action plan. • Review local government funding support for regional tourism promotion and marketing as part of the review of economic development arrangements and funding options. • Contribute to the review of options for managing hazard risks and catering for visitor growth in Franz Josef. • Support the development of feasibility studies and business cases for tourism product proposals and co-invest in major tourism initiatives and infrastructure, where appropriate.
Central government	<ul style="list-style-type: none"> • Co-fund tourism opportunities with good economic development cases through the Tourism Growth Partnership Fund and Regional Mid-Sized Tourism Facilities Fund. • Continue investment in road projects which underpin access to many visitor attractions. • Provide support for the development of the tourism strategy and action plan. • Provide advisory support for the review of tourism funding options. As part of this, undertake work on visitor levies and charging options for access to the conservation estate. • Contribute to the review of options for managing hazard risks and catering for visitor growth in Franz Josef. • Continue to invest in the maintenance and development of sites, tracks and cycle trails. • Continue investment in road projects which underpin access to many visitor attractions.



MINERALS AND RELATED PROCESSING

Overview

Although the minerals sector in the region has contracted in recent years, it still is, and will continue to be, a large-scale and high-value industry. The West Coast has significant advantages in the minerals sector given the volume of minerals, the local infrastructure and capability. There are strong local mining businesses as well as supporting businesses in machinery and equipment manufacturing, engineering, surveying, and construction. There is an experienced labour force and a well-functioning industry body.

The minerals sector generated \$418 million in GDP, or 22 percent of the value generated by the West Coast in 2015, and supported 1,180 jobs, or 7 percent of employment. The minerals sector has extremely high productivity (\$354,500 of GDP per filled job) and generates high incomes.

There has been large-scale downsizing and commencement of care and maintenance activities in relation to export-focused mines (e.g., Escarpment, Spring Creek, Roa) in response to coal and gold prices. Employment in the sector on the West Coast has fallen from 1,660 in 2012 to 1,180 in 2015, or a fall of 11 percent per year on average during that period. The closure of Holcim will see a further large drop in employment this year. Domestic coal producers remain profitable, with West Coast coal being used in a range of industries on the South Island.

The current sale of Solid Energy assets provides the most significant opportunity to maintain West Coast coal production at scale. However, international coal prices are forecast to only slightly recover over the medium-term, so only limited growth in coal mining in the region should be expected.

The prospects for a rebound in gold mining are more positive, with international prices expected to recover over the medium-term. Alluvial gold mining has remained an important industry for the West Coast, with up to 60 active operations occurring from South Westland to Northern Buller.

Companies are continuing to look for investment, development and exploration opportunities. Rangitira Developments Ltd and Stevenson Mining have applied to DoC for access to a conservation area for an open-cast coal mine at Te Kuha. Companies are also exploring the potential of 'non-traditional minerals' including garnet placer deposits, ironsands, coal-seam gas development and petroleum. Sector feedback suggests that at least one of these is likely to be developed in the next 2–3 years.

Other than the impact of international market conditions, the sector is facing several challenges in the region:

- Sector feedback suggests that in many cases they are experiencing long timeframes for the processing of exploration permits (e.g., 12-18 months for permits). It is also likely that permitting fees will increase as a result of a current fees review, although the sector may be more accepting of this if it results in more efficient services.



- Access to land for prospecting and exploration can be particularly difficult on the West Coast because of the significant proportion of land in the conservation estate (around 85 percent), which means that an access agreement is required under the Crown Minerals Act 1991 from the Minister of Conservation or, for significant projects, from the Minister and the Minister of Energy and Resources.
- A large proportion of the West Coast conservation estate is stewardship land (around 45 percent), which means that its conservation value has not been classified. Sector representatives in the region consider that there are areas of stewardship land that are of low conservation value with minerals potential, which should be candidates for sale, land swaps or reclassification. They also expressed concerns that some areas of low-value land are being added to national park areas without consideration of mineral potential.
- Sector representatives pointed to what they observed was unnecessary duplication of regulatory approval processes, which add to the time and costs involved in commencing exploration or mining. In some cases, up to six approvals related to resource management are required.
- There have been significant difficulties and costs faced by companies in obtaining consents for new mines due to environmental objections and process hurdles (e.g. the Escarpment consent process took several years and reportedly cost Bathurst over \$15 million dollars).

Opportunity

The opportunity is to create the conditions now to allow current mineral developments to be achieved – and achieved efficiently – while balancing environmental impacts, and to encourage new investment in the region when prices recover. Three proposals are suggested:

- 1 Clarifying areas of stewardship land in the conservation estate with development potential that are of low conservation value. An accelerated programme of assessing stewardship land for its conservation values and making appropriate determinations on whether to reclassify, swap or dispose of it would significantly improve certainty over the potential opportunities for the use, development or conservation of this land. This will require a well-resourced process with a clear timeframe to survey the land appropriately and enable effective consultation, including with Ngāi Tahu.
- 2 A 'single window' for dealing with applications and consents. This would be comprised of a co-located team from the relevant agencies (e.g., councils, NZPAM, DoC) with the expertise and capability to jointly assess applications for resource consents, concessions and access agreements. It would provide coordinated processes for pre-application meetings, setting out information requirements, information requests and review of documents such as assessments of environmental effects. It could also provide coordinated processes for public notifications, community and iwi consultation and engagement and undertake all support services for combined district/regional resource consent hearings. This would not only streamline the regulatory processes but aid in ensuring the consistency and quality of assessments.
- 3 A Collaborative Planning Process to facilitate mining and environmental protection in the Buller Coalfield area. The idea would be for all relevant parties (minerals companies, environmental groups, iwi, relevant community groups, local and central government agencies) to determine the conditions under which mining could be a permitted activity in specific areas of the Buller Coalfield and for this to be incorporated in the District Plan. For example, it might be that if mining companies can demonstrate upfront the economic benefits and costs of the project and that they can meet specified tests for the management, rehabilitation and compensation of environmental effects, then the mining activity would be permitted in specific areas and consents would not be



required. Additional areas of the Coalfield could also be identified for protection as part of the process.

What is the sector's contribution and make-up?

Despite the recent decline, the minerals and related processing sector is still the largest sector on the West Coast economy in value terms. In 2015, it contributed \$418 million in GDP, over 20 percent of the economy and provided 1,179 (7 percent) of the region's jobs.

The sector has extremely high productivity, with each worker producing at 320 percent of the region's average level of GDP per filled job.

Table 11. Minerals & related processing key indicators, 2015

2015	Minerals & related processing	% of region
GDP (2010 \$m)	418.0	22.3%
GDP location quotient	9.3	
Filled jobs	1,179	6.9%
Employment location quotient	9.0	
Productivity (GDP/filled job) (2010\$)	354,503	321%
Exports (2015 \$m)	1.6	0.2%

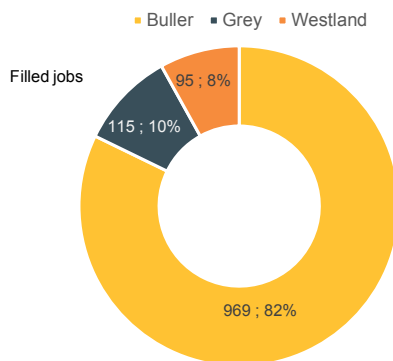
Source: Infometrics regional database.

Note: Exports shown for the minerals sector do not reflect the activity that occurs in the region. This is a combination of reporting of where export activity occurs but also sensitivity around the value of minerals exports and the reported figures. For consistency we have kept to the Infometrics estimate. However, our own estimate suggests coal and gold exports from the region were about \$270 million in 2015.

The sector is also very strongly concentrated in the region, based on the underlying mineral resources that exist that are not found in the same diversity in other regions in New Zealand.

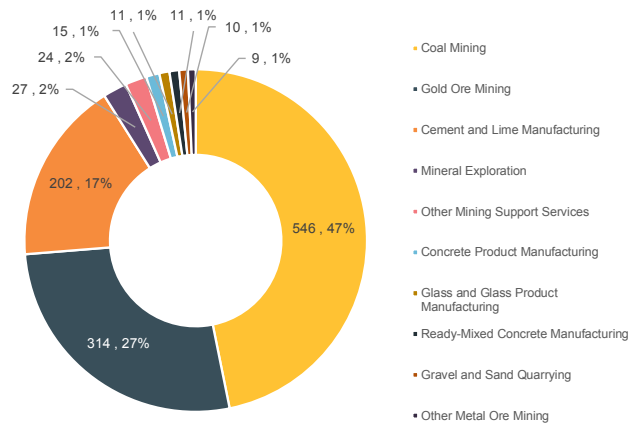
The large majority of employment in the sector is in Buller (82 percent) (Figure 48). In 2015, coal and gold mining together made up almost 75 percent of employment in the sector (Figure 49). Cement and lime manufacturing was also large (17 percent of employment) but this will have fallen with the closure of Holcim this year.

Figure 48. Minerals & related processing employment, 2015



Source: Infometrics regional database

Figure 49. Minerals & related processing employment by industry, 2015



Source: Infometrics regional database

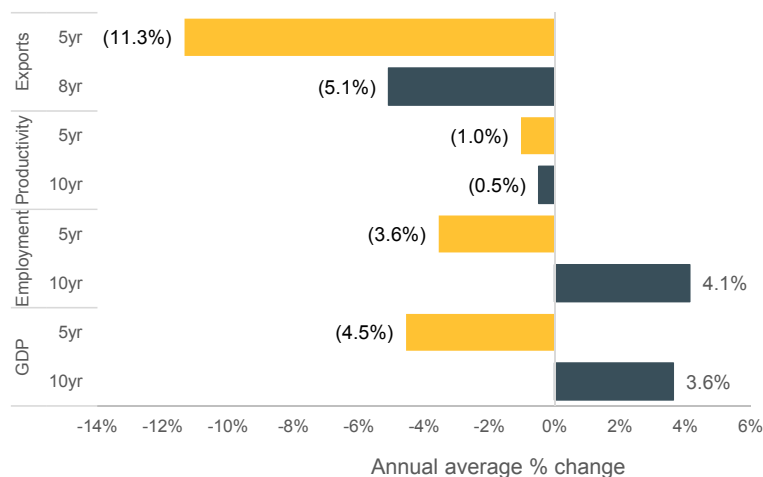


How is the sector performing?

As shown in Figure 50, sector activity has declined over the last 5 years. Estimated real GDP fell significantly, by 4.5 percent per year, and employment fell by 3.6 percent per year. Exports fell dramatically.

Conversely, the sector experienced strong growth over the longer term, with close to 4 percent growth in GDP and employment over the last decade (and hence was growing very strongly over the first half of the decade). Productivity declined slightly over the long-term, indicating that the additional value generated per employee was falling as the number of jobs grew.

Figure 50. Minerals & related processing key indicators, 5yr and 10yr change



Source: Infometrics regional database

Note: Exports are based on the volume of coal exported. Due to suppression of export values we are unable to provide a measure of minerals exports on the West Coast consistent with other sectors.

Table 12 shows the concentration of industries within the minerals and related processing sector. Employment in coal mining, gold mining, cement and lime manufacturing, mineral exploration and other metal ore mining were extremely over-represented in the region in 2015. Again, the closure of Holcim will have lowered the intensity of employment in cement and lime manufacturing.

This table also shows the 10-year trend rate of GDP and filled job growth for different industries. This shows solid to strong growth in most of the major mining industries over the long-term. However, this masks what has happened over the last 3 years, where the sector has been hit by a downturn in coal and gold prices.

Looking at the shorter timeframe of 2012–2015, GDP in the sector overall declined by 12 percent per year (by \$195 million) and employment fell by almost 11 percent per year, or by 481 jobs. There was a loss of 455 jobs in coal mining alone over the 3 years. Mining support services contracted by 66 jobs over the same period.



Table 12. Minerals & related processing GDP and employment by major industries, current, 10-year trends and location quotients

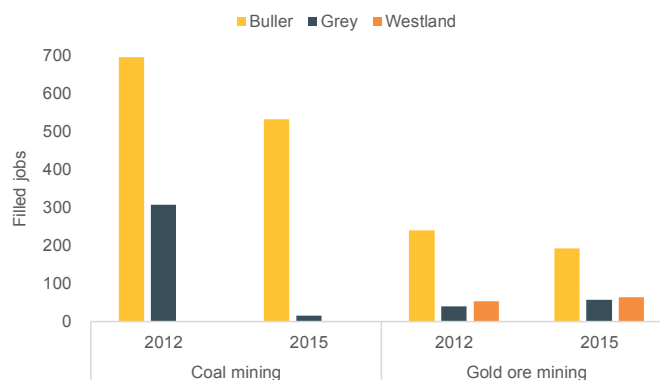
	GDP		Employment		Location Quotient	
	2015	2005-2015	2015	2005-2015	GDP	Employment
Coal Mining	251.9	3.3%	546	5.5%	33.0	70.0
Gold Ore Mining	118.6	13.8%	314	16.2%	15.9	41.1
Cement and Lime Manufacturing	23.4	3.2%	202	4.1%	40.1	51.3
Mineral Exploration	9.9	15.2%	27	21.6%	24.6	64.3
Other Mining Support Services	2.3	(25.7%)	24	(17.6%)	0.3	3.1
Concrete Product Manufacturing	1.7	(7.7%)	15	(6.9%)	0.6	0.7
Glass and Glass Product Manufacturing	1.2	(5.5%)	11	(4.0%)	0.7	0.9
Ready-Mixed Concrete Manufacturing	1.2	9.7%	11	11.1%	0.7	0.9
Gravel and Sand Quarrying	0.3	4.1%	10	7.8%	0.5	1.5
Other Metal Ore Mining	6.7	5.9%	9	1.3%	91.4	114.4
Minerals & related processing	418.0	3.6%	1,179	4.1%	9.3	9.0

Source: Infometrics regional database.
Note: Growth rates are compound annual average

Figure 51 shows the changes in the number of jobs in the two major minerals industries (coal and gold ore mining) and across the three districts between 2012 and 2015. There was a net loss of 163 jobs in Buller in coal mining over the period and a loss of 291 jobs in Grey.

Although the number of jobs in gold mining declined in Buller by 47 jobs, there was a small increase in gold mining jobs in Grey (17 jobs) and Westland (11 jobs) over the same period.

Figure 51. Employment in coal and gold mining by West Coast district, 2012 and 2015



Source: Infometrics regional database

This reflects that there is placer⁷ gold mining in Grey and Westland, which has not been as affected by the drop in gold prices compared to open-cast and underground mining in Buller.

The overall picture is that the decline in the sector has significantly affected Buller, which was exposed to both coal and gold mining, and also considerably affected Grey which was exposed to coal mining.

⁷ Placer mining is the mining of stream bed (alluvial deposits) for minerals. This is in contrast to hard rock, or lode, mining where the mineral is extracted from a lode or vein filled with mineral in the rock.



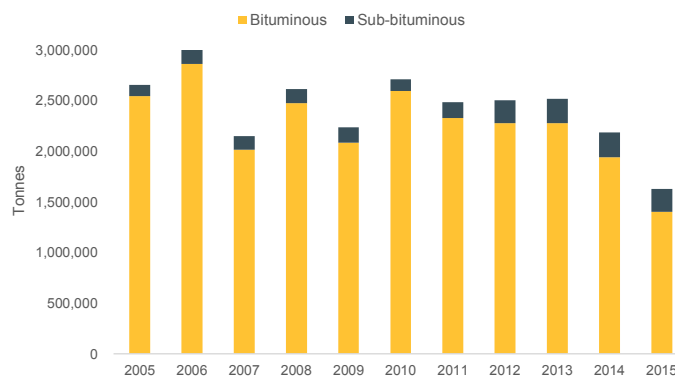
Production

Coal

The volume of coal produced in the region varied between 2 million tonnes and 2.5 million tonnes over 2007–2013 before falling rapidly in 2014 and 2015 (Figure 52).

The region produced 1.63 million tonnes of coal in 2015. The fall has been in the production of bituminous coal, with sub-bituminous remaining relatively constant at 225,000 to 250,000 tonnes over 2012–2015.

Figure 52. Coal production on the West Coast, 2005–2015



Source: MBIE, Coal data tables

In May 2016 there were 12 coal mines on the West Coast but only 6 were producing. These were Stockton (Solid Energy, Buller), Burkes Creek (RJ Banks, Reefton), Reddale Valley (Solid Energy, Reefton), Giles Creek (Birchfield Coal, Inangahua), Berlins Creek (Heaphy Mining, Inangahua), and Rajah (Francis Mining, Greymouth) (Table 13).

Stockton is the largest coal mine in New Zealand and dominates the West Coast’s production figures (around 68 percent of total production in 2015). A large proportion of the significant decline in West Coast coal production over the last 2 years is the result of the decline in production at Stockton (it was producing close to 1.9 million tonnes in 2013).

Table 13. Coal mine production on the West Coast, 2015

Coalfield	Mine	Status	Operator	Type	2015 Tonnes
Buller	Stockton	Operating	Solid Energy	Opencast	1,112,569
	Cascade	Suspended	Buller Coal	Opencast	47,026
	Escarpment	Suspended	Buller Coal	Opencast	19,140
Reefton	Burkes Creek	Operating	RJ Banks	Opencast	12,291
	Reddale Valley	Operating	Solid Energy	Opencast	26,628
Garvey Creek	Echo	Suspended	Francis Mining	Opencast	0
Inangahua	Giles Creek	Operating	Birchfield Coal	Opencast	163,105
	Berlins Creek	Operating	Heaphy Mining	Opencast	26,993
	Spring Creek	Suspended	Solid Energy	Underground	0
Greymouth	Strongman	Suspended	Solid Energy	Opencast	58,710
	Roa	Suspended	Francis Mining	Underground	24,101
	Rajah	Operating	Francis Mining	Opencast	139,340

Source: New Zealand Petroleum & Minerals, Operating coal mine production figures

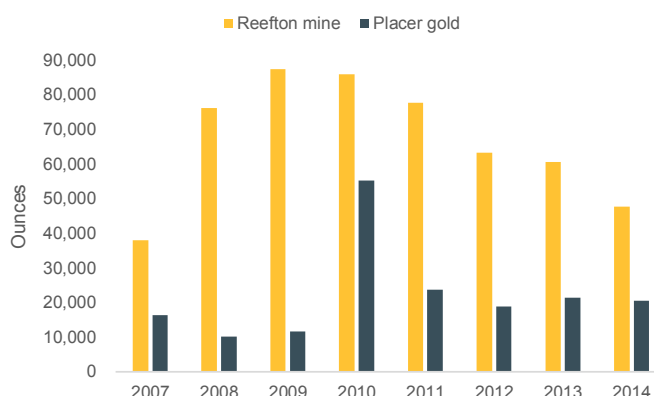


Gold

The volume of lode gold produced by OceanaGold's Reefton mine reached a peak of close to 90,000 ounces in 2009 before declining steadily to just under 50,000 ounces in 2014. The mine was put into care and maintenance this year.

The production of placer gold in the region has remained relatively steady over 2011–2014 at around 20,000 ounces (Figure 53)

Figure 53. Gold production on the West Coast, 2007–2014



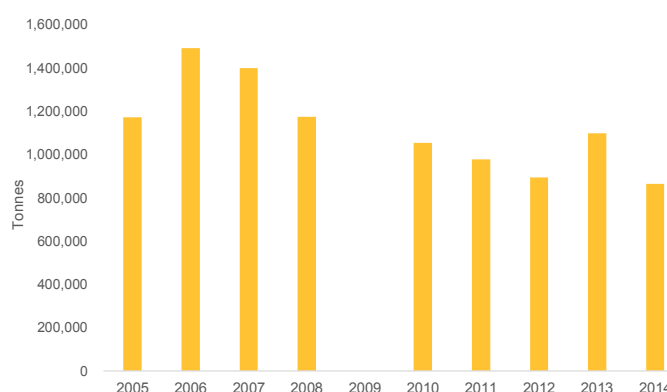
Source: OceanaGold Factbooks (various years); Placer gold figures based on MBIE, New Zealand Coal, Industrial Minerals and Metallic Minerals Production Survey (various years, with figures provided in kilograms)

Industrial minerals

The volume of industrial minerals produced on the West Coast has varied from year to year. Production has declined from 2006 when it peaked at around 1.4 million tonnes.

Over 2010–2014, production has varied between 850,000 tonnes and 1.1 million tonnes. Up until the closure of Holcim this year, limestone for cement comprised by far the largest proportion of volume at around 750,000–850,000 tonnes most years.

Figure 54. Industrial minerals production on the West Coast, 2005–2014



Source: MBIE, New Zealand Coal, Industrial Minerals and Metallic Minerals Production Survey (various years)
Note: a major element of the data was withheld in 2009.

The next largest volume minerals have typically been rock, sand and gravel for roading (close to 250,000 tonnes in 2013) and limestone for agriculture (close to 50,000 tonnes in 2013). Other industrial minerals that have been extracted in very small quantities include building and dimension stone, rock for reclamation and protection, and rock, sand and gravel for roading.



What is the current potential for growth?

The diversity of the sector means it is not straightforward to forecast growth, although given the dominance of coal mining and gold mining in the region, the fortunes of the sector will largely be tied to their prospects in the medium-term. And the prospects for coal and gold depend largely on international prices and new discoveries, although there are several companies on the West Coast that supply to domestic users of coal.

As already emphasised, coal mining has experienced a significant downturn over the last 3 years due to falling demand from China (as a result of lower growth and stricter tests on imported coal aimed at pollution control) and a resulting large decline in coking coal prices from close to US\$300 per tonne in 2011, to US\$70 per tonne earlier this year. Oil and gas have proven to be cheaper substitutes and higher cost coal production will likely continue to be an expensive alternative over the medium term.

However, spot prices have increased rapidly over the last two months, with the price of coking coal increasing to over US\$120 per tonne in August (the highest price in 2 years). This rise is due to a coking coal shortage in China, as it moves to cut its own output of poorer quality coal and because transport problems have affected the main coal producing province in the country. Most forecasts suggest that this will be a short-term phenomenon and that demand from China will remain weak over the medium-term. This, combined with Australia increasing production, suggests that coal prices will hover around US\$100 per tonne the next 1-2 years. Over the medium-term, commentators also expect prices to remain relatively flat.

The closure of the Holcim cement works has resulted in an immediate drop in demand for West Coast's thermal coal. The domestic market for thermal coal over the medium-term is regarded as relatively stable with limited potential for growth as operators largely supply coal for milk processing plants and domestic heating.

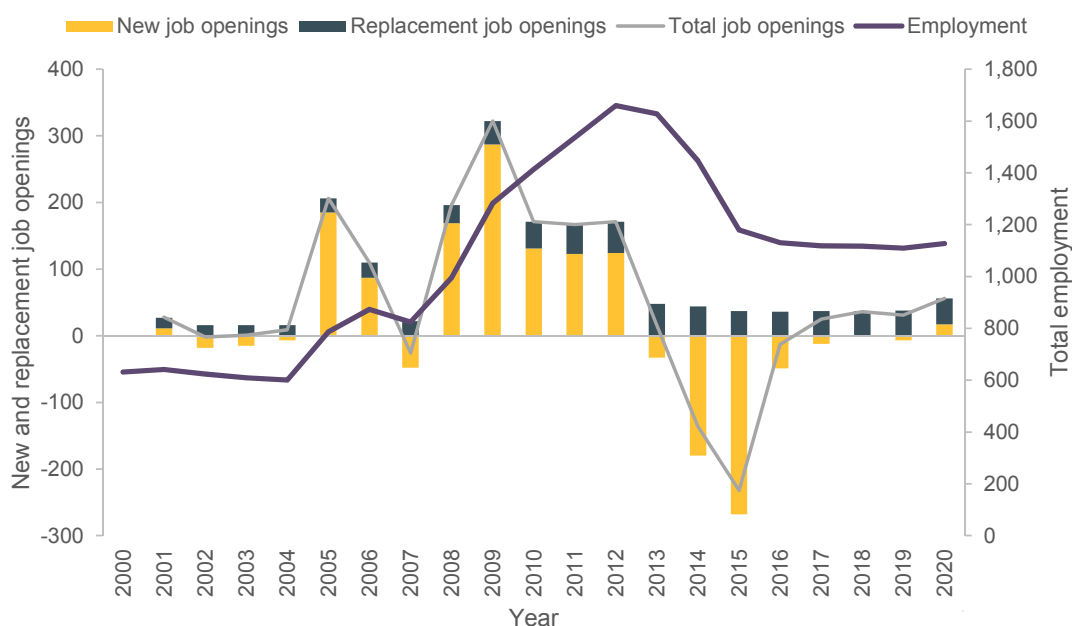
Gold mining experienced a downturn due to falling international prices (from over US\$1,850 an ounce in 2011 to just over US\$1,000 an ounce at the end of 2015). However, the outlook for gold is more positive than it is for coal. There has been a surge in world gold prices in the last few months (to over US\$1,300 an ounce) due to concerns about instability following the Brexit vote, lower interest rates and continued demand for gold from China. Expectations of poorer global economic conditions will likely maintain demand for the 'safe' investment of gold. This, coupled with an expected fall in the global production of gold, should see prices stabilise or increase slightly over the medium term, in the vicinity of US\$1,300 to US\$1,400 an ounce.

Overall, in the absence of a greater than anticipated recovery in coal and gold prices or new discoveries of gold, we would expect limited growth in the minerals sector in the region over the medium-term. However, much of the job shedding and closures or mothballing of mines appears to have already occurred.

Under a business-as-usual scenario, Infometrics forecasts that employment will only fall very slightly over 2016–2020 by 0.3 percent per year (a loss of three jobs). However, Infometrics also forecasts that the sector will have 63 job openings over 2016–2020, to replace those leaving the workforce (Figure 55).



Figure 55. Minerals & related processing job openings and total employment, historical and forecast



Source: Infometrics regional database

What are the existing strengths of the sector in the region?

The major strengths of the region relate to the availability of the minerals resource and the capability and knowledge base that has built up over a long period of time.

A significant range and amount of mineral resources⁸

The West Coast is rich in a range of minerals, including:

- Coal** – there are seven major coalfields on the West Coast (Buller, Greymouth, Pike River, Inangahua, Reefton, Garvey Creek and Charleston) as well as scattered smaller deposits. Bituminous (or coking) coal is found in the Greymouth, Buller, Pike River and Garvey Creek coalfields and is mostly exported to steel makers. The Inangahua, Reefton and Charleston coalfields contain sub-bituminous (non-coking) coals and are important sources for local markets. MBIE estimates that there around 500 million tonnes of remaining coal resources⁹ and Minerals West Coast notes that just under half of that might be recoverable.¹⁰

⁸ This section contains information from Christie, Barker and Brathwaite, 2010; Development West Coast, GNS Science, Minerals West Coast, 2010; Henley, 2016.

⁹ New Zealand Petroleum & Minerals, Regional Coal Resources. <http://www.nzpam.govt.nz/cms/investors/our-resource-potential/minerals/coal/regional-coal-resources>

¹⁰ http://www.mineralswestcoast.co.nz/westcoast_coal.aspx



- **Gold** – there are four main goldfields at Reefton, Lyell, Mt Greenland and Bald Hill as well as a range of placer or alluvial gold mining areas. There are up to 60 active alluvial gold mining operations in the region.
- **Ilmenite** – There are large ilmenite resources along the West Coast within beach deposits and dune sands between Karamea and Bruce Bay. Ilmenite can be refined to titanium dioxide, which is mainly used as a white pigment in paints, plastics and paper. Exploration of the deposits near Westport suggests about 5 million tonnes of ilmenite is potentially recoverable and associated minerals within the sand deposits could also be recovered as a by-product of mining. The other major deposit is at Barrytown where it is estimated that 6.9 million tonnes of resource exist.
- **Garnet** – large deposits of garnet have been identified near Hokitika and garnet also forms a significant amount of the ilmenite beach sand deposits near Westport. Garnet sand is used as an abrasive, particularly in sand blasting.
- **Limestone** resources are extensive and these include some high quality deposits. Major limestone deposits are found at Karamea, Inangahua, Charleston – Punakaiki, Cape Foulwind, Waipuna, Kowhiterangi and Ross. The limestone at Cape Foulwind was mined for cement manufacture for almost 50 years before the closure of Holcim. Good quality agricultural lime is produced from the Oparara quarry (Karamea), Waipuna, Ross, Kowhiterangi and from near Charleston.
- **Pounamu** can be recovered from gravels in Arahura, Taramakau and Hokitika rivers. Ngāi Tahu have ownership of the pounamu resources.
- **Aggregate** – abundant supplies of good quality roading and concrete aggregate can be obtained from gravel deposits from many of the region's rivers. High strength concrete has been produced using aggregate from the Grey, Buller and Mokihinui rivers. Large rock suitable for river and coastal protection is available from several sources.
- **Oil and gas** – there are petroleum seeps near Moana although offshore and onshore explorations have not identified a major source. However, small scale accumulations of economic importance could occur. Between Reefton and Inangahua there is some potential for coal seam gas.
- **Silica** is present in thick sand deposits at Charleston, as sandstone within the coal measures in coalfields, and as vein quartz in the Reefton Goldfield. The Charleston silica sand deposits are large and accessible but because of a high level of impurities (mica and feldspar), there has been little interest in these resources to date. If an economic method of cleaning the sand can be developed, then the potential to mine these deposits would be enhanced.

A large number of other minerals have been identified and located, including copper, nickel, tungsten, zircon, mica, slate and rare earth elements. To date these have been found mostly in low grade non-extensive deposits.

Sector capability

Not surprisingly, given the long history of mining in the region, there are strong locally-owned mining businesses and a range of machinery and equipment manufacturing, engineering, mineral analysis, surveying, and construction businesses that service the sector. There is an experienced labour force in the region. For pounamu, there is also a capable carving industry that supplies end products to visitors.



A well-functioning industry body, Minerals West Coast, coordinates industry activity and provides and disseminates relevant information to encourage growth. For example, a Minerals West Coast document was recently completed to promote the potential of the sector to investors. TPP also offers mining specific industry training.

High quality information on available resources

There is considerable information on the mineral resources available in the region that helps to inform exploration and investment decisions. This includes the West Coast aeromagnetic survey data which provides information on the subsurface geology of the region. This data has also been interpreted and published by GNS as a comprehensive minerals resource assessment.

Prospects

There are real prospects for maintaining and growing minerals production on the West Coast.

As the largest coal producer by far on the West Coast, the potential sale and ongoing operation of Solid Energy assets, particularly the Stockton mine, provides the most significant opportunity to maintain the scale of coal production on the West Coast. Whether a new owner can be found will depend in part on a combination of the outlook for coal prices and the ability of a new owner to operate more efficiently. The sale process is still to be completed.

Companies are continuing to look for new investment, development and exploration opportunities. Rangitira Developments Ltd and Stevenson Mining have applied to DoC for access to a conservation area for an open-cast coal mine at Te Kuha. It is anticipated that the mine could recover about 4 million tonnes of coal over 16 years and that construction would inject \$28 million of spend and employ 64 workers over a 12-month period on the West Coast (Copeland, 2014). OceanaGold has been exploring the potential of the Blackwater mine (south of Reefton) and have completed the preliminary economic assessment. The assessment suggests the project has promise and the ability to produce 55,000–60,000 ounces of gold per year over 11 years, employing 140–150 workers when operational (Griffiths, Smith, Moore and Hughes, 2014; OceanaGold, 2015).

Companies are also exploring the potential of garnet placer deposits, ironsands, coal-seam gas development and petroleum. We were informed that at least one of these is likely to be developed in the next 2–3 years.¹¹

¹¹ Suggestions were also made during the consultation process for this study that a potential future for coal in the region could be in processing value-added products, such as activated carbon (for water and air purification) and carbon black (used in plastics, paints and inks). However, we are not aware of any genuine proposals in this area.



What are the challenges facing the sector in the region?

Apart from the impact of international markets, the major challenges the sector faces in the region relate to securing approvals to undertake exploration and mining.

Exposure to international price movements

While relatively diversified, the sector in the region is dominated by coal (as noted, around 60 percent of the value of the sector and close to 50 percent of employment) and gold (around 28 percent of the value of the sector and employment). These two industries are largely dependent on international markets and have been hit by major falls in world prices. As was noted in the section on the outlook for the sector:

- The drop in coking coal prices over 2011–2015 (from over US\$350 per tonne to around US\$70 per tonne as shown in Figure 56) significantly affected the viability of coal mining and resulted in the rapid decline in coal production and related employment in the region since 2013.
- The fall in the price of gold over 2012–2015 from around US\$1,850 an ounce to close to US\$1,000 an ounce (Figure 57) has impacted on the viability of gold mining (particularly when gold is deeper in the ground). As with coal, open-cast gold mining in the region has fallen away since 2013 as the price has fallen although, as noted, placer/alluvial gold mining production has remained relatively constant.

Figure 56. Coal prices, 2009–2016



Source: Adapted from www.steelmarketupdate.com

Figure 57. Gold monthly price, 2006–2016



Source: IndexMundi, World Bank
Note: US\$ per ounce

As can be seen in the figures above, the price of gold and price of coking coal have both rebounded recently but it is unclear how sustainable these price increases will be.

The issue for the West Coast is that the sector will always be subject to upswings and downswings. Even when the price of coal and gold recovers and existing sites in care and maintenance are re-established and new sites become viable, there will be another downturn at some stage. As with the dairy and related processing sector, the region needs to take the opportunity when times are good to diversify its production base across a broader and higher value range of products.



Permitting processes and costs

Sector representatives indicated that in some cases they have experienced long timeframes for the processing of exploration permits. For example, it took 3 years for the WCRC to be granted a rock permit for the Waiho Loop at Franz Josef. Minerals West Coast representatives indicated that 12–18 months for permit approvals was not uncommon. We also note that there is a backlog of mineral change applications and permit applications, although a concerted effort by New Zealand Petroleum and Minerals (NZPAM) has halved this to 158 at the end of July.¹²

NZPAM have recently released the Crown Minerals (Minerals and Petroleum) Fee Review 2016 Discussion Document, which signals increases in fees associated with the Crown Minerals Act (1991). Higher fees have been suggested due to the lower than expected revenue that NZPAM has received, which is needed to maintain compliance and monitoring obligations for existing active permits. Two options are proposed. The minimum annual fee (excluding GST) for: prospecting, exploration and mining permits could increase from \$444 to \$1,400 or \$1,608; new prospecting applications could increase from just over \$1,422 to \$3,000 or \$3,446; new exploration applications could increase from around \$2,044 to \$3,000 or \$3,446; new mining applications (tier 1) could increase from \$2,844 to \$14,500 or \$16,653; and new mining applications (tier 2) could increase from \$2,844 to \$5,000 or \$5,743. Submissions have been sought on the options (NZPAM, 2016).

Sector representatives in the region see the need for higher fees as partly reflecting inefficiencies in the processing of permits. They may be more accepting of fee increases if application timeframes reduce. The WCRC has also suggested that a joint central-regional government process for monitoring and compliance in the region may be more efficient.

Access to land

Access to land for prospecting and exploration can be particularly difficult on the West Coast because of the substantial amount of land in the region in the conservation estate (around 85 percent). This means that an access agreement is required under the Crown Minerals Act 1991 from the Minister of Conservation or, for significant projects, from the Minister and the Minister of Energy and Resources. Vehicle access and any activities that fall outside the footprint of the exploring or mining operation also require a concession under the Conservation Act 1987.

A large proportion of the West Coast conservation estate is stewardship land (around 45 percent), which means that its conservation value has not been classified. Sector representatives in the region consider that there are areas of stewardship land that are low conservation value with minerals potential that should be candidates for sale or land swaps. They also expressed concerns that some areas of low-value land are being added to national park areas without consideration of mineral potential.

We were also told by sector representatives that, although not official policy, NZPAM will not grant new minerals permits within the Te Wai Pounamu World Heritage Area. This will restrict the ability to source rock in South Westland for flood protection works and may mean longer repair times and higher costs in carrying rock longer distances.

¹² <http://www.nzpam.govt.nz/cms/about-nzpam/news/current-news/second-quarterly-report-halves-permit-processing-backlog>



Regulatory requirements

Sector representatives pointed to what they observed was unnecessary duplication of regulatory approval processes, which add to the time and costs involved in commencing exploration or mining. In some cases, up to six approvals related to resource management are required.

- Crown Minerals Act (1991) – Minerals Prospecting, Exploration or Mining Permits and access to Schedule 4 land.
- Conservation Act (1987) – both access arrangements to DoC land and associated concessions for mining-related activities.
- Resource Management Act (1991)
 - Regional Council Resource Consents.
 - District Council Resource Consents.
- Heritage New Zealand Pouhere Taonga Act 2014 – authority to modify heritage, where applicable.
- Wildlife Act 1953 – wildlife permits, where applicable.

Generally, the process of prospecting, exploring and accessing a site for mining entails a long, sequential process through several of these regulatory approval processes. For example, a business has to initially obtain a permit, then consents from the district council and regional council, then potentially a land access arrangement and concession from DoC. As noted by the New Zealand Initiative (Krupp, 2015), a delay or an appeal at any one of the stages can result in significant delays to the remaining stages and the full process.

It is possible for applicants to apply for a suite of consents or permissions concurrently but sector representatives indicated that this can be frustrating and still be time consuming. For example, officials undertaking the assessments may operate remotely from one another and interpret evidence differently.

There have also been major changes in the health and safety requirements for underground and surface mining following the Pike River coal mine tragedy in 2010. These changes are regarded as necessary and important but will require more company time and resources to ensure compliance.

Managing environmental impacts

Minerals extraction obviously has impacts on the environment, including land, flora, fauna, air and water. The impact on water quality can be substantial through acid mine drainage and sediment run-off.

Companies have to plan for and manage these effects and rehabilitate the areas they are operating in, prior to, during and after mining, including investing in plantings, pest management, river restoration etc. All activities must comply with rules set out in the Regional and District Plans and companies must provide compensation when mining is undertaken on conservation land.

It is clear that mines have resulted in soils and vegetation being stripped away and there have been specific examples of acid drainage impacting on the quality of waterways, such as the Stockton mine's previous impact on the Ngakawau River. However, the extent of these impacts relative to the environmental impacts of other sectors in the region, such as dairy and tourism, is not known.



Objections and lengthy consent processes

In some cases, there have been significant difficulties and costs involved in finalising consents for new mines or the expansion of existing mines due to concerns about these environmental impacts. A well-publicised example of such a process was the consent process for the Escarpment mine on the Denniston Plateau, which took several years and cost the company involved, Bathurst, over \$15 million dollars¹³ (the costs to the other parties involved and the taxpayer have not been estimated). Other examples include the processes involved in the consents for the Cypress mine and for the Mt William North Mine project.

The Escarpment Mine Project Consent Process

The Escarpment Mine project covers 106 hectares of the 2,026 hectares of stewardship land on the Denniston Plateau.

In 2010, the predecessor to Buller Coal Limited (a subsidiary of Bathurst Resources Ltd) applied for 24 resource consents for the Escarpment Mine Project from the BDC and WCRC, and for access agreements and concessions from DoC. The resource consents were granted in 2011.

Shortly after, the West Coast Environment Network, Forest and Bird and the Fairdown Residents Association appealed the granting of the consents to the Environment Court on the basis of the landscape and habitat effects and also the climate change effects of the coal extracted from the mine. The appeals hearing was scheduled for a year later.

In 2012 the Environment Court gave a preliminary indication that the consents would be upheld after Bathurst agreed to remove large sections of land from the consent application and to increase the level of rehabilitation.

In late 2012, the Environment Court ruled that the climate change effects from the coal could not be considered as part of the effects of the consents for the mine. In early 2013, the West Coast Environment Network and Forestry and Bird appealed this decision to the High Court, and the decision was upheld. They then appealed to the Court of Appeal.

In 2013, the Minister of Conservation granted access to the conservation land, in return for a \$22 million compensation package. The money was to fund pest and predator control over 25,000 hectares in the Kahurangi National Park and 4,500 hectares on the Denniston Plateau, as well as for historic projects on the Plateau. In the same year, the Supreme Court quashed the appeal.

In 2014, approval was given for Bathurst Resources to commence work on the project and DoC issued the first Authority to Enter and Operate.

The issue with the Escarpment mine process in our view was not that objections were made about the environmental impacts of the mining on the landscape and habitat. The unique habitat and significant ecological values of the Plateau were recognised by all parties and the Courts during the process and naturally there was going to be debate about whether rehabilitation would rectify the losses and if the compensation package was sufficient. Bathurst ended up extending their protective measures as a result of the process. In our view the process was hampered for a number of reasons, including:

- Allowing objections to be considered on the basis of the climate change effects of the end use of the coal. This is a broader policy issue than the mine project in question.

¹³ <http://www.mineralswestcoast.co.nz/PDF/An-investors-Experience-Hamish-Bohannon.pdf>



- The assessment of economic benefits and costs being relatively simplistic and based on an economic impact analysis rather than a full cost-benefit analysis. Better evidence from the outset may have eliminated some of the objections.
- A failure to establish a collaborative process to work through the issues at an early stage. Towards the end of 2012 an attempt was made to bring all the parties together – Buller Coal, Solid Energy, Forest & Bird, Historic Places Trust, DoC, NZPAM and Ngāti Waewae – to discuss opportunities, including progressing a protected reserve.

The delays and costs involved in this project have likely affected the reputation of the West Coast as a location for mining. More broadly, it may mean that it will be more difficult in future to get a 'social licence', or community acceptance, to mine in the region (although feedback during this study suggested that many objections tended to come from those that lived outside of the region).

We also understand that Solid Energy and Bathurst have limited consented mining permits in the Buller Coalfield area and the full consenting process will be required again for further extensions of mining.

What are the specific opportunities for growing the sector in the region?

The major opportunity is to create the conditions now to (a) allow current mineral developments to be achieved – and achieved efficiently – while balancing environmental impacts, and (b) to encourage new investment in the region when coal and gold prices recover.

There are three potential proposals to create these conditions.

1. Clarifying areas of stewardship land in the conservation estate that are of low conservation value

As noted, close to 45 percent of the Conservation Estate on the West Coast is stewardship land – of the 1.9 million hectares of conservation land on the West Coast, 850,000 hectares is stewardship land (Parliamentary Commissioner for the Environment, 2013). The designation of the land, and its potential use, is unclear.

Stewardship land must be managed so its natural and historic resources are protected, but areas of stewardship land can be sold or swapped, reclassified into another category of conservation land, or allowed to have commercial uses (subject to conditions).

The ambiguous status of stewardship and the lack of information on its conservation values creates significant uncertainty for activities that may seek access to pursue development opportunities, such as mining.

It should not be assumed that all of stewardship land is of high conservation value or low conservation value. No systematic assessment of the land has been undertaken on the West Coast. However, assuming there are areas of low conservation value, DoC is effectively using resources to administer some land that has limited natural or historic value.



The Parliamentary Commissioner for the Environment reviewed stewardship land nationally in 2013 and recommended that DoC identify areas that are clearly of significant conservation value and reclassify them in accordance with that value (Parliamentary Commissioner for the Environment, 2013). In 2014, the Associate Minister of Conservation wrote to Conservation Boards seeking their views on priorities for reclassification of stewardship land. DoC subsequently listed three areas of stewardship land as good candidates for review and classification, including the Mokihinui area in the Buller District, and the Te Wāhipounamu South West New Zealand World Heritage Area. In 2015, the West Coast Conservation Board agreed to choose the top five stewardship land areas and decide how it would like to classify these and the criteria on which this would be based.

However, rather than just identifying areas of high conservation value, we suggest also focusing on identifying areas of low value that could be used for other productive uses, sold or swapped. The West Coast Conservation Board, in consultation with iwi, councils and the wider public, could be asked to identify areas based on clear criteria (e.g., 10 areas in the first instance). The review and reclassification would need to have a clear and appropriate timeframe to ensure requisite surveying and consultation (e.g., 2 years), including with Ngāi Tahu, and be well resourced.

Our assessment of the proposal

An accelerated programme of assessing stewardship land for its conservation values and making appropriate determinations on whether to reclassify, swap or dispose of it would significantly improve certainty over the potential opportunities for the use, development or conservation of this land.

As well as increasing certainty for the minerals and related processing sector it could support the development of other sectors such as dairy and forestry, and would be an important information base for wider strategic decisions on the appropriate use of natural resources in the region.

Low conservation value stewardship land could be swapped for high conservation value private land, enabling greater economic development opportunities as well as delivering long-term conservation benefits through permanent protection of high conservation value land within the public conservation estate. While offsetting is not always appropriate, such arrangements can provide flexibility for activities that are unable to avoid impacts on biodiversity, while ensuring that overall they result in no net-loss, or preferably a net gain in biodiversity values. This could be further enabled by:

- identifying private land with high conservation values that could be added to the conservation estate as part of a land-swap
- identifying potential offset sites, or priorities, where private investment in improving conservation values through permanent protection and management could be coordinated to achieve scale
- adjusting regional and district plans to provide a framework for offsetting residual environmental effects that cannot be avoided in line with best practice
- finalisation of the proposed National Policy Statement on Indigenous Biodiversity to provide clarity in national policy direction.

Consultation with Ngāi Tahu will be integral to the process as they have Right of First Refusal to any Crown land intended for sale or swap.



This proposal rates highly in that it is based on addressing an obvious opportunity for the sector and region, is likely to be regionally significant, and could leverage the previous work on identifying areas of high conservation value.

The proposal rates lower in terms of its practicality because it will require significant work and time to undertake the required assessment and consultation.

Table 14. Assessment of proposal to identify low conservation value stewardship land

Criteria	Assessment
Validity	High
Potential impact	Medium-High
Practicality	Low-Medium
Regionally significant	High
International orientation	Low-Medium
Ability to leverage local/regional work and investment	High
Consistency with national priorities	Medium-High
Overall assessment	Medium-High

The Governance Group assessed this proposal as a high priority.

2. Create a ‘single window’ for dealing with permits, land access applications and consents

As was discussed, significant development proposals can require several approvals by multiple agencies, often with over-lapping requirements. Although criteria for decision making and information requirements will vary because of different legal mandates, there is potential for significant duplication. For example, DoC requires an Assessment of Environmental Effects (AEE) in determining access arrangements for mining activities and an AEE is also required for resource consent applications. While the same AEE may suffice for both purposes¹⁴, with different officials operating remotely from one another, there is significant potential for inconsistency between agencies that are not only associated with their different statutory obligations.

There is the potential for resource consent applications under Regional and District Plans to be considered together through a single process. Although this can be much more efficient than applying for separate district and regional resource consents, it is not common practice. Barriers to the joint processing of district and regional resource consents can include a lack of alignment of objectives, a need to coordinate between regional and district councils for information requirements and to liaise with applicants, the time it takes to share expertise and, where required, to agree on the appointment of hearing commissioners.

A single window could overcome these barriers and involve:

- a co-located team with the expertise and capability to assess applications for permits, resource consents, access agreements and concessions
- appointing case managers to provide overall guidance for applications for major projects
- providing coordinated processes for pre-application meetings, setting out information requirements, information requests and review of documents such as assessments of environmental effects
- providing coordinated processes for public notifications, community and iwi consultation and engagement

¹⁴ DoC Guidance on preparing AEEs for applications for Access Arrangements recommends that they meet the requirements of the RMA.



- undertaking all support services, for combined district/regional resource consent hearings.

Over time, such a concept could be expanded to include a role in monitoring mining sites against their obligations.

Our assessment of the proposal

A single window should significantly speed up the application process (e.g., by reducing delays in exchanging information across agencies and undertaking consultation) as has been demonstrated by similar approaches offshore (New Zealand Initiative, 2015). It would thus reduce costs to applicants (and to others involved in the process).

A single window would pool capability for the assessment of complex development approvals and aid in the consistency and quality of assessments. It may also attract talent that may not otherwise be drawn to working for a smaller agency. The increased scale could warrant further investment in improving regulatory practice.

Although there may be risks that environmental issues are not given their due in a streamlined and facilitated process, the evidence offshore suggests that this does not need to be the case (Krupp, 2015). In fact, it may allow these issues to be examined in a more comprehensive way by combining the resources and expertise of several agencies.

There will be costs involved in setting up the real and/or virtual office and processes, although these may be offset by savings through reduced duplication and shared office functions.

Māori should be engaged effectively through the process. This would ensure that iwi would be aware of applications and development proposals early in the process and be a partner and facilitator rather than a constraint or barrier. This is particularly important where development is proposed in pounamu management areas, where Ngāi Tahu own pounamu resources that may be affected by activity.

This proposal rates high on our criteria, as it is likely to genuinely reduce the costs and time involved in the regulatory approval processes and the impact of this may be substantial. It is also consistent with local and central government priorities to reduce the costs associated with compliance and regulation. As with several of these proposals, the complexity will be in designing and implementing the concept and processes involved.

Table 15. Assessment of the single window for regulatory approvals proposal

Criteria	Assessment
Validity	High
Potential impact	High
Practicality	Medium-High
Regionally significant	High
International orientation	Low-Medium
Ability to leverage local/regional work and investment	High
Consistency with national priorities	High
Overall assessment	High

The Governance Group also assessed this proposal as a high priority.



3. Collaborative process for facilitating mining and environmental protection in the Buller Coalfield area

Several areas of the Buller Coalfield have already been subject to lengthy and extensive consenting processes and so a considerable amount is known about the resources and the habitat and eco-systems in these areas. The proposal is to streamline the approval and establishment of further mining, as well as environmental protection, in selected areas of the Coalfield. This could involve a collaborative process between the minerals companies, environmental groups, iwi, relevant community groups and local and central government agencies.

The idea would be for parties to determine the conditions under which mining could be a permitted activity in specific areas of the Buller Coalfield and for this to be incorporated in the District Plan. For example, it might be that, if mining companies can demonstrate upfront the economic benefits and costs of the project and that, they can meet specified tests for the management, rehabilitation and compensation of environmental effects, then the mining activity would be permitted and consents would not be required. The tests could be those already established in prior consenting processes (e.g., Escarpment Mine and Cypress Mine projects). The areas to which these conditions would apply could be based on boundaries identified already through the previous consultative process involving Forest and Bird, DoC, MBIE, the councils and the companies. Additional areas of the Coalfield could also be identified for protection as part of this process.

One mechanism for doing this could be the Collaborative Planning Process proposed under the Resource Legislation Amendment Bill 2015, which can enable a District Plan Change. Under the proposed Process:

- the Council would appoint a Collaborative Group to make recommendations on the issue, with a membership that reflects a balanced range of the community's interests and values in relation to the issue
- terms of reference would be established for the Collaborative Group, which must engage with the broader community and prepare a report with consensus recommendations
- the Council would publicly notify the Collaborative Group report and prepare the plan change which gives effect to the consensus position
- A majority-independent review panel would consider the report and the council would accept or reject the recommendations of the review panel. The decisions must be publicly notified but, if the council accepted the recommendations of the review panel, appeals would be limited to points of law only.

If it is considered that such a collaborative process is not going to be sufficient to significantly reduce the costs or timeframes involved in making approvals, a final option that has been suggested is to specially legislate to make mining a permitted activity in the area subject to conditions (potentially as a 'special economic zone' initiative).

Our assessment of the proposal

We see the merits of this proposal given that it would be an extreme waste of resources for all parties to go through several years of consenting and appeals processes for every project in the area if they are effectively based on similar evidence and arguments to prior processes, and given it is likely they will result in the same outcomes.



The proposal might be seen as favouring a small number of companies, but the fact is that the areas of mining involved are the largest contributors to the value generated by and employment in the sector and hence are important contributors to the economy. Moreover, a key part of the process could also be identifying areas of the Coalfield for environmental protection, which can result in broader social, environmental and economic benefits.

The efficacy of a collaborative process will depend on all parties being prepared to be part of the process and being open to compromise and coming up with a consensus position. Evidence from overseas and New Zealand with collaborative processes suggest that critical success factors are:

- ensuring information is credible, transparent and open to scrutiny
- parties are committed to the process and to engagement
- having a skilled and respected chair
- ensuring open and on-going communication amongst participants in the process
- having clear objectives and timelines at the outset.

Establishing such a process and keeping parties engaged may be difficult. For example, we note that Forest and Bird has a general policy that there be no mining on conservation land (Forest and Bird, 2014). However, we consider that such a process should be attempted as the special legislative option could be more complex, costly and time consuming.

As kaitiaki, Poutini Ngāi Tahu need to be engaged early in the evolution of this proposal, to enable efficient and effective progress through all stages of development.

This proposal rates lower on our criteria mainly because it is quite possible that such a collaborative process will not be feasible. The impact, although potentially significant in the short-term, in our view could be lower over time than the broader proposals to review stewardship land, to establish a single window process and to introduce spatial planning (see *Natural Resources*).

Table 16. Assessment of Buller Coalfield collaborative process proposal

Criteria	Assessment
Validity	High
Potential impact	Medium-High
Practicality	Low-Medium
Regionally significant	Low-Medium
International orientation	Medium-High
Ability to leverage local/regional work and investment	Medium
Consistency with national priorities	Medium
Overall assessment	Medium

The broader benefits will also largely be captured in the Buller district.



Sharing royalty revenue with the region

A few organisations suggested that an opportunity that should be considered in future is the potential for the region to share in the royalties paid by the minerals sector to central government. The issue is that the Councils in the West Coast provide infrastructure and services that enable mining but they cannot rate sufficiently to recover this as the majority of mining occurs on the conservation estate.

Local Government New Zealand has also suggested royalty sharing as a funding option to help build a partnership between the industry, local communities and central government (Local Government New Zealand, 2015). Such arrangements are used in some locations overseas, such as Western Australia. Options include paying a proportion of the royalty payments received from mining in the region back to the region; placing a portion of the total royalty payments received across New Zealand into a special purpose fund that regions can apply for in order to meet mining related infrastructure and service costs; or allowing for local cost-recovery of relevant infrastructure and services where it applies to developments on the conservation estate.

This is a preliminary proposal and requires policy consideration at a national level. The study and action plan process could provide an opportunity to further explore revenue sharing or cost recovery models with the Councils in the West Coast.

What other opportunities will impact on the sector's growth?

Several of the other opportunities discussed in this report will support growth in the minerals and related processing sector, namely:

- improving road resilience and road/bridge improvements to ensure machinery and product can be transported effectively
- the development of an applied research centre focused on working with companies in key sectors, such as minerals and related processing, to assist them in dealing with real-world problems and opportunities
- undertaking regional spatial planning, to enable a vision to be set for an area that deals with competing resource uses and to provide certainty about the outcomes envisaged for that area.

There are also several existing central government initiative of relevance as shown below.

Relevant Central Government initiatives

- Local Government Commission process on local government arrangements in the region, including a project commissioned in association with West Coast Mayors and Chair Forum on options to improve resource management planning, consenting and compliance monitoring services.
- Resource Legislation Amendment Bill 2015.
- Policy development on Special Economic Zones.
- NZPAM Crown Minerals Fees Review.
- Proposed National Policy Statement on Biodiversity.



What do stakeholders need to do to support the opportunity and growth in the sector?

Industry	<ul style="list-style-type: none"> • Continue to invest in prospecting, exploration and mining. • Ensure economic cost-benefit assessments of new major mining projects are robust. • Continue to invest in producing quality information on the potential of minerals in the region. • Continue to invest in environmental management and rehabilitation projects. • Participate, as required, in the collaborative process for facilitating mining and environmental protection in the Buller Coalfield area. • Provide advice on areas of low conservation value stewardship land with minerals potential. • Co-invest in R&D to support the development of new added value products.
Communities	<ul style="list-style-type: none"> • Participate, as required, in the collaborative process for facilitating mining and environmental protection in the Buller Coalfield area.
Māori/iwi/hapū	<ul style="list-style-type: none"> • Participate in the collaborative process for facilitating mining and environmental protection in the Buller Coalfield area. • Work with local and central government to implement the single window for dealing with permits, resource consents and land access arrangements. • Continue to invest in Pounamu extraction and processing. • Consider co-investment in new prospecting, exploration and mining projects. • Participate in the collaborative process for facilitating mining and environmental protection in the Buller Coalfield area.
Local Government	<ul style="list-style-type: none"> • Continue to monitor companies and sites in meeting their consent obligations. • Work with central government and iwi to implement the single window for dealing with permits, resource consents and land access arrangements. • Participate in the collaborative process for facilitating mining and environmental protection in the Buller Coalfield area.
Central Government	<ul style="list-style-type: none"> • Continue to reduce the backlog of mining permit applications and change requests. • Continue to monitor permit holders' obligations. • Continue to produce high quality information on mineral resources. • Undertake the process for identifying areas of low conservation value stewardship land, including research, surveys and consultation. • Work with local government and iwi to implement the single window for dealing with permits, resource consents and land access arrangements • Participate in the collaborative process for facilitating mining and environmental protection in the Buller Coalfield area.



CREATIVE AND ICT

Overview

The creative and ICT sector is currently small in scale in the region (contributing around \$17 million in GDP and just over 300 jobs) but it is growing. Industries that are growing particularly strongly in the region, albeit from a small base, are photographic services, computer systems design and specialist design services.

The West Coast is well known for creative capability in photography, jewellery, design and art. Many artists and craftspeople reside in the region. The region is also growing a stronger base of ICT capability. Two key initiatives that have been launched to support growth in the ICT sector in the last 12 months are Tech Space in Greymouth and EPIC Westport.

The region faces several challenges in attracting and developing ICT enterprises. The West Coast's remoteness, scale and more limited urban amenity options may put off some entrepreneurs. In addition, although high-speed broadband has been rolled-out and fibre has been established in Greymouth and selected locations in Hokitika and Westport, internet accessibility is still poor in many areas of the region. Entrepreneurs likely to come to the region will be attracted to the lifestyle of the Coast, its affordability and the natural amenities.

On the positive side, the establishment of EPIC Westport is proving that the region can attract and grow ICT firms when it presents a clear value proposition. Over 2016, EPIC has attracted five new businesses to the region and generated 12 new jobs. Tech Space in Greymouth is also raising the profile of ICT and improving the capability of local residents.

Opportunity

Small investments would ensure that the number of enterprises and jobs in the ICT sector increases quite quickly. These investments would extend EPIC's and Tech Space's services and presence in the region, co-fund new ICT/creative start-ups, and expand programmes to develop the ICT competence of youth and businesses in key sectors.

What is the sector's contribution and make-up?

The creative and ICT sector is currently a small but developing sector in the region.

In 2015, it contributed \$16.9 million in GDP (1 percent of the regional economy) and employed 311 people (2 percent) of the region's jobs.

Table 17. Creative & ICT key indicators, 2015

2015	Creative & ICT	% of region
GDP (2010 \$m)	16.9	0.9%
GDP location quotient	0.2	
Filled jobs	311	1.8%
Employment location quotient	0.4	
Productivity (GDP/filled job) (2010\$)	54,367	49%
Exports (2015 \$m)	4.3	0.6%

Source: Infometrics regional database

The sector has relatively low productivity, with each worker producing around half of the region's average level of GDP per filled job. This reflects the dominance of creative and art-related industries currently, which are labour intensive. ICT-related industries currently make up a small proportion of the sector (around 6 percent).



Employment in this sector is not concentrated in the region, suggesting that the region does not offer significant resource advantages for this sector overall, although there is a concentration of jobs in some industry segments (see Table 18 below).

The large majority of employment in the sector is in Grey (53 percent) and Westland (29 percent) (Figure 58). Employment in the sector is dominated by newspaper publishing, jewellery manufacturing, museum operation and photographic services (Figure 59).

Figure 58. Creative & ICT employment, 2015

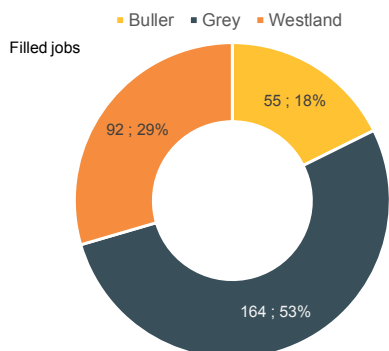
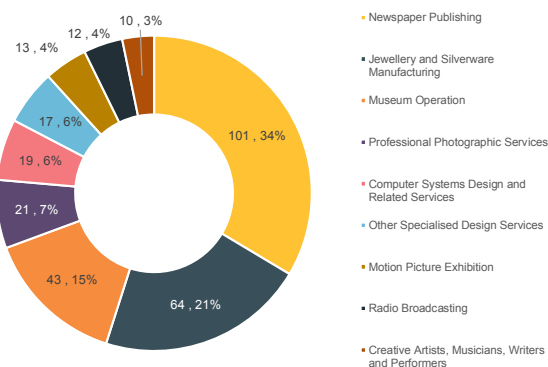


Figure 59. Creative & ICT employment by industry, 2015



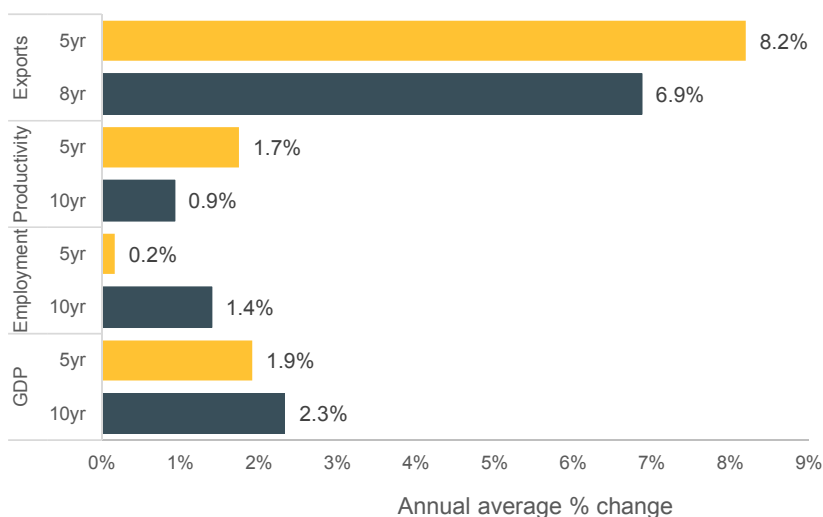
Source: Infometrics regional database

How is the sector performing?

As shown in Figure 60, the sector's estimated real GDP grew moderately over the last 5 years by 1.9 percent per year and employment only grew slowly (by 0.2 percent per year). However, exports grew very strongly by 8.2 percent per year, albeit from a small base.

Although this is a positive story, growth in the sector in the region is well behind the sector nationally, which achieved 4.4 percent per year GDP growth and 2.7 percent per year employment growth over the last 5 years.

Figure 60. Creative & ICT key indicators, 5yr and 10yr change



Source: Infometrics regional database

Creative and ICT industries that have grown particularly strongly in the region over the long-term are photographic services, computer systems design and related services and specialised design services (Table 18).



Industries that are reasonably concentrated in the region are newspaper publishing, jewellery manufacturing, museum operation and photographic services.

Table 18. Creative & ICT GDP and employment by major industries, current, 10-year trends and location quotients

	GDP		Employment		Location Quotient	
	2015	2005-2015	2015	2005-2015	GDP	Employment
Newspaper Publishing	5.7	4.3%	101	1.5%	1.4	2.4
Jewellery and Silverware Manufacturing	3.4	-0.7%	64	-1.4%	6.3	8.6
Museum Operation	2.0	-1.3%	43	0.5%	1.3	2.3
Professional Photographic Services	1.2	11.9%	21	12.7%	1.0	1.6
Computer Systems Design and Related Services	1.0	12.2%	19	13.2%	0.0	0.1
Other Specialised Design Services	1.0	16.1%	17	16.9%	0.2	0.3
Motion Picture Exhibition	0.7	-4.3%	13	-6.6%	0.6	1.0
Radio Broadcasting	0.6	6.5%	12	3.8%	0.3	0.6
Creative Artists, Musicians, Writers and Performers	0.4	-5.9%	10	-4.0%	0.2	0.4
Data Processing and Web Hosting Services	0.3	-5.1%	2	-7.8%	0.1	0.2
Creative & ICT	16.9	2.3%	311	1.4%	0.2	0.4

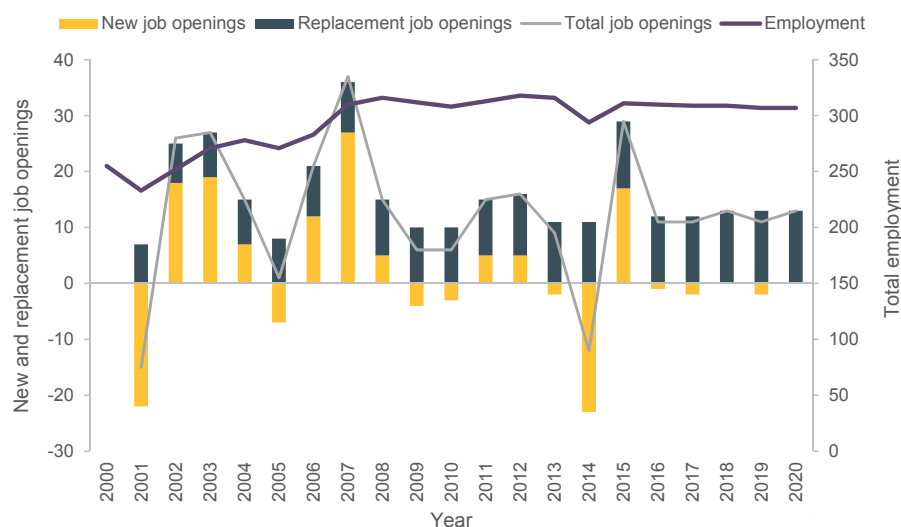
Source: Infometrics regional database

Note: Growth rates are compound annual average.

What is the current potential for growth?

Under a business-as-usual scenario, Infometrics forecasts fairly static growth for the sector in the region over the next 5 years. Based on their modelling, the sector is forecast to decrease employment very slightly by 0.3 percent per year (or lose three jobs) (Figure 61). Across New Zealand the forecast is rosier, with forecast employment in the sector expected to increase by 1.7 percent per year over 2016–2020.

Figure 61. Creative & ICT job openings and total employment, historical and forecast



Source: Infometrics regional database

Note: Shaded area is forecast

However, Infometrics also forecasts that the sector will have 63 job openings over 2016–2020, to replace those leaving the workforce (Figure 61).



We consider that Infometrics forecasts of new jobs are conservative and would expect employment in this sector to be closely tied to the fortunes of the tourism sector, given that several of the major industries are dependent on the visitor economy such as jewellery manufacturing, museum operation and photographic services. Given that tourism in the region is forecast to grow strongly, we would expect some flow-through to this sector. Further, as discussed below, the establishment of EPIC Westport has already seen the attraction and growth of ICT firms in the region (this recent gain in employment is not captured in the Infometrics forecasting model).

Are there any existing or emerging strengths in the region?

The West Coast is well known for creative capability in photography, jewellery, design and art. Many artists and craftspeople reside in the region, for example, pounamu carvers, painters, gold and silversmiths, glass blowers and sculptors, and there are a range of galleries and artist studios. This capability provides value to a range of other sectors such as tourism, minerals and construction.

The region is growing a stronger base of ICT capability. Two key initiatives that have been launched to support growth in the ICT sector in the last 12 months are Tech Space in Greymouth and EPIC Westport.

- **Tech Space** was established by the West Coast Technology Education Trust in 2015 and provides a location where learning and collaboration on technology can occur. It supports the development of ICT capability in youth and the broader community through a range of programmes and events. Demand for Tech Space's programmes has been high (e.g., more than 200 people have attended 12 workshops on electronics, 3D modelling and printing, online tools and animation over 2015 and Tech Space runs a weekly coder's club to teach people the basics of coding).

Tech Space is to employ a project manager to identify how to grow its services (for example, offering a virtual coaching service and formal structured courses). The vision is to take the resources out to other communities on the West Coast.

- **EPIC¹⁵ Westport** was established this year and provides technology businesses with open plan co-working spaces and access to fibre optic internet, with a focus on fostering collaboration and supporting business growth. EPIC services include mentoring and business coaching, network development, funding and investment advice. They are also delivering pilot programmes of work-based training for job seekers. EPIC has been supported by DWC and BDC and has a plan for developing the ICT and creative base of the economy in three stages:

- i Genesis – establish a sustainable innovation hub in Westport, and get businesses in the region to better understand what a weightless economy means and how to make the most of ICT and related capability. This includes relocating teams from national businesses to Westport and supporting local innovation, including the delivery of the Co.Starters programme, which had 16 participants and 14 new businesses in the first cohort.

Co.Starters is a nine-week programme that helps entrepreneurs to develop the tools and relationships they need to turn their ideas into businesses. BDC has supported the

¹⁵ Enterprise Precinct Innovation Centre



implementation of the programme through the DWC Economic Stimulus Fund to bring the cost down for participants.

- ii Beachhead – attracting businesses into the centre and region and demonstrating the types of business activity that are viable. This includes software as a service, call centres, satellite offices, offsite R&D centres, and disaster recovery sites.
- iii Growth – supporting the growth of ‘weightless’ businesses through the region. This includes a focus on developing paths to market, and securing contracts that can be delivered sustainably from the West Coast.

The establishment of EPIC is already showing that the West Coast can attract ICT firms and entrepreneurs from other regions. To date, EPIC has attracted five new businesses. In the first half of 2016, EPIC Westport has generated 12.5 new jobs, with a further 12 jobs scheduled to be created in the second half of 2016.

Several digital literacy programmes are also offered in the region such as the Computers in Home initiative and Stepping Up programme.

What are the challenges facing the sector?

The West Coast faces several obstacles in growing the ICT component of the broader sector.

- **The region’s remoteness, scale and more limited urban amenity options makes it difficult to attract ICT/creative entrepreneurs and skills.** Those that are likely to come to the region will be attracted to the lifestyle of the West Coast, its affordability and the natural amenities. It is clearly possible to attract such entrepreneurs, given the initial success that EPIC Westport has had.
- **There is a limited range of advanced ICT skills in the region.** For example, feedback from Tech Space indicated there are no experienced coders in Greymouth to provide youth with further advice and guidance beyond the basics.
- Although high-speed broadband has been rolled out and fibre has been established in Greymouth and selected locations in Hokitika and Westport, there is still **poor internet accessibility in many areas of the region.** This will limit the ability of ICT firms to grow their businesses (e.g., staff will expect to have fast access not only at work but also at home) and will make the region less attractive to those firms.

What are the specific opportunities for growing the sector in the region?

We consider that the region can and should build on the start that the West Coast Technology Education Trust and EPIC have made in developing the digital economy. Growth in the creative and ICT sector on the West Coast is behind national levels and the region could have a stretch goal to match national trends over the long-term.



A digital economy action plan

To enable this, the specific proposal is to develop and implement a plan to accelerate the development of digital businesses and ICT capability and skills in the region (a 'digital economy action plan'). This would include:

- a. Expansion of the delivery of EPIC services and presence in the region. This could involve partnering with Tech Space or the proposed Discovery/Innovation Centre in Greymouth. This could also involve the further development of EPIC Westport's accelerator programme.
- b. The provision of additional training programmes to develop the ICT capability of youth and jobseekers. In practice, this could involve an expansion of EPIC and Tech Space education programmes to a greater number of school and tertiary students. This could also involve partnering with Tai Poutini Polytechnic (TPP) or the South Island ICT Graduate School.
- c. Expansion of programmes to grow the digital competence of businesses in key sectors (e.g., tourism, dairy, health) to enable them to make greater use of ICT. Part of this should involve demonstrating how digital technology can be used to add value in areas such as marketing, financial management and benchmarking. This could involve partnering with NZTE, which offers digital programmes for internationalising businesses, and leveraging the Capability Voucher Support (delivered through DWC).
- d. Additional funding support for new ICT/creative start-ups that go through the Co.Starters programme.
- e. Support to attract digital businesses and entrepreneurs to the region. This could include rates rebates or subsidies for moving to the region (e.g., to assist with employing staff).

Our assessment of the proposal

The proposal is based on a clear opportunity for the region to use technology to overcome the disadvantages associated with its small scale and distance from markets. It is consistent with national priorities to improve digital competence and use. For example, the Government has established a Digital Economy Work Programme to support the growth of New Zealand's digital sector and the uptake and smart use of ICT across the economy. There are many government initiatives that are relevant to this opportunity that may be able to be leveraged (see below).

The proposal is also consistent with local priorities. For example, GDC's Community Economic Development Strategy includes an action to develop a Digital Economy Strategy for the district, which this proposal could form a part of. The councils in the region also cooperated on the development of the Digital Enablement Plan in applying for government support for UFB and RBI extension and mobile black spot funding (discussed later in this report in the section on *Telecommunications*).



The proposal builds on existing work and investments. Both EPIC Westport and Tech Space have already demonstrated their ability to execute and deliver real outcomes. Tech Space is achieving excellent reach with youth and the broader community, and ongoing demand suggests that participants value the programmes. EPIC Westport provides credibility in accelerating the scale of the ICT industry on the West Coast due to their established partnerships and proven methods, and given it is backed by EPIC Christchurch (which itself has demonstrated a clear contribution to the local economy¹⁶).

The direct impact on jobs and incomes of this proposal in the first few years may be relatively small given the current small scale of the ICT industry, although that will depend on the number of businesses that can be attracted to the region (which may have a relatively large initial impact). However, the creation of around 10-20 jobs per year in the first 5 years seems feasible given EPIC’s initial successes.

In addition, the development of ICT businesses and digital capability has broader benefits for the economy. Digital literacy and the increased use of ICT products and services improves business efficiency and can help future-proof West Coast businesses against disruptive change. It enables online sales (reducing the impact of West Coast’s scale and distance from markets), improved marketing and logistics, and better quality control. Increasing the digital capability of youth and broader communities enables local people to make the most of new employment opportunities in a variety of sectors.

Success will depend crucially on the participation of businesses and youth. They will need to be convinced about the value they will obtain by improving digital competence and how they use these skills on the West Coast.

The proposal needs a committed lead organisation to take responsibility and to be accountable for results. We suggest that the specific components of the plan and target objectives, benefits and costs be developed by EPIC given that they will be central to many of the activities. In doing so, they should work closely with the West Coast Technology Education Trust and consult with industry representatives, EPIC Christchurch, council officials, TPP (and potentially other education providers beyond the region), MBIE and NZTE. This would then form the basis of a case for funding support (e.g., potentially from DWC and private and public investment sources).

Table 19 summarises our assessment of the proposal. Overall, the proposal rates moderately on our assessment criteria. It is not one of the highest priorities, largely due to the uncertain scale of impact.

However, given that the development of the digital economy and capability is well aligned with local and central priorities, the proposal has sufficient potential to be further developed as part of the action plan process.

Table 19. Assessment of the digital economy action plan proposal

Criteria	Assessment
Validity	High
Potential impact	Low-Medium
Practicality	Medium
Regionally significant	Medium
International orientation	Medium
Ability to leverage local/regional work and investment	Medium
Consistency with national priorities	High
Overall assessment	Medium

¹⁶ Canterbury Development Corporation assessed EPIC Christchurch’s annual contribution to the local economy to be around \$20 million, including induced effects. It was also estimated to have helped create more than 240 additional technology workers in total over 3 years.



What other opportunities will impact on the sector's growth?

The success of the plan will also depend, in part, on the region securing the extension of UFB and RBI (discussed in the section on *Telecommunications*). Without this, businesses outside of the main centres will not have the opportunity to fully benefit from improved digital capability, and growth in the creative and ICT sector will be constrained.

Another proposal of relevance to this sector is the proposed expansion of experiential leadership programmes (see the section on *Education*).

Relevant Central Government initiatives

- Government's Digital Economy Work Programme (which includes several of the initiatives below).
- Ultrafast Broadband and Rural Broadband Initiative investment.
- Regional Business Partners Programme – management capability vouchers.
- Māori ICT Development Fund - TPK.
- Digital Journey Tool.
- Digital Business Academy offered through NZTE.
- Better by Digital Programme - NZTE.
- Project Grants and Getting Started Grants - Callaghan Innovation.
- Increased tertiary places for students of science and technology subjects.
- ICT Graduate Schools.
- Computers in Homes funding support.
- A review of the positioning and content of digital technologies in the New Zealand Curriculum.
- Government ICT Strategy 2015.
- NZ Investment Attraction Strategy, which includes a focus on attracting ICT firms.
- Better Public Service result areas nine (one-stop online shop) and ten (digital transactions).



What do stakeholders need to do to support the opportunity and growth in the sector?

Industry	<ul style="list-style-type: none"> • Invest in upskilling and digital technology to increase productivity. • Communicate the benefits of improved digital competence to other businesses. • Participate in the development and implementation of the digital economy action plan.
Communities	<ul style="list-style-type: none"> • Participate in and support programmes to increase digital literacy such as Computers in Homes. • Support young people/rangātahi to develop digital skills and capabilities.
Māori/iwi/hapū	<ul style="list-style-type: none"> • Increase whanau, tamariki, and rangātahi digital education and literacy. • Participate in the development and implementation of the digital economy action plan.
Local Government	<ul style="list-style-type: none"> • Implement digital enablement initiatives, in partnership with industry, iwi and central government. • Participate in the development of the digital economy action plan. • Be exemplars through the adoption of e-government services (e.g., adoption of online documentation and payments).
Central Government	<ul style="list-style-type: none"> • Build support for businesses on the West Coast to develop digital competency and encourage technology adoption, for example through NZTE's digital programmes. • Participate in the development of the digital economy action plan. • Finalise the implementation of the of the UFB and RBI extension process.



FORESTRY AND WOOD PROCESSING

Overview

The forestry and wood processing sector is relatively small, contributing close to \$40 million in GDP and 460 jobs (close to 3 percent of the region's jobs). However, this sector is estimated to generate around 6 percent or \$40 million of the region's exports. The sector's real GDP and exports have grown strongly over the last 5 years (3.5 percent and almost 9 percent per year respectively), although employment growth has been more moderate. Growth has been driven by log sawmilling and veneer and plywood manufacturing, likely in response to rising demand for the Christchurch rebuild.

While the region's processors largely process radiata pine, the region does not have any advantages in this activity. Average forest growth rates are amongst the lowest in New Zealand and there is limited local log supply. There are higher transport costs involved in transporting logs to processors and timber products to customers. Processors are relatively small, which limits economies of scale.

The majority of the West Coast's forests are indigenous and within the conservation estate, but the sector has been restricted from processing this. Local indigenous wood processors have had to rely on supply from private land.

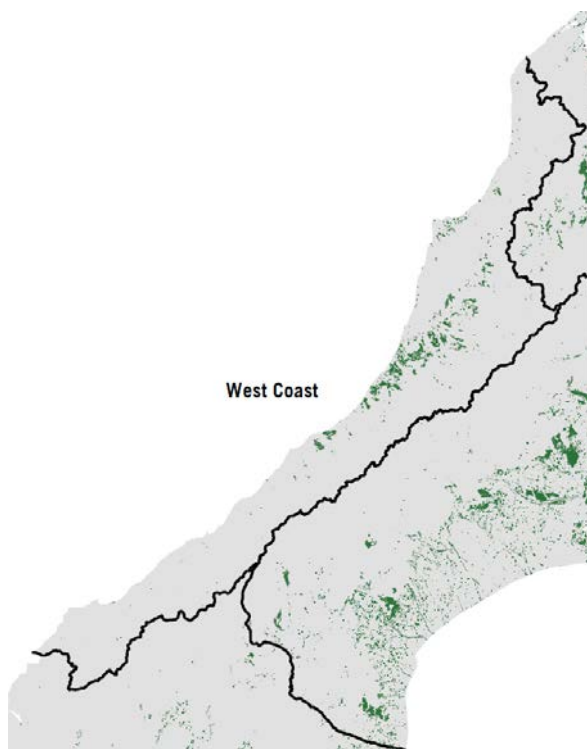
However, special legislation that came into effect in 2014 has allowed operators to remove and process indigenous timber from the conservation estate that was damaged by Cyclone Ita.

This legislation has sparked the revival of a small indigenous processing industry in the region. Although it can be costly to remove the timber, the high sale price of the timber makes it worthwhile.

The operators have proven that there are reasonable economic benefits to be made from indigenous timber and that it can be removed with minimal damage to the environment. In addition, DoC receives stumpage fees for conservation efforts.

The revival may be short-lived as the quality of the available timber is deteriorating and the legislation that allows the removal of the timber is to be repealed in 2019. There is limited incentive for owners of indigenous forest on private land to increase supply due to current limited processing capacity, market restrictions and poor marketing efforts.

Figure 62. Planted forest on the West Coast, 2015



Source: New Zealand Farm Forestry Association, New Zealand Forestry Owners Association and Ministry for Primary Industries (2015), National Exotic Forest Description 2015



Opportunity

The opportunity is to amend the legislation to allow windblown timber on conservation estate to be removed by approved processors after any major weather event or at the discretion of the Minister. This will allow operators to extract such timber on a broader basis and post-2019. Aligned with this, a more significant and longer-term opportunity is to incentivise the expansion of indigenous timber forestry and processing from production plantations on the West Coast by reviewing and reducing current market barriers (e.g., export restrictions, building standards).

What is the sector's contribution and make-up?

Forestry and wood processing is a relatively small sector in the region. In 2015, it contributed \$38.4 million in GDP (2 percent of the regional economy) and employed 459 people (close to 3 percent of the region's jobs).

Table 20. Forestry & wood processing key indicators, 2015

2015	Forestry & wood processing	% of region
GDP (2010 \$m)	38.4	2.0%
GDP location quotient	1.2	
Filled jobs	459	2.7%
Employment location quotient	1.9	
Productivity (GDP/filled job) (2010\$)	83,595	76%
Exports (2015 \$m)	38.8	5.5%

Source: Infometrics regional database

However, at \$38.8 million, the sector is estimated to generate a relatively high proportion of the region's exports (5.5 percent).

The industry is quite concentrated in the region with an employment location quotient of 1.9, suggesting that there are underlying resource advantages. The sector has moderate-low productivity, with each worker producing around three quarters of the region's average level of GDP per filled job.

Most of the sector's activity is in Grey (58 percent of employment) and Westland (36 percent) (Figure 63). Employment in the sector is dominated by two processing industries, log sawmilling (131 jobs), and veneer and plywood manufacturing (105 jobs). Forestry is the third largest employer contributing 79 jobs (Figure 64).

Figure 63. Forestry & wood processing employment, 2015

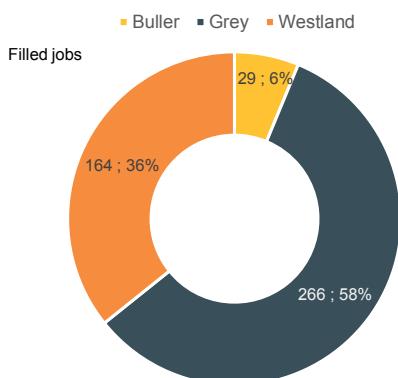
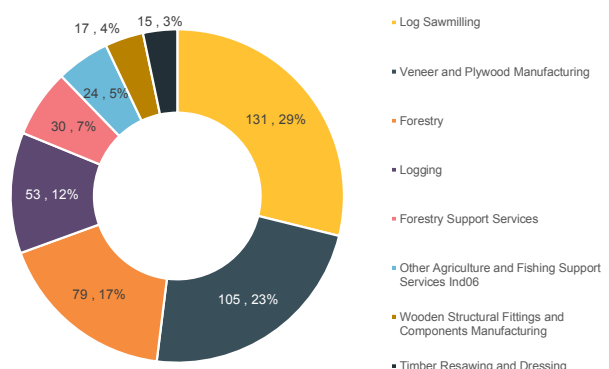


Figure 64. Forestry & wood processing employment by industry, 2015



Source: Infometrics regional database



The forestry resource and processing in the region

The majority of the West Coast's forests are indigenous and are within the conservation estate. Rimu was the major source of revenue to the West Coast industry up until the legislative requirement to reduce indigenous forest harvesting to a sustainable level in 2000 and then the complete cessation of native harvesting from Crown-owned forests in 2002 (Ministry of Agriculture and Fisheries, 2009). In recent years, harvesting and processing of windblown native forest has been possible (discussed below) but it is very small in scale.

At 31,200 hectares, the West Coast has a small proportion of New Zealand's area of exotic or production forests (1.8 percent). Grey and Westland have the most significant areas of production forestry in the region with around 13,500 hectares each (Figure 65). However, Grey has the greatest standing volume of production forest at around 3.15 million cubic metres, followed by Westland at around 2.12 million cubic metres.

Figure 65. Planted production forests by area, West Coast, 2015

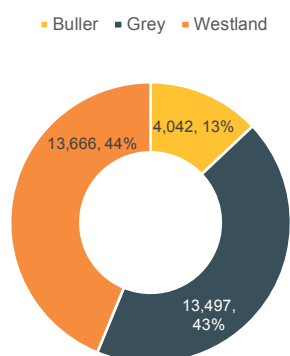
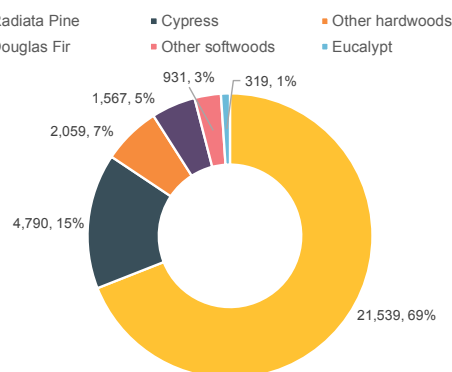


Figure 66. Species of planted forest by area, West Coast, 2015



Source: New Zealand Farm Forestry Association et al (2015), National Exotic Forest Description 2015
 Note: Area is in hectares

Radiata pine is the main species of production forest in the region (69 percent), followed by douglas fir (15 percent) and cypress (7 percent) (Figure 66). Harvesting of production forests in the region has grown from around 160,000 m³ in 2010 to 200,000 m³ in 2015.



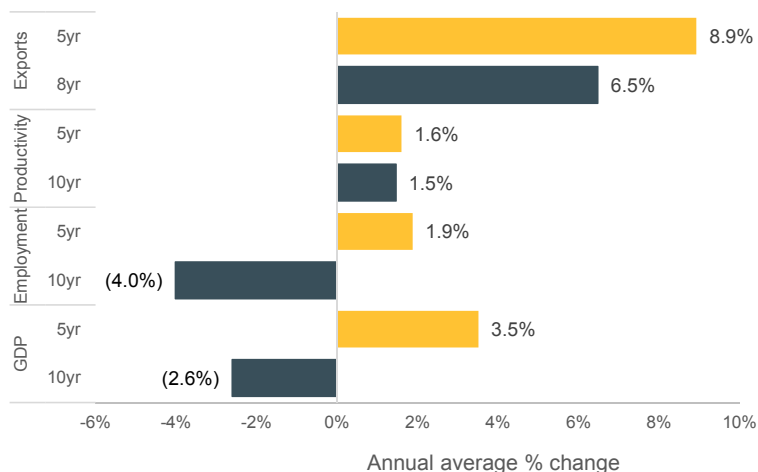
How is the sector performing?

The sector has had strong GDP and export growth over the last 5 years (3.5 percent and 8.9 percent per year respectively), although employment grew more moderately over the last 5 years, by 1.9 percent per year (Figure 67).

The rate of employment and GDP growth on the West Coast over the last 5 years has been faster than the sector nationally.

The recent strong performance of the sector is apparent when considering that, over the last 10 years, there has been an overall decline in GDP and employment.

Figure 67. Forestry & wood processing key indicators, 5yr and 10yr change



Source: Infometrics regional database

The main forestry and wood processing industry that has grown over the long-term is veneer and plywood manufacturing (Table 21). Industries that are highly concentrated in the region are veneer and plywood manufacturing, log sawmilling, forestry and forestry support services.

Table 21. Forestry & wood processing GDP and employment by major industries, current, 10-year trends and location quotients

	GDP		Employment		Location Quotient	
	2015	2005-2015	2015	2005-2015	GDP	Employment
Log Saw milling	9.5	-2.8%	131	-4.3%	2.9	3.5
Forestry	8.8	-4.3%	79	-7.6%	2.8	7.1
Veneer and Plywood Manufacturing	6.7	1.3%	105	0.2%	8.9	12.3
Logging	5.6	-2.4%	53	-4.8%	0.6	1.7
Forestry Support Services	2.9	-8.5%	30	-8.5%	2.3	1.4
Other Agriculture and Fishing Support Services Ind06	2.2	0.0%	24	8.6%	1.7	1.1
Wooden Structural Fittings and Components Manufacturir	1.2	-0.1%	17	-1.7%	0.3	0.4
Timber Resawing and Dressing	1.1	1.4%	15	0.0%	0.9	1.1
Other Wood Product Manufacturing n.e.c.	0.3	(2.3%)	4	(3.3%)	0.2	0.2
Wood Chipping	0.1		2		2.9	4.0
Forestry & wood processing	38.4	-2.6%	459	-4.0%	1.2	1.9

Source: Infometrics regional database

Note: Growth rates are compound annual average.

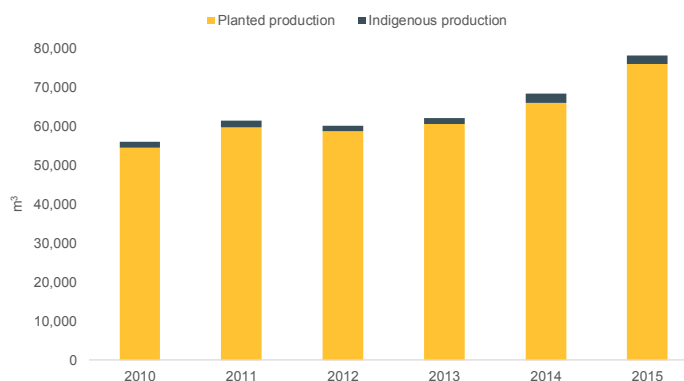


Wood processing in the region is, not surprisingly, small scale. In 2015, the region produced about 76,000 m³ of sawn timber from planted production forests and another 2,100 m³ of timber from indigenous forest.

However, production has grown quite strongly over the last 5 years from around 56,000 m³ in 2010 to 78,000 m³ in 2015 or by 6.9 percent per year (Figure 68).

It is likely that this has largely been in response to rising domestic demand, particularly in Christchurch, which the local sawmills supply.

Figure 68. Production of sawn timber on the West Coast, 2010–2015



Source: New Zealand Farm Forestry Association et al (2015), National Exotic Forest Description 2015

Ngāi Tahu Forestry Estate (NTFE) is the major large-scale plantation forest owner in the region, with cutting rights to 22,800 hectares of forest (New Zealand Farm Forestry Association et al, 2015). There are another 18 smaller scale owners (New Zealand Farm Forestry Association et al, 2015). Most forests are in the 40–499 hectare range.

There are five major wood processors on the West Coast located in Grey and Westland: International Panel and Lumber, Westimber, Westco Lagan, Stillwater Lumber and Sustainable Forest Products Ltd. The first four source pruned and unpruned pine logs from the upper South Island or locally and produce plywood, various timber grades (e.g., appearance, structural framing) and finished timber products (e.g., mouldings, panelling and weatherboards). Sustainable Forest Products Ltd focuses on environmentally friendly New Zealand red and silver beech timbers and has also been removing and processing windblown rimu timber locally.

What is the current potential for growth?

Sector growth on the West Coast will depend on the level of harvesting, market demand and increased investment in innovation and technology. Feedback from sector representatives suggests there will not be any increase in radiata processing capacity in the region over the medium-term.

- Harvesting:** As noted, harvesting has increased over the last 5 years. However, harvesting is expected to stabilise over the medium-term, at around 210,000 m³ per year over 2016–2020 (Indufor Asia Pacific Limited, 2016). Harvesting in Nelson-Marlborough, another major source market of logs for the timber processors, is expected to increase over the period (Indufor Asia Pacific Limited, 2016). The availability of logs for domestic sawmilling will, however, depend on export prices, which have recovered over the last year. The Emissions Trading Scheme (ETS) will also influence land-owners' decisions regarding when and if to harvest their plantations, and when and if they will replant them.

The harvest and yield of indigenous timber is expected to decline as the salvage operations wind up leading into 2019.



- **Market demand** for sawn timber and wood products:
 - Domestic demand for sawn timber and wood products is expected to increase over the medium-term with the Auckland and Christchurch housing markets growing strongly, although demand in Christchurch is likely to peak over 2017 as the bulk of the rebuild is completed (Pacifecon (NZ) Ltd and BRANZ, 2016).
 - Sawn timber export volumes from New Zealand have generally fallen over the last few years (other than a rebound in 2013) due to reduced demand from Australia and the United States. This follows on from depressed housing markets in both countries and increased competition for markets from timber processors from the European Union, United States (US) and Canada (Ministry for Primary Industries, 2012). In the short- to medium-term, demand for sawn timber from New Zealand is expected to increase moderately as construction demand in the US and China recovers (Ministry for Primary Industries, 2015a; 2016a).
- **Innovation and technological changes:** there has been increasing automation and R&D in the sector as it has aimed to significantly improve productivity, wood quality and resistance from pests and diseases. West Coast processors told us that have been investing in plant and equipment to improve efficiency.

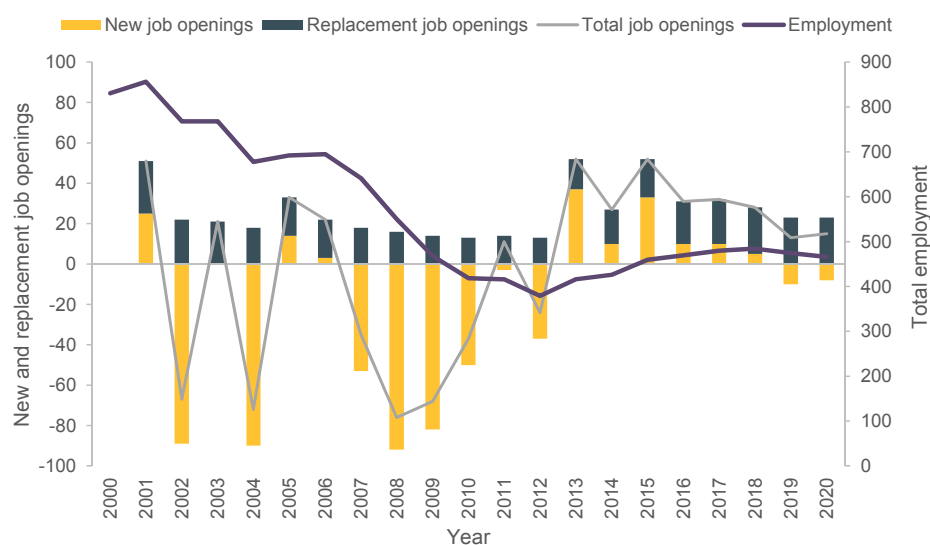
The overall picture for the next 5 years is for moderate international demand for sawn timber, strong domestic demand for sawn timber and other processed wood products, flat rather than increasing harvesting volumes, and some productivity improvements in processing. This suggests low to moderate growth in overall forestry and wood processing output from the West Coast over the next 5 years.

Infometrics employment forecasts are consistent with our research.¹⁷ Between 2015 and 2020, Infometrics forecast that, under a business-as-usual scenario, employment in the sector will fluctuate but ultimately increase by seven jobs or by 0.3 percent per year (Figure 69). In addition to new jobs, there will also be job openings as a result of people leaving the sector (e.g., due to retirement, moving to other regions). Infometrics forecasts that there will be another 112 job openings to fill replacement positions over the next 5 years.

¹⁷ The Ministry of Business, Innovation and Employment's (MBIE) short-term labour market forecasts actually predict a fall in forestry and logging employment but slight growth in wood processing employment in the West Coast over the 2016-2019 period (Ministry of Business, Innovation & Employment, 2016). They forecast that employment in forestry and logging in the region will fall by 11 percent per year over the period (by 30 jobs) and that employment in wood processing will grow by 0.8 percent per year (by 8 jobs), for a decline in the sector's total employment of 1.8 percent per year.



Figure 69. Forestry & wood processing job openings and total employment, historical and forecast



Source: Infometrics regional database

What are the challenges facing the sector?

Although the sector largely grows and processes radiata pine, the West Coast has no real advantages in this, and faces significant competition from other regions:

- **Average forest growth rates are amongst the lowest in New Zealand**, due to low-medium soil fertility. The forests also have major physical challenges of remoteness and can be subject to major weather events.
- As noted, some of the processors need to source logs from outside the region to ensure their plants continue at capacity because of the **limited availability of supply within the West Coast**. This can be a challenge, particularly when the export price of logs is high as it becomes more profitable for forest owners to export the logs rather than supply domestic producers. Moreover, it adds to the costs of production.
- Given the distance of the West Coast from markets, the sector faces **higher costs in transporting logs and timber to customers**. There can also be occasional transport constraints caused by road resilience issues (discussed in the *Transport* section).
- Depending upon where logs are harvested, transporting them to market can have short term impacts on local roads.
- The **processors are also relatively small, which limits opportunities for economies of scale**. A review of the industry by the Ministry of Agriculture and Forestry in 2009 suggested that there should only be one large-scale processor on the West Coast.
- The ineligibility of pre-1990 forests to earn carbon credits means there is **reduced incentive to re-plant pre 1990 forests when they are harvested**. This is an issue for NTFE, who own predominantly forests that are pre-1990.



The region has a vast native timber resource but is largely excluded from harvesting it. Until the 1990s, the region was processing around 100,000 m³ of indigenous timber per year, largely rimu (Ministry of Agriculture and Forestry, 2009). As noted, harvesting of native forest on Crown land ceased in 2002 so the supply of indigenous timber has been restricted to private land. Suppliers must have an approved sustainable forest management plan or a permit, and harvesting is limited to a level to ensure the volume of timber removed is less than the forest growth rate. On the West Coast there are nine registered sustainable forest management plans and 14 permits, with a maximum allowable annual harvest of 7,150 m³, covering a range of species such as kahikatea, miro, rimu, red beech, silver beech, hard beech, kahikatea and hinau (Ministry for Primary Industries, 2016b).

Special legislation came into effect in 2014, which allows operators to remove and process indigenous timber from the conservation estate that was damaged by Cyclone Ita (discussed further below). However, the outer wood is now rotting and stains are setting in which makes much of the timber unusable. This means harvesting is less efficient (and extraction is already costly given that in many cases logs need to be removed by helicopters). The legislation that allows this harvesting is due to expire in 2019.

The Forests Act 1949 also places restrictions on indigenous timber exports, which limits market opportunities for this part of the sector. Rimu and sawn beech sourced from registered sustainable forest management plans/permits, and finished and manufactured indigenous timber products, can be exported. However, some commodity exports cannot be exported and others require approval from MPI. Effectively, indigenous timber species other than beech and rimu are restricted to selling in the domestic market. There are also hurdles to exporting certain forms of beech and rimu, such as logs and chips.

The sector faces some skill challenges. Wood processing companies on the West Coast told us that their management and supervisory staff are nearing retirement age and replacements will need to be found. However, they find it difficult to find and attract workers for these positions. In their view there is a limited pool of such staff in the region and it is difficult to attract people from outside the region (due to perceptions about the lack of opportunities and amenities). Although they find lower-skilled production staff easy to find, there are consistent problems of absenteeism due to drug use, which can make it difficult to maintain sufficient numbers of production staff. Limited broadband connectivity has also impacted the ability of businesses to provide online training for staff.

What are the specific opportunities for growing the sector in the region?

The major opportunities for the region in this sector are to at least maintain and to potentially grow indigenous timber processing.

1. Extend the ability of approved processors to remove wind-blown timber on conservation land

In June 2014, the West Coast Windblown Timber (Conservation Lands) Act was enacted, which allowed for a proportion of the trees that were blown down on conservation land during Cyclone Ita to be recovered. At the time, there were objections made that removing the timber would prevent the restoration of natural eco-systems (e.g., from dying tree material to contribute to nutrient cycling and habitat creation). To meet these concerns, several restrictions to harvesting were put in place.



- First, although 38,000 hectares of forest was affected, only 8,700 hectares was eligible for potential recovery. The World Heritage Area, national parks and the white heron sanctuary reserve were excluded from recovery. Within the eligible areas, it was estimated that 105,000 m³ of rimu and 36,000 m³ of beech were available.
- Second, only timber that could be processed for high value uses and only a small proportion of timber at any one site was allowed to be removed. This left considerable material in the forest ecosystem.
- Finally, no significant soil disturbance was allowed and operators were required to minimise damage to the forest.

Ten operators were approved to remove timber from 26 sites and had to submit detailed work plans for timber salvage (8 operators lodged work plans and have extracted timber). It is estimated that around 6,000 m³ may eventually be removed. Rimu is expected to make up around 90 percent of the timber. This is significantly more than the quantity that is available locally from plantation forests (the registered allowable harvest of rimu on the West Coast is currently around 1,200 m³ per year and not all of this is harvested (Ministry for Primary Industries, 2016b)).

Stumpage fees of \$250 per m³ for rimu and \$60 per m³ for beech are paid to DoC for conservation works. Although it is costly to remove the timber, rimu heartwood can sell for around \$2,250 per m³ from the processors and then over \$3,500 per m³ following re-sale, so it is a high value activity¹⁸.

The Act is due to be repealed in 2019. The opportunity is to amend the legislation to allow windblown timber on conservation estate to be removed after any major weather event or at the discretion of the Minister and hence to allow operators to extract such timber on a broader basis and post-2019.

In our view, the operators have proven that there are reasonable economic benefits to be made from such timber and that it can be removed with minimal damage to the environment. DoC has reported that the ecological impact of harvesting has been at most minor and short-term, with the lowest impact at sites where logs are extracted by helicopter.

The restrictions on how the timber can be removed could remain in order to mitigate environment risks.

Our assessment of the proposal

The major benefit of extending the ability of approved processors to remove wind-blown timber on conservation land on the West Coast region is largely to retain the jobs and economic benefits that have been created as a result of the existing legislation. Different estimates suggest that the ability to log the native timber has created between 30-50 jobs. In addition, DoC is expected to receive around \$1.5 million from stumpage fees for conservation efforts.

The regulatory impact assessment of the original legislation indicated that the wider economic benefits from the timber recovery are 10 times the stumpage value (so if the industry segment recovers \$1 million per year in timber, this generates \$10 million in wider benefits to the region) (Department of Conservation, 2014). It will also continue to provide DoC with additional revenue to manage the conservation estate on the West Coast.

¹⁸ Estimates provided by Sustainable Forest Products Ltd.



These benefits are relatively small, but in the context of a region facing a downturn in its major industries and population base, they are important. The huge amount of competing timbers that are imported into New Zealand also suggests that there is room for import replacement (for example, in 2015, around 20,000 m³ of sawn timber hardwoods, at a value of \$33 million, was imported into New Zealand).

The proposal may not be straightforward to implement. It will require legislative change, which tends to take time. When the West Coast Windblown Timber (Conservation Lands) Bill was being considered, there were a range of views on the merits and, as noted, concerns were raised about the environmental impacts of allowing timber removal. Objections are likely to be raised again and clear evidence will need to be provided about the impacts of removals to date.

An advantage of this proposal, of course, is that there is existing experience on which to draw from industry and DoC. The first step will be for DoC and MPI to assess the overall benefits and costs of the activity to date, in consultation with industry.

Table 22 summarises our assessment of the proposal. Overall, the proposal rates lower on our criteria due to the relatively small impacts on the economy and the amount of work that may be required to get it over the line.

However, given that the Act is not being repealed until 2019, this is a proposal that could be implemented over a longer time frame (although as noted, the quality of the existing wind-blown timber is declining).

Table 22. Assessment of the extension of wind-blown timber on conservation land proposal

Criteria	Assessment
Validity	High
Potential impact	Low-Medium
Practicality	Medium
Regionally significant	Low-Medium
International orientation	Low-Medium
Ability to leverage local/regional work and investment	Medium-High
Consistency with national priorities	Low
Overall assessment	Medium

As part of this proposal, NTFE would be interested in assessing the feasibility of having a sustainable management plan prepared for an indigenous programme over the indigenous forests held by them.

2. Review market barriers to the expansion of the indigenous timber industry

A more significant and longer-term opportunity is to actively encourage the expansion of indigenous timber forestry (from production plantations) and processing on the West Coast by reducing current market barriers.

As is the case nationally, currently only a proportion of the maximum allowable levels approved on the West Coast under the sustainable management plans and permits is actually harvested annually. A nationwide study found that low harvest levels are due to limited processing capacity, market restrictions and marketing efforts (including a lack of understanding by domestic consumers about sustainable harvesting in New Zealand) (KPMG, 2013).

For example, as the study noted, increased processing may require investment in kiln drying and additional heavy lifting helicopters, which are expensive (KPMG, 2013). Incentivising this investment would require improved access to the domestic and international markets.



A review of market barriers would involve consideration of export restrictions on indigenous timber, building standards that act to restrict the use of indigenous timber, and potential regulation of the importation of unsustainably produced special purpose timbers, such as tropical timbers and timber products (at least to assess whether the current voluntary industry approach to importing only certified timber is sufficiently effective and whether it would be beneficial to have additional mechanisms to ensure that the importation of special purpose timber meets the same sustainability standards as New Zealand timber).

We appreciate that this is a national issue and options to improve market access for local producers would need careful consideration of the costs and benefits, including in relation to trade agreements (e.g. a requirement that imported special purpose timber be certified as sustainable could be regarded as a non-tariff barrier). However, currently there is not a level playing field for forest owners and processors of indigenous timber on the West Coast, or the rest of New Zealand. If the status quo is maintained, growth in this industry segment of the forestry and wood processing sector will continue to be constrained.

Our assessment of the proposal

The benefits of a review of market barriers to the indigenous forest and processing industry could be sizeable assuming they result in changes that improve access to domestic and offshore markets. A value analysis of indigenous forestry (KPMG, 2013) has estimated that if the maximum allowable level of indigenous plantation forest resource was harvested nationally (potentially incentivised through better market conditions), this could result in:

- \$2 million of annual revenue for owners of red beech forests (compared to \$0.1 million currently), \$3.1 million of revenue for silver beech forest owners (compared to \$1.3 million currently), and \$1.7 million of revenue for rimu forest owners (compared to \$0.5 million currently)
- \$10 million of revenue for processors from red beech (compared to \$0.7 million currently), \$16 million from silver beech (compared to \$7 million currently), and \$5 million from rimu annually (compared to \$1.5 million currently).

The West Coast currently has 87 percent of New Zealand's registered allowable volume of red beech, 10 percent of rimu and 2 percent of silver beech (based on Ministry for Primary Industries, 2016b). In rough terms, the estimates suggest that indigenous forest owners and processors on the West Coast could obtain up to a ten-fold increase in revenue from these species if the maximum allowable level was harvested (and subsequently processed in the region). The increase in revenue in the region would be even greater if all privately owned indigenous forestry land in the region was under a plan or permit. Improved market access may also incentivise new plantings.

Beyond revenue, employment and conservation benefits, broader benefits from improving market access would include:

- the development of new indigenous timber products and markets
- increased investment in indigenous processing in the region, and this may result in additional productivity benefits to supplying firms due to the introduction of new techniques, quality or delivery standards.

As noted above, the review of market barriers facing the indigenous timber industry will require a national-level policy and consultation process and will take considerable time (likely to be at least 2 years). This could be led by MPI, in consultation with the industry, iwi, MFAT, MBIE and DoC.



Table 23 summarises our assessment of the proposal. This opportunity currently ranks at the lower end of the opportunities identified due to the likely complexity of the process required and because this is more of a national level opportunity rather than specific to the West Coast.

Table 23. Assessment of the review of market barriers to growth in the indigenous timber industry proposal

Criteria	Assessment
Validity	Medium
Potential impact	Medium-High
Practicality	Low-Medium
Regionally significant	Low-Medium
International orientation	Medium-High
Ability to leverage local/regional work and investment	Low
Consistency with national priorities	Medium
Overall assessment	Low-Medium

In saying that, this study and action plan process may provide an impetus to commencing such a review.

What other opportunities will impact on the sector's growth?

Several other proposals discussed in other sections of this report will help to address challenges faced by this sector on the West Coast.

- Extension of UFB and RBI and acceleration of roll-out.
- Maintaining the road network and improving resiliency where necessary.
- An expansion of experiential leadership programmes.

The sector in the region can also take advantage of a range of central government initiatives, particularly several R&D projects that are underway to improve productivity and increase processing value-add.

Relevant Central Government initiatives

- MPI Primary Growth Partnership and Sustainable Farming Fund projects with the forestry and wood processing industry, including:
 - the Growing Confidence in Forestry's Future programme to make pine forests more productive, sustainable and profitable through precision technology, improved environmental practices and management and better use of genetic resources
 - research on radiata pine breeding to produce new technologies that will reduce the time it takes to breed and commercially plant improved pine trees
 - the Steepland Harvesting programme, focused on reducing steepland harvesting costs by 25 percent using innovative log harvesting technologies.
- The review of the Emissions Trading Scheme.
- The development of the National Environmental Standard for Plantation Forestry.
- The Wood Products Research Partnership.
- Further work on timber standards with a focus on engineered wood products.
- Investment in roads and bridges to support HPMV vehicles.
- The Afforestation Grant Scheme.



What do stakeholders need to do to support the opportunities and growth in the sector?

Industry	<ul style="list-style-type: none"> • Work with MPI and DoC to assess the costs and benefits of windblown timber removal and how the legislation can be extended. • Continue to invest in processing improvements and R&D in added value wood products. • Provide advice on market barriers facing the indigenous timber industry and on options for addressing these.
Māori/iwi/hapū	<ul style="list-style-type: none"> • Continue to invest in forestry plantations on the West Coast. • Work with MPI and DoC to assess the costs and benefits of windblown timber removal and how the legislation can be extended.
Local Government	<ul style="list-style-type: none"> • Continue to invest in maintaining the road network and improving resiliency where necessary.
Central Government	<ul style="list-style-type: none"> • Lead work on assessing the costs and benefits of windblown timber removal and the required legislative change. • Review market barriers to growing the indigenous timber sector in New Zealand. • Continue to support R&D projects in the sector. Ensure that West Coast forestry and wood processing businesses are connected into national R&D programmes. • Continue to review and update building standards to account for indigenous timber products. • Continue to invest in maintaining the road network and improving resiliency where necessary.



HORTICULTURE, FOOD AND BEVERAGE

Overview

This sector is of moderate-large scale in the region, contributing \$80 million in GDP and 760 jobs in 2015 (just over 4 percent of the region's GDP and employment). It is a relatively large exporter, producing an estimated \$98 million in exports in 2015. Sector GDP has grown quite strongly over the last five years (3.4 percent per year), although employment growth has been low.

The largest industries, by far, are related to meat, including beef cattle farming, deer farming, meat processing, and cured meat and smallgoods manufacturing, which together account for over 60 percent of the sector's GDP and employment. Several smaller segments have a strong concentration of employment in the region, suggesting advantages exist for growing a variety of products, such as vegetables (under cover), beekeeping, and beer manufacturing.

The West Coast has some natural advantages for this sector, with reliable rainfall and relatively few frost days providing good conditions for pasture and crop growth. Karamea's coastal land is regarded as ideal for horticulture due to lower rainfall averages and a marine climate that prevents low temperatures at nights. On the other hand, adverse weather events can have a significant impact on the sector. Industry representatives provided examples of major storms that destroyed more than 50 percent of crops.

Other than in the meat industry, most food and beverage industries in the region are effectively cottage industries, with businesses run by people as a part-time venture. Sometimes these people have moved to the region for lifestyle reasons and have no ambition to grow their business. Despite this, several businesses are exporting nationally or internationally, or both, including in tomatoes, lettuce, tea tree oil, sphagnum moss, cranberries and honey. There is also some further processing in the region, with Monteith's and Blackball Salami well recognised in New Zealand.

There is limited land suitable or available for horticulture. Some areas ideal for horticulture have been converted to other use, such as dairy. Some industry representatives also noted there can be high costs involved in accessing land.

Sector representatives also considered that there is the view in the region that horticulture and food and beverage processing is not a particularly good opportunity and hence it is not well supported. They noted that there have been several unsuccessful efforts to grow experimental crops in the region that have created negative perceptions.

The livestock and meat sector is not expected to grow significantly. However, there is potential to sustainably increase horticulture production, which could result in increased employment as well as diversification.



Opportunity

The opportunity is to support incremental growth in the sector through a combination of activities. The proposed activities include:

- a) Piloting a social enterprise approach to develop the sector in Buller. Using a similar approach to the development of social enterprises in the Far North, Gisborne and Manawatu, this would involve a programme over several months for individuals or teams to explore new prospects for horticulture, food & beverage while also pursuing social and/or environmental objectives. For example, this might result in a food cluster in Karamea to produce, add value, market and distribute locally grown food, supporting local employment and healthy lifestyles.
- b) Supporting scoping work and research on the potential development of new niches, e.g., harakeke, and expansion of niches with potential, e.g., honey.
- c) Holding fielddays/demonstration days on horticulture as a business opportunity.
- d) Developing a West Coast brand for horticulture, food & beverage. A new tourism brand has already been developed and a horticulture brand could be aligned with this. Efforts to grow visitor numbers and expenditure and having a strong local food and beverage offering and banner are mutually beneficial. The benefits and costs of such a brand will need to be assessed.

What is the sector's contribution and make-up?

Employing 759 people and generating \$80 million in GDP, the horticulture, food and beverage sector accounts for 4.3 percent of GDP and 4.5 percent of filled jobs on the West Coast.

People are slightly less likely to be employed in the sector on the West Coast compared to nationally, as it has an employment location quotient of 0.9.

Table 24. Horticulture, food & beverage key indicators, 2015

2015	Horticulture, food & beverage	% of region
GDP (2010 \$m)	80	4.3%
GDP location quotient	0.9	
Filled jobs	759	4.5%
Employment location quotient	0.8	
Productivity (GDP/filled job) (2010\$)	105,370	95.5%
Exports (2015 \$m)	98	14.0%

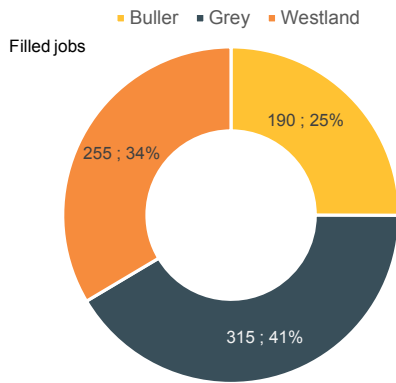
Source: Infometrics regional database

For its size, the sector makes a relatively large contribution to the region's exports. At \$98 million in the year to March 2015, the sector accounted for 14 percent of the West Coast's exports. The sector's labour productivity is close to the regional average.

Most of the jobs in the sector (41 percent) are in Grey, followed by Westland (34 percent). Buller accounts for about 25 percent of employment in the sector (Figure 70).

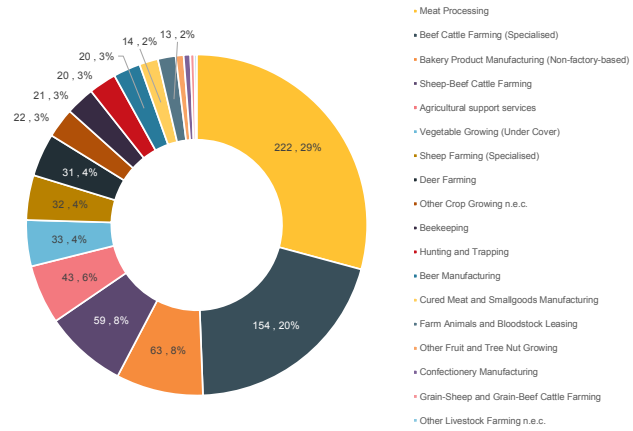


Figure 70. Horticulture, food & beverage employment, 2015



Source: Infometrics regional database

Figure 71. Horticulture, food & beverage employment by industry, 2015

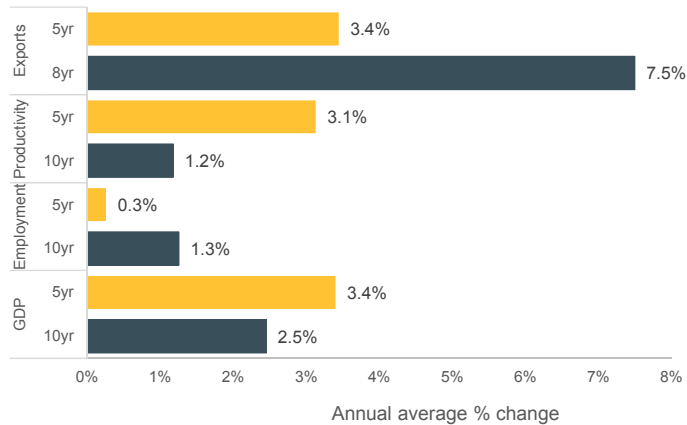


The industries that contribute most to the sector are meat processing, beef cattle farming, sheep farming, and bakery product manufacturing (Figure 71). Other significant industries are vegetable growing, beer manufacturing and cured meat and smallgoods manufacturing.

The 5 years to 2015 saw both GDP and exports in the sector grow strongly by 3.4 percent per year. Employment growth has been much slower at 0.3 percent per year. This shows through in strong productivity growth of 3.1 percent per year.

Over the longer-term, 2005–2015, GDP growth has been slower (2.5 percent per year) while employment growth has been faster (1.3 percent per year).

Figure 72. Horticulture, food & beverage key indicators, 5yr and 10yr change



Source: Infometrics regional database
Note: Compound annual growth

Export growth over the longer-term (8 years) was significantly higher than the last 5 years at 7.5 percent per year, due to a slow-down in exports over 2012–2014.

Of the main industries in the sector, beef cattle farming, agricultural support services, other crop growing and beer manufacturing have grown strongly over the last decade. GDP and employment in bakery product manufacturing, deer farming, hunting and trapping, and cured meat and small goods manufacturing have declined (Table 25).



Table 25. Horticulture, food & beverage GDP and employment by major industries, current, 10-year trends and location quotients

Industries	GDP		Employment		Location Quotient	
	2015	2005-2015	2015	2005-2015	GDP	Employment
Meat Processing	15.6	1.1%	222	2.4%	1.3	1.5
Beef Cattle Farming (Specialised)	22.3	5.8%	154	4.7%	3.3	2.4
Bakery Product Manufacturing (Non-factory-based)	4.1	-5.5%	63	-4.3%	1.0	1.4
Sheep-Beef Cattle Farming	9.1	1.5%	59	0.0%	1.1	0.7
Agricultural Support Services	3.9	0.0%	43	8.6%	0.8	0.5
Vegetable Growing (Under Cover)	3.0	2.3%	33	1.2%	4.7	2.7
Sheep Farming (Specialised)	4.7	-0.9%	32	-3.0%	0.6	0.5
Deer Farming	2.1	-2.8%	31	-4.0%	4.5	3.6
Other Crop Growing n.e.c.	1.4	19.1%	22	20.3%	2.1	1.7
Beekeeping	1.7	4.3%	21	2.2%	2.8	1.8
Hunting and Trapping	1.6	-2.4%	20	-2.5%	14.7	11.2
Beer Manufacturing	5.3	10.7%	20	12.5%	1.8	2.3
Cured Meat and Smallgoods Manufacturing	0.8	-10.3%	14	-8.9%	0.7	1.0
Farm Animals and Bloodstock Leasing	2.8		13		4.1	4.0

Source: Infometrics regional database

Employment in beef cattle farming, vegetable growing (under cover), deer farming, hunting and trapping and beer manufacturing is strongly concentrated in the region, suggesting that there are some regional advantages for these industries in the sector.

Horticulture production

Very little land on the West Coast is in horticulture. Because of the small amount of land in horticulture, the actual hectares dedicated to horticulture is suppressed in Statistics New Zealand data. However, land use data from MfE suggests that the area of land in horticultural crop farms in the West Coast was 112 hectares in 2012, which was less than half of the area that existed in 2002.¹⁹ This is consistent with the views of industry representatives, who indicated that there was probably less than 100 hectares in horticulture production now. This is less than half of one percent of the total agricultural area (200,000 hectares) on the West Coast.

The same MfE data indicated that there were 108 arable crop farms but only 27 horticultural crop farms in the region in 2012.²⁰ The number of horticultural farms had remained constant since 2007 but had declined from 39 in 2002.

Most horticulture production in the region (by volume) is under cover hydroponics, producing tomatoes and lettuce. There are a number of specialist or niche commercial crops such as tea tree, cranberries, passion fruit, blueberries and feijoas (sphagnum moss is also gathered from swamps in the region).

¹⁹ <https://data.mfe.govt.nz/table/2471-farm-size-area-of-large-commercial-agricultural-activities-2002-2007-and-2012/>

²⁰ <https://data.mfe.govt.nz/table/2472-farm-numbers-farm-numbers-by-agricultural-activity-2002-2007-and-2012/>

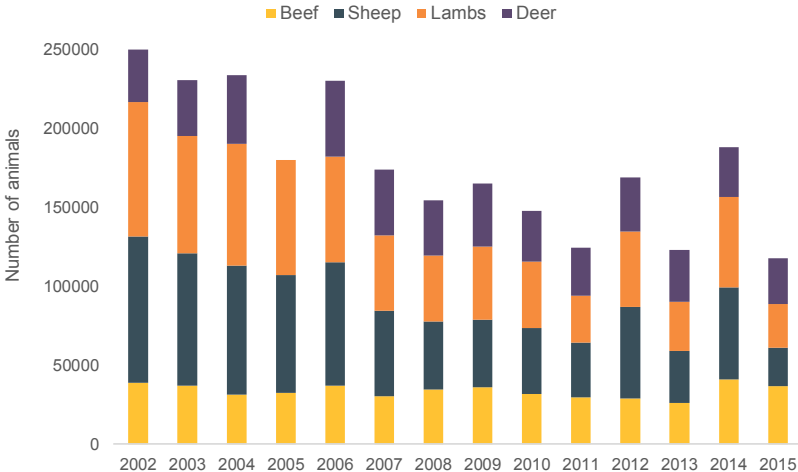


Livestock production

The largest share of agricultural area in the region is in grassland for livestock grazing and, as noted, livestock production and processing makes up the largest portion of the food and beverage sector on the West Coast. In 2012, there were 417 sheep-beef farms in the region (about 97,000 hectares in total) and the number had remained constant since 2007.²¹ In 2012 there were 45 deer farms (about 19,000 hectares in total) but the number had fallen from 63 in 2007.²²

Figure 73 shows West Coast livestock numbers from 2002 to 2014.

Figure 73. West Coast livestock (numbers), 2002–2014



Source: Agriculture Production Statistics, Statistics New Zealand

Total livestock numbers on the West Coast were steady between 2002 and 2006 before falling and generally remaining at lower levels. Beef cattle numbers declined sharply after 2010 before rebounding in 2014 (there were just over 36,500 beef cattle in the region in 2015).

Sheep and lamb numbers have generally been declining over the 2002 to 2015 period, although there was increased stocking of sheep and lambs in 2012 and 2014 (there were 24,700 sheep and 27,300 lambs in the region in 2015). Deer numbers peaked in 2006 at 48,000 but are down to 29,300 in 2015.

Changes in livestock numbers on the West Coast have been quite different to trends at the national level, where the numbers of beef cattle, sheep, lamb and deer numbers have all gradually fallen over the last 5 years.

²¹ Ibid

²² Ibid



Apiculture

The honey sector in the region is relatively small scale. The Infometrics database identifies 22 beekeepers, and business demography statistics identifies 12 businesses. Many of these businesses will be one or two person operations. The largest honey producer in the region runs around 1,100 hives and sells wholesale to larger honey companies and users of honey. Most beekeepers in the region run around 100-200 hives. Very few beekeepers retail honey outside of farm-gate sales, with most sales being wholesale to larger processors (e.g., to Pūtake Honey in Marlborough).

Most honey in the region is Kāmahi and Rata, with only small stands of Mānuka. As such, the region has not seen the level of interest as in other regions of New Zealand where the value of Mānuka honey has seen large increases in production. However, the general increase in honey prices over the last few years has seen the demand for hive locations increase, with a number of out-of-region companies establishing hives in the region.

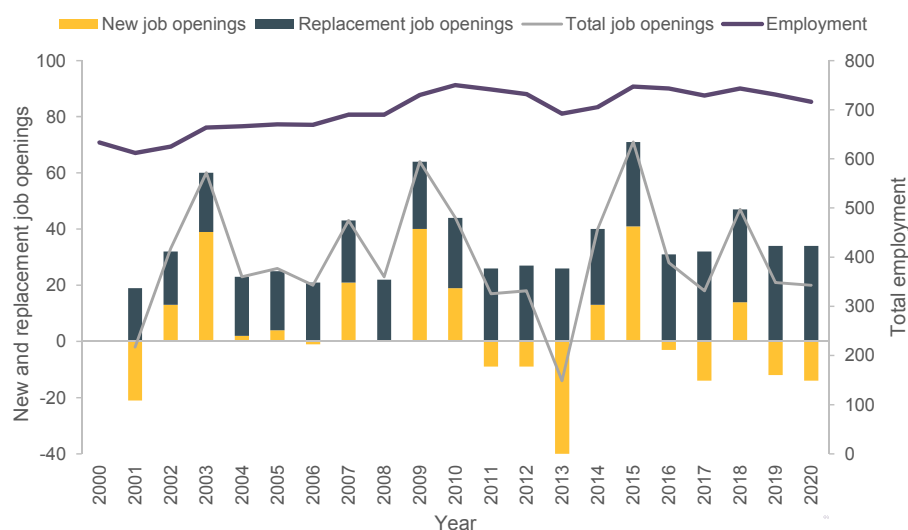
This growing demand for hive real estate has seen an increase in demand for concessions on the conservation estate. DoC is currently looking at changing its allocation method for concessions from a first-in first-served approach to an expression of interest approach.

While iwi are not currently involved in the apiculture industry on the West Coast, Ngāi Tahu and the local rūnanga have expressed aspirations to be involved in the honey business.

What is the current potential for growth?

MBIE's short-term employment forecasts (Ministry of Business, Innovation & Employment, 2016) estimate that employment in food and beverage processing on the West Coast will grow quite strongly over 2016 to 2019, by 3.2 percent per year. This does not include the farming and cultivation industries in the sector. We consider that these forecasts are somewhat optimistic, particularly given past trends.

Figure 74. Horticulture, food & beverage, job openings and total employment, historical and forecast



Source: Infometrics regional database



Infometrics forecasting model suggests that there will actually be a slight decline in employment in the sector over the next 5 years, by 31 jobs or by -0.8 percent per year (Figure 74). However, it is also expected that there will be 164 job openings in the sector over the next 5 years due to natural churn and some people leaving the workforce. Hence, it is expected there will be an average of 27 job openings in the sector each year between 2016 and 2020.

Estimating future growth in the horticulture, food and beverage sector is more difficult than many other sectors because of the wide range of industries, products and markets involved. Growth will depend on production capacity, demand and new developments (as well as weather conditions).

- **Production capacity** – growth in horticulture will be constrained as most available land (for outdoor cultivation) is already being used as grazing for the dairy sector and the livestock industry. Similarly, the potential to grow the beef meat component of the sector will be constrained over the medium- to long-term by the availability of land and competition with the dairy sector, although intensification is possible. In addition, lower dairy prices are resulting in increased culling of dairy cattle, although that is expected to reduce as prices recover from 2017 onwards (Ministry for Primary Industries, 2016).

Sheep numbers are expected to continue to decline nationally. Venison numbers are expected to stabilise over the medium-term in response to higher prices (Ministry for Primary Industries, 2016).

Honey production growth may be limited in the short-term due to supply constraints although it is expected to be stronger in the medium-term as new areas become viable (Ministry for Primary Industries, 2015b; Ministry for Primary Industries, 2016). There are opportunities to increase Mānuka plantings on low value conservation land and grazing lease areas.

- **Demand** – Fruit and vegetable consumption domestically and internationally has been relatively flat over the last 5 years. Research suggests that, overall, consumption of these products domestically will grow slowly over the short- to medium-term (Coriolis, 2014). As most of the producers of fruit and vegetables in the West Coast region supply domestically, it is unlikely that expected growth in demand in China and South East Asia for fruit and vegetable produce will have much of an influence on the region.

International demand for beef meat has been growing and prices have been high. Demand for beef from the US and China is expected to remain strong, although the impact on New Zealand will be tempered by increasing competition from South America, Australia and US producers (Ministry for Primary Industries, 2016). Demand for lamb is falling as New Zealand's largest market, the EU, is expanding production, although this is being offset by growing demand in China as consumers turn to different sources of protein (Ministry for Primary Industries, 2016). Demand for venison is increasing from North America and the EU, which is strengthening prices (Ministry for Primary Industries, 2016).

There may be stronger demand for honey as local suppliers provide inputs into export as well as domestic markets. There have been world shortages of high quality honeys due to diseases and poor weather conditions in competing countries, and increasing consumption of honey in Asian markets (Coriolis, 2014).

Demand for other food and beverage products is expected to grow steadily, particularly from Australia and Asia due to rising standards of living and an expected low New Zealand dollar.

More generally there is increasing demand for traceability, artisan and healthy food products. There may be perceived value in a West Coast brand for food products building on the natural environment and 'craft' nature of production.



Based on this research, we consider that employment growth in the sector will fall somewhere in between the MBIE and Infometrics forecasts. The research suggests moderate growth in meat farming and processing, weak growth in fruit and vegetable cultivation and potentially strong growth in honey production. Given the scale of different industries in the region, moderate growth in employment (around 1-2 percent per year) in the sector overall could be expected under a business-as-usual scenario.

Are there any existing or emerging strengths in the region?

The West Coast has some advantages for growing certain horticulture crops and for livestock farming, which are based on climate and resources. **The region has good conditions for pasture growth**, given its reliable rainfall of 2,000-3,000 millimetres a year and average sunshine hours of between 1,800-1,900 hours annually (Saunders, Parsonson-Ensor and Greer, 2011). In the north, **Karamea's coastal land is regarded as ideal for horticulture** due to lower rainfall averages, mild winters and the marine climate preventing low temperatures at nights (Saunders et al, 2011). The expected future increases in temperature in the region due to climate change, as noted in the section on *Natural Resources*, could also support the region in growing crops for extended periods of the year in the very long-term (Saunders et al, 2011).

The region does have **some production cost advantages for covered horticulture**. For example, there are several established businesses producing basic market crops (tomatoes, lettuce) for the local market and some that are supplying the South Island (e.g., Karamea Tomatoes), aided by cheaper heating costs (coal) and relatively lower land costs.

A 2011 study on the viability of a sustainable horticulture industry on the West Coast also suggested that the West Coast had greater potential for berry crops such as blueberries, blackcurrants and elderberries; fruit such as kiwifruit and feijoas; and niche products, such as tea tree and wasabi (Saunders et al, 2011).

However, there are many other areas around New Zealand that could claim similar advantages for pasture and horticulture. It is not apparent that the region currently has any unique factors which support competitive advantage. As noted in the 2011 study:

“while the West Coast does have some factors which lend itself to comparative and competitive advantage ... these are not really sufficient enough points of difference from elsewhere in New Zealand (or the world) to establish a sustainable industry. There certainly are areas where the West Coast could (with aid also of promotion) establish niches but it is difficult to see how this could occur at industry or reasonable scale level in the short term.” (Saunders et al, 2011; p. 20)

One factor that could provide a stronger point of difference in future is the West Coast brand.

This is evident with the success of the Wild Foods Festival, which draws on the wild, untamed and natural image of the region. Monteith's is another successful brand associated with the independent and explorers' spirit of the West Coast. With a large visitor market seeking to experience the West Coast, there is opportunity to increase the market for local food products.



What are the challenges facing the sector?

Although the climate provides some advantages, **major weather events can have a significant detrimental impact on horticulture**. High intensity rainfall can damage crops, lead to increased susceptibility to pests and diseases, leaching of nutrients in soil and erosion (Saunders et al, 2011). High winds can blow fruit off plants. Sector representatives we spoke to provided several examples about major storms destroying a significant proportion of crops (e.g., a storm in 2014 was estimated to have destroyed 60 percent of a tomato crop and 50 percent of a feijoa and passion fruit crop in Karamea²³).

As noted, **access to land is also a challenge for horticulture**. Only 300 hectares of land on the West Coast was considered to be high class land for food production (the most productive land for growing food, which support most crops) when last assessed in 2011.²⁴ Some areas ideal for horticulture have been converted to other use, such as dairy. Some industry representatives also noted that there have been high costs involved in accessing land, e.g., sphagnum moss grows in wetlands and harvesting requires resource consent. At the time of finalising this report, however, the WCRC was consulting on proposed changes to the Regional Land and Water Plan, including a proposal to allow the harvesting of sphagnum moss to be carried out as a permitted activity. This will be a positive development for the industry.

A major challenge to growth is that, other than in the meat industry, **most food and beverage industries in the region are effectively cottage industries**, with businesses run by people as a part-time venture and/or who have moved to the region for the lifestyle. Many of these entrepreneurs have established successful export ventures but they have no ambition to grow their business significantly.

We had assumed that distance from markets and transport constraints would have been a major issue in getting produce to market quickly, particularly for those food products where freshness is critical. However, none of the sector representatives we talked to regarded transport as a challenge. Some noted that they backload the return journeys of inward freight and get competitive rates.

Sector representatives also considered that there is the **view in the region that horticulture and food and beverage processing is not a particularly good opportunity** and hence it is not well supported. They noted that there have been several unsuccessful efforts to grow experimental crops in the region that have created negative perceptions. For example, DWC invested \$3 million into a venture to create a 51-hectare sustainable cranberry farm in Buller, which ultimately was not successful, although growers in the region did benefit from using the farm's crops and cranberry plants.

²³ O'Connor, Sarah-Jane (2014). *West Coast Still Recovering After Storm*. Press Article 22 April 2014.

²⁴ <https://data.mfe.govt.nz/table/2493-high-class-land-for-food-production-new-urban-area-on-high-class-land-by-region-19902008/>



What are the specific opportunities for growing the sector in the region?

Supporting growth in horticulture, food and beverage

We have not identified a specific opportunity to significantly grow a particular horticulture, food and beverage industry on the West Coast. However, there is the opportunity to support incremental growth in the sector as a whole through a combination of several activities:

a. Piloting a social enterprise approach to develop the sector in the Buller district

Social enterprises, like any business, earn income from trading but they commit to benefiting the community. For example, they might focus on providing employment opportunities for youth, improving the health of local people, or creating local infrastructure. The characteristics of the West Coast region (scale, isolation but close-knit communities) and the characteristics of many of the horticulture, food and beverage operators (lifestyle businesses) suggests that social enterprises could play an important role.

There is currently a social enterprise framework being applied by the Akina Foundation in several regions and districts in New Zealand such as Northland, the East Coast, Manawatu and Rotorua. We consider that the West Coast could benefit from the support the Akina Foundation could provide. Using a similar approach, this would involve a programme over several months for individuals or teams to explore new prospects for horticulture, food and beverage, while also pursuing social and/or environmental objectives.

Karamea has characteristics that would make it a good place to pilot the activity, including a supportive environment for horticulture. For example, this might result in a food cluster or collective in Karamea to produce, add value, market and distribute locally grown food, supporting local employment and healthy lifestyles.

b. Supporting scoping work and research on the potential development of new niches, e.g., harakeke, and expansion of niches with potential, e.g., honey

In the course of this study we have become aware of a small number of potential new horticulture opportunities in the region, such as harakeke and sugar beets. For example, there is a proposal to hold a symposium in the region to assess the potential for the commercial production of value added products from harakeke. There is the opportunity to implement a more structured approach to scoping, assessing and, if justified, undertaking feasibility work on these opportunities and others that might emerge.

In addition, although it is not currently a large or well developed industry on the West Coast, there is a real opportunity to grow apiculture in the region. We understand that Ngāi Tahu are interested in building a mānuka honey business and that they have recently bought into one of the largest mānuka honey companies in New Zealand (Watson & Son). There is potential for this business to include activity on the West Coast. Makaawhio is currently identifying how it can participate in supplying mānuka honey to the venture. The opportunity is to explore how this can be supported to encourage as much activity and employment on the West Coast as possible. This includes addressing issues in relation to concessions and access to the DoC estate.

We believe there will be a role for DWC or a new economic development organisation to provide support for this type of work (see the section on *Economic Development Arrangements*).



c. Holding fielddays/demonstration days on horticulture as a business opportunity

The purpose would be to demonstrate the potential and value of horticulture crops as a primary or secondary income to encourage an increase in horticulture. The focus should be on basic crops that have proven successful and have ready markets, e.g., tomatoes, blueberries, lettuces, as opposed to experimental crops. The days would also provide information and access to expertise to support horticulture businesses in the region.

d. Developing and supporting a West Coast brand for horticulture, food and beverage aligned with the visitor brand

Efforts to grow visitor numbers and expenditure and having a strong local food and beverage offering and banner are mutually beneficial. As noted, consumers are becoming more interested in the provenance of food and the story about where it comes from, including how it meets safety and sustainability standards. A West Coast food brand could support a premium price for some products. Other regions, such as Northland (Savour Food and Wine Northland) and Wairarapa (Pure Wairarapa) have developed such brands and promotional concepts and the West Coast could benefit by differentiating itself. The benefits and costs of such a brand will initially need to be assessed.

These activities could be kick-started by appointing a sector specialist to promote and develop the horticulture opportunities in the region, working with the relevant stakeholders. There is also a range of initiatives and R&D being undertaken at a national level that could support productivity improvements and growth in some of the niches and the broader sector (see *Central Government Initiatives* below).

Relevant current Central Government initiatives

- Sustainable Farming Fund projects with the horticulture, food and beverage sector, including:
 - resource development for new entrant deer farmers.
 - strategic bee plantations for pollination and honey.
 - pest management in land use modification on the South Island West Coast.
- Primary Growth Partnership programmes, for example:
 - high Performance Mānuka Plantations – a seven year programme to increase mānuka honey exports to more than \$1 billion.
 - FoodPlus – a programme to identify opportunities to create new, higher value products, with a focus on new food, ingredients and healthcare products.
 - Farm IQ – The programme consists of a suite of projects throughout the red meat value chain, from on-farm production systems and genetics, to processing and analysis of market requirements.
 - red meat profit partnership – this programme focuses on supporting farmers in the adoption of best practice behind the farm gate and between the farm and processor.
- The Food and Beverage Information Project – which provides comprehensive information on several industries within the sector, including about market and investment opportunities.

Our assessment of the proposal

The proposed set of initiatives are less developed than several of the others in this study and will require more testing during the action planning phase.

Social enterprise is well suited to the sector and several food and beverage initiatives have been established through a social enterprise programme in other communities of New Zealand. Individual projects tend to be small in scale, and hence manageable, and are unlikely to require a significant investment. They can have a reasonable impact on employment in small communities and also provide a range of other benefits such as (De Bruin and Stangl, 2014; Luxon and Snow, 2015):



- retaining skills within the community
- increasing confidence and capability in business skills and how to develop new ventures
- empowering communities to lead other change projects.

However, developing successful social enterprises will require investment in capability and a support network to sustain them. The Akina Foundation has already run workshops introducing the region to social enterprise, so there is a base of knowledge in the region.

The benefits of further testing and development of emerging concepts such as harakeke or the expansion of niches such as honey will ultimately depend on whether these are feasible and the scale of production that results. Similarly, the benefits of a West Coast food brand are also difficult to estimate. Consumers will pay a premium for food and beverages when they have provenance but that depends on a credible and well-understood story and ensuring producers are committed to safety and sustainability standards.

We do note that DWC provided a range of support to encourage the development of the horticulture industry several years ago (e.g., investing in research on the viability of different crops in the region, holding horticulture forums in 2011 and 2012 to discuss the potential of the industry and how it could work better together, supporting a group of cranberry growers to collectively market West Coast cranberries) and these efforts ultimately had limited results. So there is a legitimate question about whether taking another approach now will succeed.

Because the proposal is more speculative and the benefits are quite uncertain (and likely to be long-term), it rates lower on our criteria. The opportunity exists, but there is not a compelling need. There is some existing work and interest in the region that can be drawn on, but there will need to be upfront investment in testing the opportunities.

Table 26. Assessment of the initiatives to support growth in the horticulture, food & beverage sector proposal

Criteria	Assessment
Validity	Low-Medium
Potential impact	Low
Practicality	Medium
Regionally significant	Medium
International orientation	Low
Ability to leverage local/regional work and investment	Low-Medium
Consistency with national priorities	Medium
Overall assessment	Low-Medium

What other opportunities will impact on the sector's growth?

The proposed regional tourism strategy and action plan to encourage more visitors through the West Coast region and a strong local food culture are mutually beneficial. Incorporating a strong local food offering provides an additional experience to attract visitors to the region. More events could be offered based on the food culture. In addition, developing and promoting the Oparara Basin and Arches as a new iconic attraction will encourage more visitors to the northern end of the region and to Karamea. This provides an opportunity to sell Karamea/West Coast food branded products to visitors to the region.

Other opportunities of relevance to this sector include the proposals for:

- identifying areas of stewardship land that are low conservation value



- developing an applied research centre focused on working with companies in key sectors such as horticulture, food and beverage, to assist them in dealing with real-world problems and opportunities
- maintaining the road network and improving resiliency where necessary
- assessing the feasibility of the Wangapeka road
- reviewing economic development arrangements and functions.

What do stakeholders need to do to support the opportunity and growth in the sector?

Industry	<ul style="list-style-type: none"> • Participate in fielddays/demonstration days on horticulture as a business opportunity. • Contribute to research and scoping work on the potential of new horticultural opportunities. • Provide advice on the costs and benefits of West Coast brand for food and beverage.
Communities	<ul style="list-style-type: none"> • Support and participate in the social enterprise approach to explore new prospects for horticulture, food and beverage.
Māori/iwi/hapū	<ul style="list-style-type: none"> • Support and participate in the social enterprise approach to explore new prospects for horticulture, food and beverage. • Support scoping work on the potential of new horticultural opportunities such as harakeke. • Investigate options for the West Coast to participate in the development of the mānuka honey industry in the South Island.
Local Government	<ul style="list-style-type: none"> • Provide information on land use and potential land use options. • Support the social enterprise approach to explore new prospects for horticulture, food and beverage. • Support scoping work on the potential of new horticultural opportunities.
Central Government	<ul style="list-style-type: none"> • Continue to support R&D programmes for the sector. Ensure that West Coast horticulture, food and beverage businesses are connected into national R&D programmes. • Support scoping work on the potential of new horticultural opportunities.



EDUCATION

Overview

The education sector on the West Coast is of moderate- to large-scale, contributing almost \$50 million in GDP and around 1,100 jobs in 2015. Over the last decade, the sector in the region has grown faster than the sector nationally, but growth has been quite modest (1 percent per year GDP growth and 1.6 percent per year employment growth over 2005–2015). The strongest growth has been in the technical and vocational education and education support service industries.

There was consistent feedback that people perceive that the West Coast has a limited quality and range of educational opportunities. The West Coast is a small market, which limits the local customer base and hence revenue. The downturn in the economy has made it challenging for some schools to maintain roles and operational funding has been affected by changes in decile ratings. Several primary schools in the region have faced management challenges and difficulties recruiting staff. Tai Poutini Polytechnic (TPP) is the only tertiary education institution in the region, so tertiary options are limited. However, TPP does offer a large variety of courses and qualifications relevant to key sectors in the region, including civil construction, mining, outdoor education and hospitality.

International education in the region is currently limited. The value of exports generated by the sector on the West Coast was an estimated \$2.4 million in 2015, but this has the potential to grow.

TPP has partnerships with Wharton Business School and in South America and Asia, and is working with institutions in China to develop exchange programmes. TPP has been running a leadership programme for MBA students from Wharton for 3 years and demand for the programme has exceeded available places. TPP also recently led an international tour of local tourism operators into China to improve their understanding of the servicing requirements of that market.

Opportunities

The West Coast has a current opportunity to expand its international education offering and at least double the size of education exports through the expansion of experiential leadership programmes focused on regional specialties of outdoor education, environmental management and eco-tourism. This would include:

- a) providing international MBA students and business representatives with experiences in the region (building off the programme that TPP runs with Wharton School of Business)
- b) training New Zealand leaders in relevant fields (e.g., conservation management) and bringing leaders to the West Coast for practical experience (e.g., short course executive programmes)
- c) In-bound and outbound study tours - providing West Coast businesses with international experience and expertise to prepare them for meeting international demands. This could include travel into markets and bringing international expertise to the West Coast.

Given the many challenges we have identified, it is quite possible that the current mix of education and training options in the region is not appropriate for the limited resources and capabilities that exist. It is clear that some schools are under pressure in the face of falling rolls and resources and that TPP is also facing resource constraints. It may be a good point in time for education organisations in the West Coast, in partnership with relevant government agencies, to work together to assess what the future of education delivery and resourcing should be in the region.



The aim should be to identify the overall model that will best meet the needs of children, youth and adults as well as key sectors of the economy, taking into account the unique circumstances of the West Coast.

What is the sector’s contribution and make-up?

In 2015 the education sector in the West Coast employed 1,106 people and generated an estimated \$50 million in GDP. This represented 2.6 percent and 6.5 percent of the region’s GDP respectively (Table 27).

There is not a strong concentration of employment in this sector, with a relatively low location quotient of 0.8.

Table 27. Education, summary indicators, 2015

2015	Education	% of region
GDP (2010 \$m)	49.5	2.6%
GDP location quotient	0.6	
Filled jobs	1,106	6.5%
Employment location quotient	0.8	
Productivity (GDP/filled job) (2010\$)	44,807	41%
Exports (2015 \$m)	2.4	0.3%

Source: Infometrics regional database

Labour productivity in the sector is very low at just over 40 percent of the regional average. The sector also had very low estimated exports in 2015 of only \$2.4 million.

As shown in Figure 75, over half of the employment in the sector is in Grey (52 percent), reflecting the large schools and location of TPP. Buller and Westland each have around a quarter of employment in the sector.

Figure 75. Education, employment, 2015

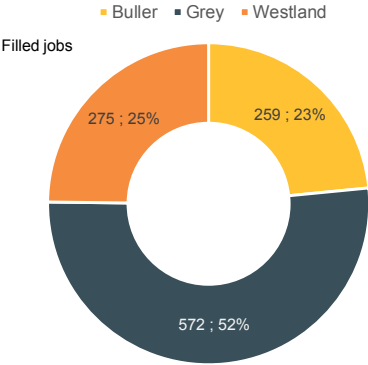
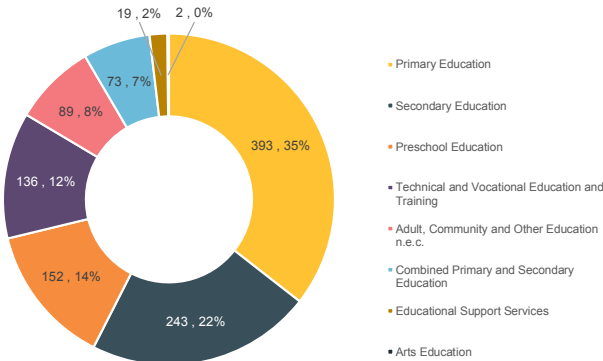


Figure 76. Education, employment by industry, 2015



Source: Infometrics regional database

Primary education, secondary education and preschool education account for over 70 percent of employment in the sector (Figure 76). Technical and vocational education and training accounts for another 12 percent of employment.



How is the sector performing?

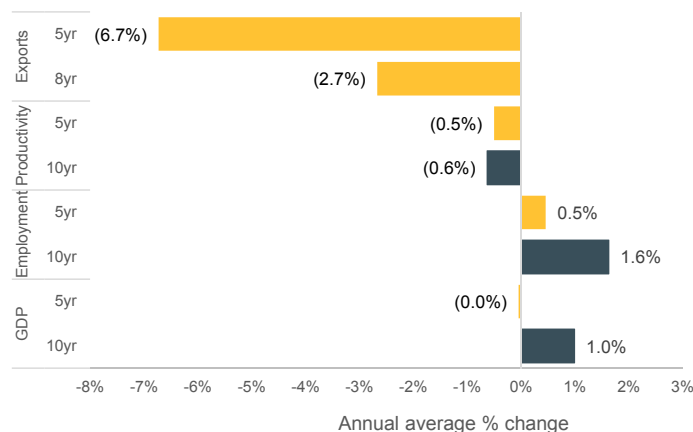
Figure 77 shows the change in GDP, employment and productivity in the education sector over the last 10- and 5-year periods.

Over the last 10 years the sector has experienced relatively low GDP growth at around 1 percent per year and moderate employment growth of 1.6 percent per year (Figure 77). However, GDP and employment growth in the region was faster than the sector experienced nationally.

Growth was much slower over the last five years, with GDP remaining relatively static and employment increasing by only 0.5 percent per year.

Labour productivity has declined by 0.6 percent per year over the last 10 years. Estimated exports have declined quite strongly, by 2.7 percent annually over the last eight years.

Figure 77. Education, change in key indicators



Source: Infometrics regional database

Table 28 presents GDP, employment and location quotients for the industries that make up the sector in 2015. It also shows the 10-year trends in GDP and employment by industry.

Table 28. Education, GDP and employment by major industries, current, 10-year trends and location quotients

	GDP		Employment		Location Quotient	
	2015	2005-2015	2015	2005-2015	GDP	Employment
Primary Education	17.7	0.2%	393	0.8%	0.8	1.1
Secondary Education	10.9	-2.1%	243	-1.5%	0.7	0.9
Preschool Education	6.8	8.4%	152	9.3%	0.6	0.8
Technical and Vocational Education and Training	6.0	36.1%	136	36.7%	1.4	1.8
Adult, Community and Other Education n.e.c.	4.0	2.7%	89	3.3%	0.8	1.0
Combined Primary and Secondary Education	3.2	4.2%	73	5.1%	1.4	1.8
Educational Support Services	0.9	27.4%	19	29.1%	0.6	0.9
Education	49.5	1.0%	1,106	1.6%	0.6	0.8

Source: Infometrics regional database

None of the major segments in the sector are strongly concentrated in the region. However, employment in the smaller technical and vocational education and training segment is over-represented in the region.

Pre-school education and technical and vocational education and training have grown very strongly over the last decade while secondary education has declined. These trends likely reflect changes in the population of the school-aged population. For example, the number of:

- 0-9 years olds in the region increased by 140 over 2006–2015
- 10-19 year olds declined by 830



- 20-29 years olds increased by 430.

It will also reflect increasing participation rates and investment in early childhood education and tertiary education (see the section on *Skills and Talent*) and growing demand by industries for skilled workers. We were also told that many families send children out of the region for secondary schooling.

What is the current potential for growth?

Population growth and demographic factors are key determinants of the demand for education services. As noted earlier in the discussion on *Economic Context*, there is forecast to be limited population growth in the region.

Based on Statistics New Zealand's medium population projections, the population of young people (0–29 year olds) in the region is expected to decline by 390 people over 2013 to 2023. However, there is variation by different age groups. For example, the population of:

- 0–4 year olds is expected to decline by 460 (-0.7 percent per year)
- 5–14 year olds is expected to increase by 220 (0.5 percent per year)
- 15–19 years olds is expected to decline by 250 (-1.4 percent per year)
- 20–29 years olds is expected to decline by 200 (-0.6 percent per year).

This suggests that there will be fewer young people available to go into pre-school education, higher numbers available for primary education, and lower numbers available for secondary education and tertiary and higher education (noting that older age groups also participate in tertiary and higher education).

Other than the population, other drivers of growth in education services will be (New Zealand Treasury, 2013; New Zealand Productivity Commission, 2016):

- Economic opportunities – Prospective students make decisions on whether to participate in higher and tertiary education depending on whether they believe there will be future rewards in terms of employment opportunities and higher incomes. The downturn in the regional economy and perceived lack of local opportunities in the short- to medium-term is likely to encourage people back into education to re-skill or to wait until conditions improve. In general, an increase in the unemployment rate results in an increase in higher and tertiary education.
- Industry composition – changes in the composition of the economy will encourage greater demand for some types of training and education and less demand for others. A growing services sector in the region, for example in tourism, makes skills development more important because performance in that sector depends fundamentally on skills such as customer service, ICT and marketing. Whether the education sector in the region benefits will depend on whether it offers relevant courses (and TPP does offer several relevant service-based programmes). Conversely, a declining minerals sector is likely to result in a reduction in demand for mining-specific courses.
- Costs of education – research suggests that demand for education by domestic students is quite insensitive to price, although it may alter where students study and how much they study. Demand by international students is more sensitive to price and hence exchange rates. Costs include transport costs, which will be higher on the West Coast, although other costs, such as accommodation, will be lower.



- Investment in education services – the Government’s investment in different types of education encourages supply and demand. For example, there has been a strong focus on, and investment in, early childhood education, trades training and international education. TPP has also recently invested in a new trades-training centre in Greymouth with a focus on automotive engineering, which should attract new students. As noted below, TPP is also investing in increasing international education services.
- Technological change – the increasing availability of online education can make it easier for institutions on the West Coast to reach students in other areas of New Zealand or overseas but also makes it easier for providers from outside the region to reach local students. The Government has recently announced the proposal to develop Communities of Online Learning to take advantage of technology.

Another important influence is international demand and the ability of regional providers to meet international expectations. Demand for international education worldwide is expected to grow over the next decade, particularly from China, India, Indonesia, Nigeria, Germany and Saudi Arabia, as a growing middle class in these economies increases spending on education services (Education NZ, 2016). A range of countries are growing their international education offers to meet this demand. To compete and capture a greater slice of the market will require that providers offer not only high quality education services but also a unique experience. The West Coast is well positioned to provide such an experience.

Some of these factors will encourage increased supply of, and demand for, education services in the region, while others will offset this and restrict growth. This mixed set of incentives, in combination with the declining number of youth in the region, suggests overall that employment and GDP in the education sector will remain relatively static over the medium-term under a business-as-usual scenario.

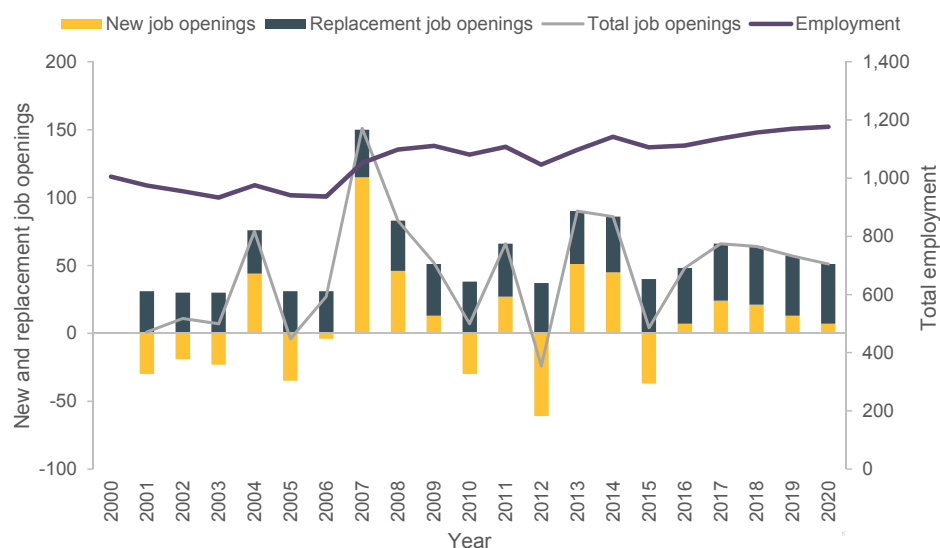
Short-term employment forecasts (Ministry of Business, Innovation and Employment, 2016) estimate that employment in the education sector in the region will hardly grow at all, by 0.1 percent per year. Infometrics’ model suggests a more positive picture of moderate growth over the next 5 years. The model forecasts that employment in the sector will grow by 1.3 percent per year or 72 jobs over 2016 to 2020 (Figure 78).

In addition, there is forecast to be an additional 214 jobs openings resulting from people leaving the workforce (e.g., due to retirement, moving out of the sector or region). Hence, overall there is forecast to be a total of 286 openings in the sector over 2016-2020, or an average of 57 per year.

We consider that Infometrics forecasts represent a more optimistic outlook than is likely under a business as usual scenario and will only be realised if there is a turnaround in several key sectors (and hence growth in employment and in the population in the region) and/or further investment in new education initiatives.



Figure 78. Education job openings and total employment, historical and forecast



Source: Infometrics

What are the strengths of the sector in the region?

There is a good range of early childhood and compulsory education options available on the West Coast. We identified 26 options for early childhood education (ECE) and 36 primary and secondary schools on the West Coast. There are schools right throughout the region, from Haast to Karamea. There are no decile 1 or 2 schools, and two are decile 9 or 10. Education Review Office reviews suggest that most of the schools in the region that provide secondary school education are performing well.

Although there isn't such a range of higher education options, it does appear that **vocational education is well aligned with key sectors** in the region. The main provider of vocational training is TPP. Its main campus is in Greymouth with campuses at Westport, Reefton, Wanaka and Hokitika. There are also campuses in Auckland (Trades, and Music and Audio Institute of New Zealand (MAINZ)) and Christchurch (Trades, and MAINZ). It enrolls around 4,000 local students, which is a high penetration rate given the regional population.

TPP offers a large variety of courses and qualifications that reflect the industry needs of the local economy. Relevant study options include:

- Arts and carving – the polytechnic's 1- and 2-year jade carving programmes are unique to New Zealand
- Business and computing
- Chef and hospitality
- Drilling, civil and mining
- Emergency management, and search and rescue
- Pre-health
- Automotive and engineering



- Health, safety and compliance
- Outdoor education and tourism.

The national School of Mines within TPP was established in 2012, focused on training those who wish to take advantage of mining employment opportunities. The Reefton Education Centre provides training in civil plant operation, in partnership with industry.

TPP was last reviewed by the New Zealand Qualifications Authority (NZQA) in 2013. As part of that review, TPP's engagement with industry was viewed as high, based on evidence collected through the four main programmes evaluated (music, outdoor education, allied trades and a National Certificate in Infrastructure Works). Industry engagement was considered to be close and active, including through joint projects, critical input and analysis of programme content, and adding to students' preparation for employment (NZQA, 2013).

Another provider of vocational training is Westport Deep Sea Fishing School, which is a private training provider in the region that delivers two Level 2 National certificates to students during a 13-week training programme. The programme consists of onshore training and sea-time training on fishing vessels. A high proportion of students secure jobs in the industry after completing training. When last reviewed by NZQA (2012), employers indicated they valued the workers that came from the school because they had the required technical abilities and were able to adapt to life at sea.

Generally, the quality of tertiary education has been good.²⁵ The NZQA 2013 review concluded that TPP was "Confident in educational performance" and "Confident in capability in self-assessment" (NZQA, 2013). In 2012, TPP course and qualification completion rates were 81 and 70 percent, better than median national figures (78 and 61 percent respectively) (NZQA, 2013).

In some cases, there are reports of 100 percent of graduates gaining employment in a field related to their study, for example, Outdoor Education and Ski Patrol. In other faculties such as Allied Trades, there is a growing body of evidence that students are making significant gains in transferable skills and knowledge in areas such as 'gaining pride and confidence in their work', and increasing companies' profitability. While much of the evidence is through informal student and employer anecdotes, and firms requesting repeat courses for their employees, there is a clear pattern to this feedback.

Although international education is currently very small (discussed below), TPP has been **building up the international offering from the region** with partnerships in the US, South America and Asia. For example, TPP has:

- Delivered experiential leadership training in the region to a group of Wharton Business School MBA students (the third year of the programme). In 2014 and 2015 this was rated as the top Wharton venture by the students.
- Developed a relationship with Instituto Vertical in Chile and had its first international student enrolment from there
- Delivered a leadership programme to students at the Hong Kong University of Science and Technology

²⁵ We note that there have been concerns raised about the quality of search and rescue training offered by TPP and that an investigation is going on in relation to funding of course hours for this programme and courses on scaffolding and cranes, emergency management, and drilling and mining. The investigation was still being completed at the time of this report.



- Received support from Education New Zealand to develop Ecotourism Study Tour products, and recently led an outbound study tour of local tourism operators to China to help them better understand the Chinese visitor market. Chinese students are travelling to the region for a 10-week ecotourism guiding programme later in 2016.

In addition, Te Rūnanga o Ngāti Waewae as well as Ngāi Tahu whānui have a number of tribal and hapū initiatives that work towards improving the educational outcomes of Māori in the area. Some of these include relationships with Universities, such as the Te Tapuae o Rehua consortium, as well as internationally with Stanford University.

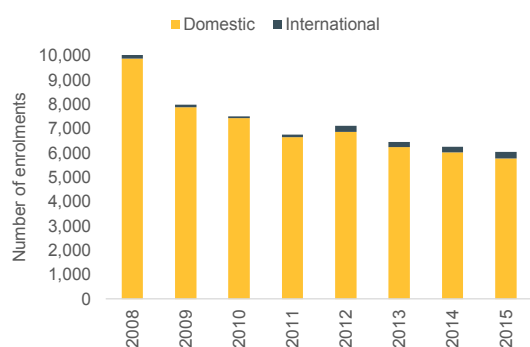
What are the challenges facing the sector in the region?

We heard consistent feedback from business representatives and other stakeholders that **people perceive that there is a limited quality and range of educational opportunities** on the West Coast. There are views that this is a key reason why it is difficult to attract managerial staff with families to the region.

We do note that several primary schools in the region have faced management challenges and difficulties recruiting staff. In addition, TPP is the only tertiary education institution in the region, so the **direct provision of tertiary options is certainly limited**.

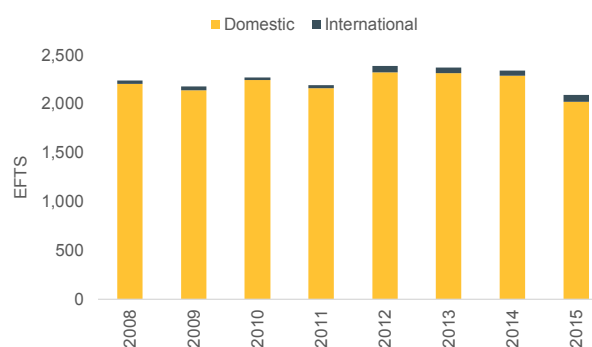
A major challenge is that **the West Coast is a very small market**, which limits the customer base and hence revenue. TPP has limited resources to expand programmes. It has attempted to diversify through markets in Auckland and Christchurch but TPP enrolments overall have decreased since 2007 (Figure 79) and numbers of equivalent full time students (EFTS) have also decreased since 2012 (Figure 80).

Figure 79. Tai Poutini Polytechnic enrolments, 2008–2015



Source: MOE, Education Counts

Figure 80. Tai Poutini Polytechnic equivalent full time students, 2008–2015



Source: MoE, Education Counts

TPP's national initiatives are effectively cross-subsidising the local services. It has also been reported that TPP is finding it challenging in the latest year to meet its EFTS target.

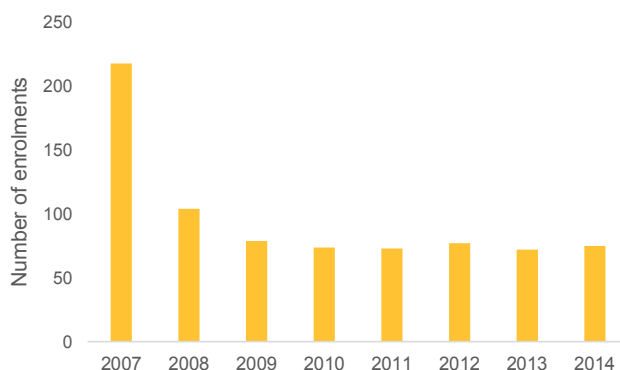


Some schools are also finding it challenging to maintain rolls in the face of the declining population and operational funding has also been affected by the downturn. For example, the decile ratings of some schools were raised based on Census results (when times were good), which no longer reflect the current economic conditions where employment and incomes have fallen, particularly in Buller. As a result, some schools have incurred a drop in operating funding from the MoE.

One way of growing funding streams is through international students. **But international education services and take-up in the region are currently limited.**

In 2014, the West Coast region captured a very small percentage of New Zealand’s fee-paying international student enrolments (0.07 percent). Over 2007–2014, international student numbers in the region fell from a high of 218 in 2007, to between 70 and 80 over 2009 to 2014 (Figure 81). We assume the fall after 2007 was due to the financial crisis (there was a large fall in international student numbers in several regions).

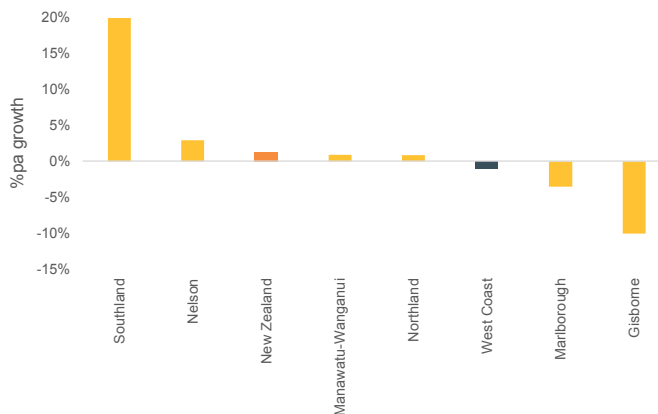
Figure 81. International student enrolments on the West Coast, 2007–2014



Source: MoE, export education levy statistics

On average, international student enrolment numbers on the West Coast declined by 1 percent per year over 2009 to 2014. This was less than growth achieved in several comparator regions such as Northland, Manawatu-Wanganui and Nelson (Figure 82). Nationally, international student numbers increased by 1.3 percent per year over the period.

Figure 82. Growth in international student enrolments, selected regions, 2007–2014



Source: MoE, export education levy statistics

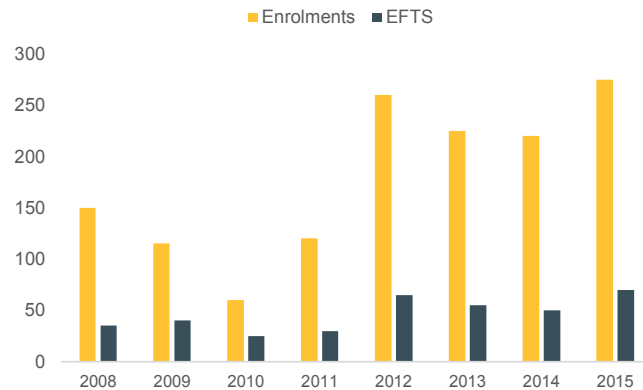
Almost all international students in the region attend TPP – 71 of the 75 in 2015. TPP itself has achieved reasonable growth in international student numbers on the West Coast, from 47 in 2010 to 71 in 2015, or 8.6 percent per year.

TPP also has a large number of international student enrolments in its other campuses.



In 2015, the total number of enrolments at TPP across all of its campuses was 275, with 70 of those being EFTS. Enrolments have been between 220 and 280 each year since 2012. There was a large increase in enrolments and EFTS of international students over 2014 and 2015.

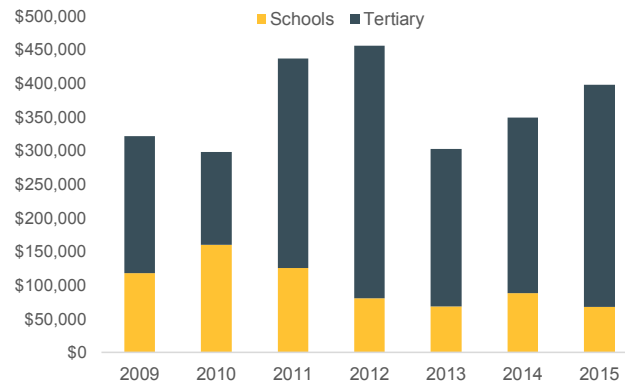
Figure 83. International student enrolments and EFTS, Tai Poutini Polytechnic, 2008–2015



Source: MoE, customised export education levy statistics

The value of tuition fees to the West Coast from international students has fluctuated over the last 7 years, reaching a low in 2010 of \$298,000 and a peak of \$456,000 in 2012. There was a large decline in fees over 2012–2013.

Figure 84. International student tuition fees on the West Coast, 2009–2015



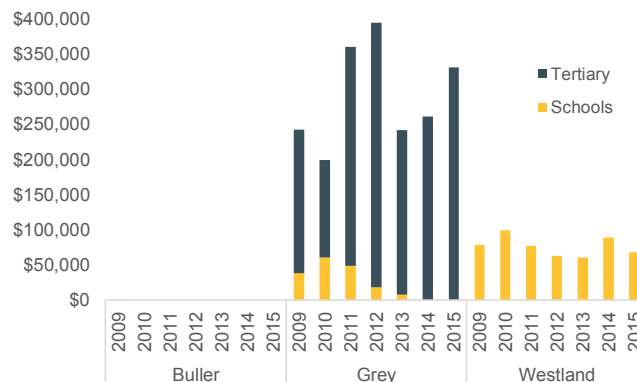
Source: MoE, customised export education levy statistics

Notes: This figure shows total tuition fee income for all of TPP's international students, including in Auckland.

Fee revenue has steadily increased over the last 3 years from around \$300,000 to \$400,000 (14.7 percent per year) even though the numbers of international students have remained relatively constant.

At the district level, most international student tuition fees are captured in Grey as it is where TPP's main campus is located. However, schools in Westland have had some success in attracting international students and fees, although the numbers are very small.

Figure 85. International student tuition fees at the district level, 2009–2015



Source: MoE, customised export education levy statistics

Buller had international students in 2009, but official statistics suggest that it has not had any since.



What are the specific opportunities for growing the sector in the region?

The main opportunity is to significantly grow international and national education services delivered from the region, while also developing leadership capability in key sectors of the regional economy.

Expansion of experiential leadership programmes

There is an international trend to accelerate leadership development through experiential leadership practices. The West Coast is well placed to capitalise on this trend due its geographical situation and diverse landscape, and particular specialties in outdoor education, conservation management and ecotourism.

An expansion of the current experiential leadership initiatives would include:

- a) providing international MBA students and business representatives with experiences in the region on outdoor education, environmental management, tourism etc. (building off the programme that TPP runs with Wharton School of Business)
- b) training New Zealand leaders in relevant fields (e.g., conservation management) and bringing leaders to the West Coast for practical experience (e.g., short course executive programmes)
- c) In-bound and out-bound study tours - providing West Coast businesses with international experience and expertise to prepare them for meeting international demands. This could include travel into markets and bringing international expertise to the West Coast.

DWC is providing funding support this year to allow TPP to further build staff capability and to expand the experiential leadership programmes for international students. TPP has sufficient support to run two different programmes and to scope a programme with another University. There is also an opportunity to work with DoC to develop a customised programme targeted at international conservation estate managers. TPP considers that at least 15 to 20 experiential leadership ventures could be delivered each year.

A first eco-tourism in-bound study tour was delivered in January 2016 to graduates from Guilin Tourism University. A second is due for delivery in the third quarter of 2016. As noted, TPP also delivered an out-bound study tour to China in June 2016 for local tourism representatives. This study tour focused on understanding the culture and expectations of tourists, and basic language skills. It involved study at Guilin Tourism University and examination of local businesses.

To create a step-change in the number of international participants and local participants in such study tours, resourcing is needed to develop relationships with additional universities in markets such as China and India.

Our assessment of the proposal

There appears to be strong demand by international students for an expansion of the existing initiatives. For example, in 2015, while there were 14 places on the Wharton Business School initiative, there was a waiting list of 110 students. There has been interest from Universities in the UK, Hong Kong and China. Further demand is likely if the programme can be upgraded to be recognised by universities for credit.



As noted, the objective of the proposal would be to at least double the value of international education in the region from around \$2.5 million per year currently to \$5 million per year within 5 years. This is feasible. Considering only the experiential programme for offshore MBA students and business representatives and assuming 20 ventures are delivered annually, this represents another \$2 million in revenue. Revenue from short-term executive courses and study tours would be additional to this.

There will also be broader benefits to the West Coast from increasing the number of international students and executives travelling to the region. This includes bringing in new perspectives to local communities, helping local students to improve their understanding of the world, providing international connections for businesses, and cultivating ambassadors for the West Coast overseas.

We also heard interest from several sector and iwi representatives in having an expanded programme for West Coast executives. Out-bound study tours and short-term leadership courses for West Coast and New Zealand business representatives will provide a range of benefits to the region. Improved leadership capability will help businesses in key sectors adopt an international focus, become more responsive to market requirements, and invest in practices to improve productivity.

We are not aware of any similar programmes delivered on the West Coast, although businesses can access these programmes in several other regions. DWC does support a more extensive 12-month leadership and governance programme in the region, so the relationship between any short-course executive programme and the DWC initiative will need to be considered.

There is potential to support the programme by providing a cultural element and also improve the experience through Ngāi Tahu Tourism. As noted, Te Rūnanga o Ngāi Tahu also has close relationships with Stanford University that could be leveraged.

The proposal is consistent with Central Government's goal to double the economic value of international education by 2025. This includes increasing the number of international students enrolled in New Zealand providers and improving New Zealanders' skills and knowledge to operate effectively across cultures. Other relevant central government initiatives are noted below.

The major risk to this initiative is the capacity of TPP to deliver such a step-change and for courses to be upgraded to receive credit recognition. We consider that there will be other providers in New Zealand that will have relevant expertise and resources that could be applied in an expanded programme (e.g., Queenstown Resort College). As such, we believe that TPP should seek to partner with other education and training providers in developing and extending the programme.

Relevant current Central Government initiatives

- Government's Leadership Statement on International Education.
- Education New Zealand, including Regional Partnership Programme which provides funding support, facilitation and advice.
- International Education Growth Fund, which provides funding between \$10,000 and \$50,000 on a co-funded 50:50 basis for international education initiatives.
- New Zealand International Education Strategic Roadmap.
- Immigration Online, implementing web-enabled student visa applications and approvals.



This proposal rates medium-high on our criteria. The expansion of experiential leadership programmes appears to be targeted at an area where there is existing demand and has a strong international orientation. It is also consistent with national objectives for growing the international education sector.

Table 29. Assessment of proposal to expand experiential leadership programmes

Criteria	Assessment
Validity	Medium
Potential impact	Medium
Practicality	Medium
Regionally significant	Medium
International orientation	High
Ability to leverage local/regional work and investment	High
Consistency with national priorities	High
Overall assessment	Medium-High

There could be a reasonable impact on local business capability and on international earnings. As noted, whether it can be achieved will depend on securing resources to build up local capacity and partnerships with institutions in other regions.

Identifying the best approach for delivering and resourcing education in the region

Given the many challenges facing the education sector in the region, in our view it is quite possible that the current mix of education and training options in the region is not appropriate for the limited resources and capabilities that exist. It is clear that some schools are under pressure in the face of falling rolls and resources and that TPP is also facing resource constraints. It may be a good point in time for education organisations on the West Coast, in partnership with relevant government agencies such as MoE, TEC and MSD, to work together to assess what the future of education delivery and resourcing should be in the region. The aim should be to identify the overall model that will best meet the needs of children, youth and adults as well as key sectors of the economy, taking into account the unique circumstances of the West Coast.

This is very much a preliminary proposal. Stakeholder interest in and options for undertaking such a review would need to be tested as part of the action planning stage of this study.

What other opportunities will impact on the sector's growth?

The proposed tourism strategy and action plan will also support the development of international education by improving the promotion of the region in offshore markets.

Accelerated broadband roll-out in the region will also potentially lend itself to the delivery of education services in other parts of New Zealand and offshore. Online education delivery will also be supported by the proposed measures to develop the creative and ICT sector in the region.



What do stakeholders need to do to support the opportunity and growth in the sector?

Industry	<ul style="list-style-type: none">• Participate in in-bound and out-bound study tours.• Partner with education providers, iwi and government to develop the experiential leadership programmes.• Build stronger relationships with education providers to increase the relevance of provision to industry needs.
Educational institutions	<ul style="list-style-type: none">• Develop a business case for the extended experiential leadership programmes.• Develop relationships with more universities and training providers offshore.• Consider opportunities to partner with other educational institutions in New Zealand.
Māori/iwi/hapū	<ul style="list-style-type: none">• Partner with education providers, industry and government to develop the experiential leadership programmes.• Participate in the in-bound and out-bound study tours.
Central Government	<ul style="list-style-type: none">• Provide support for the expansion of the experiential leadership programmes.• Partner with education providers and industry to develop the experiential leadership programmes, for example, in conservation management.• Participate in in-bound study tours as appropriate.



FISHING, AQUACULTURE AND RELATED PROCESSING

Overview

Fishing and aquaculture is a small, growing sector in the region. The sector contributed around \$16 million to the West Coast economy and supported 229 jobs in 2015 (around 1 percent of the economy). The sector has achieved strong value growth over the last 5 years (2.9 percent per year growth in GDP, with the value of exports growing at 5.9 percent per year), although this is from a low base.

The West Coast has both natural and capability advantages to support growth in the sector. The West Coast fishery is regarded as being abundant due to protection provided by weather and sea conditions.

There are two relatively large commercial fishing companies that are investing in product development. While there has been investment in value add products and improved processing capability, growth is likely to be incremental as volumes are constrained by the availability of quota shares and annual catch entitlement (ACE).

The West Coast has a strong reputation and capability in recreational fishing and whitebaiting. However, commercial freshwater fishing and aquaculture are currently very small in scale. There are a few commercial whitebait operators and a boutique salmon farm in the region. There is, however, interest in growing the potential of both salmon farming and whitebaiting.

The potential of whitebait, both recreational and commercial, is constrained by available whitebait stocks and limited information about the management of the stocks. Industry feedback suggests that whitebait stocks in the regions have declined as a result of changes to waterways and spawning sites. Sites and key waterways have been adversely affected by a combination of erosion, expanded coastal towns, and dairy farming. DoC has been doing restorative work on some sites but is limited by resource constraints.

Opportunity

The main opportunity is to develop a sustainable wild whitebait fishery. The key activity that will need to be undertaken is a programme to develop, restore, monitor and protect more spawning sites (and this may need to extend beyond the West Coast). This should be supported by research to ensure that the work is undertaken in the right places. An initial assessment of 136 sites on the West Coast has already been undertaken, identifying their enhancement needs.

Additional investigations could also be undertaken into options to enhance adult whitebait habitats, on the state of the stocks and the effectiveness of the network of closed areas, and on the value of the whitebait fishery to the West Coast.

There is also commercial interest in assessing the feasibility of and developing salmon farming in the region. A concept is being developed and an assessment of a potential site has commenced.



What is the sector's contribution and make-up?

In 2015, the sector contributed almost \$16 million to the West Coast economy, supported 229 jobs and generated exports of \$35.6 million in 2015 (Table 30). This represented 0.8 percent of the region's GDP and 1.3 percent of jobs.

There is a strong concentration of employment in this sector, with a high location quotient of 3.3.

Table 30. Fishing & aquaculture, summary indicators, 2015

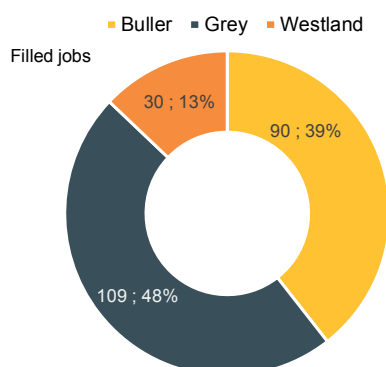
2015	Fishing & aquaculture	% of region
GDP (2010 \$m)	15.9	0.8%
GDP location quotient	2.4	
Filled jobs	229	1.3%
Employment location quotient	3.3	
Productivity (GDP/filled job) (2010\$)	69,686	63%
Exports (2015 \$m)	35.6	5.1%

Source: Infometrics regional database

Labour productivity in the sector is relatively low at around two-thirds of the regional average.

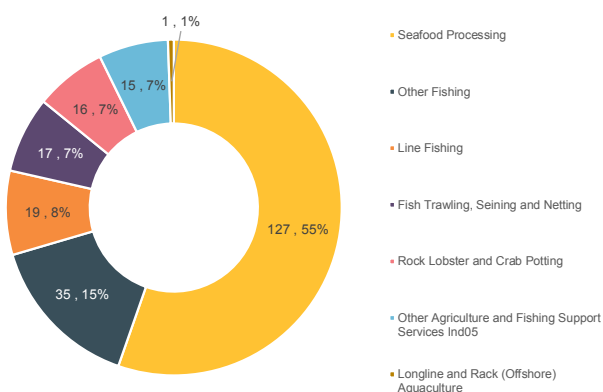
As shown in Figure 86, the bulk of the activity in the sector is split between Grey and Buller. Grey accounts for almost half of sector's employment, while Buller accounts for almost another 40 percent. This illustrates the dominance of Westfleet Seafoods and Talley's in the sector.

Figure 86. Fishing and aquaculture, employment, 2015



Source: Infometrics regional database

Figure 87. Fishing and aquaculture, employment by industry, 2015



Source: Infometrics regional database

Seafood processing accounts for over half of the sector's employment, with 'other fishing' representing another 15 percent (Figure 87).



How is the sector performing?

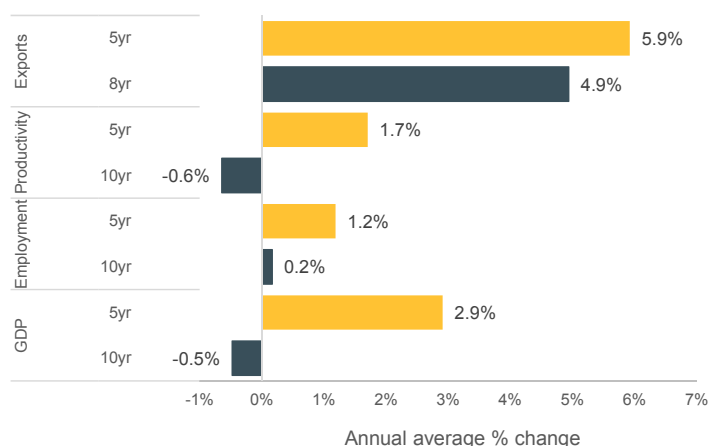
Figure 88 shows the change in GDP, employment and productivity in the fishing and aquaculture sector over the last 10- and 5-year periods.

Over the last 10 years, the sector has experienced a decline in GDP of -0.5 percent per year and only slight growth in filled jobs of 0.2 percent per year.

Growth has been stronger over the last 5 years, with GDP increasing by 2.9 percent per year and employment increasing by 1.2 percent per year.

The sector has grown more strongly in the region than it has nationally, albeit off a low base.

Figure 88. Fishing and aquaculture, change in key indicators



Source: Infometrics regional database

Exports have grown strongly at 5.9 percent per year over the last 5 years and 4.9 percent per year over the last 8 years. This is significantly stronger than New Zealand's aquaculture and fishing export growth over the same periods (although, again, from a very low base).

As shown in Table 31, almost all of the industries in the sector are strongly concentrated in the West Coast, which suggests that the region has some underlying advantages for this sector. The major industry within the sector, seafood processing, has experienced moderate employment growth but limited growth in value added. 'Other fishing' has experienced extremely rapid GDP and employment growth (and this industry includes freshwater fishing and whitebaiting).

Table 31. Fishing & aquaculture, GDP and employment by major industries, current, 10-year trends and location quotients

	GDP		Employment		Location Quotient	
	2015	2005-2015	2015	2005-2015	GDP	Employment
Seafood Processing	11.3	0.3%	127	1.6%	3.2	3.7
Other Fishing	1.1	42.1%	35	46.6%	2.9	8.2
Line Fishing	0.6	-8.0%	19	-6.2%	1.4	3.9
Fish Trawling, Seining and Netting	0.9	-11.0%	17	-10.9%	0.9	1.5
Rock Lobster and Crab Potting	0.5	-3.9%	16	-3.0%	1.7	5.0
Other Agriculture and Fishing Support Services Ind05	1.4	0.0%	15	8.6%	3.9	2.6
Aquaculture, fishing & related processing	15.9	-0.5%	229	0.2%	2.4	3.3

Source: Infometrics regional database

What is the current potential for growth?

Growth in the volume of fishing is constrained by the availability of quota share and ACE. Feedback from the sector suggests that quota does not come on to the market that often. Growth in value will thus likely be dependent on achieving higher prices through product development, market



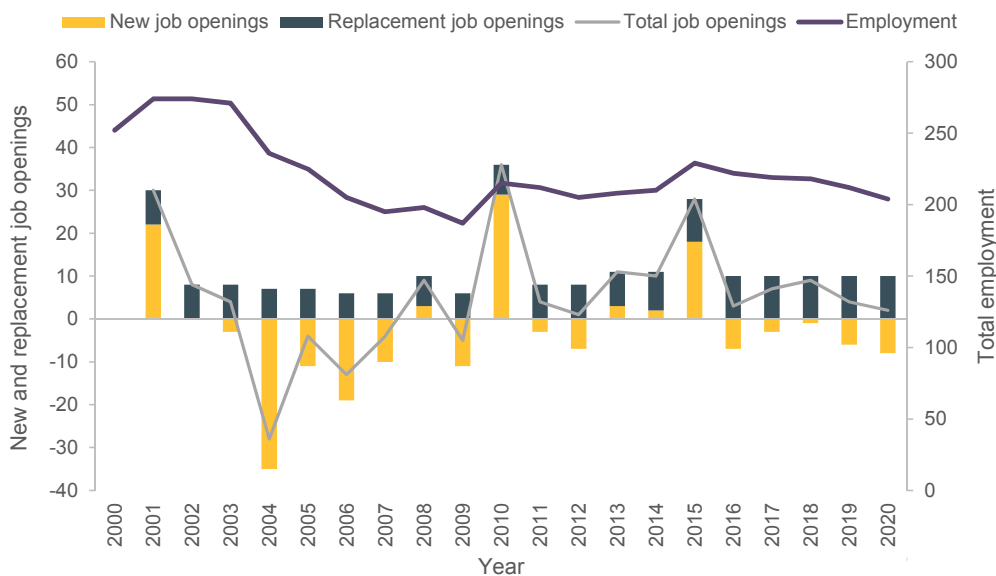
differentiation or more favourable exchange rates. Limited volume growth, combined with new technology that is making processing more efficient, is resulting in lower employment in the sector (Westpac, 2016).

At a national level, growth in the value of the seafood sector is expected over the medium-term, with an increase in export earnings from around \$1.6 billion in 2015 to \$2.1 billion in 2020 (Ministry for Primary Industries, 2016). Growth in the value of wild fisheries exports is expected to be around 5 percent per year. Demand should be supported by rising incomes in emerging markets, strong demand in China, Europe and North America for premium white fish, and an expected depreciation of the New Zealand dollar (Ministry for Primary Industries, 2016a; Westpac, 2016). The Australian market is not expected to grow strongly (and this is the main market for fresh fish from the West Coast). New technology may allow more efficient fishing and exports of fresh and chilled products to a wider range of markets beyond Australia.

Overall, under a business-as-usual scenario, we would expect to see growth in the value of the sector in the region, but limited further employment growth.

Infometrics forecasts relatively low growth in employment in the industry nationally over 2016–2020, of around 0.9 percent per year. Their forecasts suggest that employment in the sector on the West Coast will decline over the next 5 years by 25 jobs or an annual decline of 2.3 percent (Figure 89).

Figure 89. Aquaculture, fishing & related processing job openings and total employment, historical and forecast



Source: Infometrics

Infometrics also forecast an average of 5 job openings per year in the sector in the region due to natural churn and some people leaving the workforce.



What are the strengths of the sector in the region?

The West Coast **fishery is extensive and has many species in abundance** due to protection provided by weather and sea conditions, in combination with cool water temperatures. Commercial species include hoki, blue fin tuna, ling, terakihi, blue warehou, flatfish, snapper and gurnard, amongst others.

There is **strong commercial fishing and processing capability** in the region and two companies of scale in Westfleet Seafoods and Talley's Westport. Westfleet has over 100 staff and has recently invested in a modern wharf facility at the Port of Greymouth that offers processing, retrieval and ice-making facilities. Talley's has over 50 staff with a processing operation in Westport and undertakes fishing from Greymouth and Jackson Bay. As noted in the section on the *Education sector*, the region also has the Westport Deep-sea Fishing School, which has a good reputation with the fishing industry.

The region has a **strong reputation and capability in whitebaiting and recreational fishing**. According to the West Coast Whitebaiters Association, there are around 650 registered stand holders and 2,000 set or scoop netters that fish in the region. Whitebaiting is a key part of the region's lifestyle and whitebait are of cultural significance to Māori. West Coast whitebait is regarded as a must-eat and high-value delicacy. Recreational fishing is an important part of the visitor offering on the West Coast, including trout, salmon and game fishing. Several fishing guides and charter companies operate on the West Coast.

What are the challenges facing the sector in the region?

Businesses have experienced **difficulties in finding and retaining labour** at two levels:

- supervisory and leadership staff – we were told that experienced management staff are aging and looking to exit the sector. As was common to several other sectors, it has proven difficult to attract these skills to the West Coast.
- fishing or processing labourer roles – fishing boat staff are also ageing but there are fewer young people interested in fishing as a career due to the difficult working conditions and long hours involved. There can be a high drop-out rate of new recruits to fishing and processing roles.

As noted in the section on *Transport*, the **future of Westport Port and its suitability to cater for larger fishing vessels over the long-term is uncertain** given that dredging has been suspended. However, BDC has indicated that it is possible that dredging will still take place when required to enable larger vessels to unload.

Commercial freshwater fishing and aquaculture is very small in scale. Salmon are farmed at the South Westland Salmon Farm (the entire production of the farm is sold from an on-site shop and café) and whitebait is caught and packaged by small operators such as Curly Tree Whitebait Company in Haast and the Cascade Whitebait Company that has an operation in Waitotō (and a distribution centre in Christchurch).

Stakeholders indicated that **whitebait stocks in the region have declined**, due to changes to waterways and breeding sites, although there is no hard evidence about volumes or the amount taken by recreational or commercial fishing. We were told that sites and key waterways have been adversely affected by a combination of erosion, expanded coastal towns, gravel extraction and dairy farming.



There was positive feedback that DoC has been doing a good job in restoring some sites but that the extent of restoration is limited due to a lack of resources.

What are the specific opportunities for growing the sector in the region?

There do not appear to be significant opportunities to grow the fishing industry within the sector on the West Coast beyond what the existing companies are already doing.

The region does have aquaculture potential and there is commercial interest in assessing the feasibility of and developing salmon farming in the region. A company is developing a salmon farm concept and assessing a potential site. This is a commercial project and no support has been sought through this study and action plan process. It could be the starting point for an expansion of the industry in the region if it is established and proves successful.

Relevant current Central Government initiatives

- Investment in R&D to support the industry, including the Precision Seafood Harvesting Primary Growth Partnership, investment in Integrated Aquaculture Solutions to develop freshwater aquaculture activity by exploiting dairy farm effluent, and investment in business R&D to explore new aquaculture products and species.
- Government Aquaculture Strategy and Action plan to grow aquaculture exports to \$1 billion by 2025.

There is an immediate opportunity to support growth in the recreational and commercial potential of whitebait.

Developing a sustainable wild whitebait fishery

The proposal is to enhance the habitat for whitebait on the West Coast and to improve the quality of information about breeding and the stocks of whitebait. Four activities are proposed:

- a) A programme to restore and protect whitebait spawning sites. 136 sites in the region have been assessed and their enhancement requirements have been identified. This provides a basis for prioritising and undertaking the work.
- b) An investigation into options to enhance adult whitebait habitat, focused on addressing potential barriers to fish passage
- c) An assessment of the whitebait stock and the effectiveness of the current network of closed areas
- d) Research to quantify the economic, social and cultural value of the whitebait fishery to the West Coast.

The work should be managed by DoC, in partnership with the WCRC, iwi and hapū and in consultation with whitebaiters. DoC manages the whitebait fishery and enforces the Whitebait Fishing Regulations (West Coast) 1994, while WCRC administers consents for the construction and maintenance of whitebait stands. Māori have customary rights to whitebait (e.g., for hui or tangi as long as the intention is notified to a warranted officer).

There are also views that whitebait regulations should be reviewed, for example, to introduce limits for catching whitebait. However, we consider that resources are best directed at improving the evidence-base on stocks and impacts before considering regulatory options.



Our assessment of the proposal

Taking action to restore and improve whitebait stocks is likely to be relatively easy to implement given that there is good experience in the region in undertaking this work and there has been prior research and guidance on what works from NIWA. The main challenge will be identifying sufficient funding and capacity to extend this, which will be a task for the action planning stage. Resources will also be required to monitor and evaluate the impact of restoration and protection work.

Improving the quality of information about whitebait and its value to the region will be important to the success of this proposal. Currently it is unclear what types of developments are having the greatest impact on spawning and stocks, for example, runoff from farming, floodgates, culverts, sediment accumulation, or removal of cover. The research will ensure that enhancement work is focused on the right sites and activities and will help to inform whether different approaches to managing the fishery are required. Understanding the value of whitebaiting will help in making investment decisions about future enhancement efforts, particularly if these involve restricting other developments.

The economic benefit of the proposal, i.e., the impact on jobs and incomes, may well be limited given the small scale of commercial activity (although, as noted above, the scale of activity is not known). However, there will be broader benefits, such as:

- maintaining the West Coast’s reputation as the premiere whitebait region in New Zealand (and the flow-on benefits that come from that, such as visitors during whitebait season)
- improvements in health and wellness that come from recreational whitebaiting
- improved river ecosystems and health of other fish species
- lessons that can be applied to whitebait habitats in other parts of New Zealand.

One risk with the proposal is that protecting habitat and spawning sites in the region may not have a substantial impact on whitebait entering the rivers and contributing to the fishery in the absence of similar measures in other parts of the country. Research has shown that whitebait entering regions from the sea come from a pool of fish that includes rivers in other parts of New Zealand (NIWA, 2010).

This proposal ranks medium on our criteria due to low economic impact and possible length of time before there will be a major impact on the fisheries in the region.

As noted, there has been some research undertaken on spawning sites already so there is a knowledge base to build on.

The proposal is also consistent with central government’s Business Growth Agenda priority to develop aquaculture, fisheries and marine resources.

Table 32. Assessment of the proposal to support the development of a sustainable wild whitebait fishery

Criteria	Assessment
Validity	High
Potential impact	High
Practicality	Low
Regionally significant	Medium
International orientation	High
Ability to leverage local/regional work and investment	Low
Consistency with national priorities	Medium
Overall assessment	Medium



What other opportunities will impact on the sector's growth?

The proposal to develop a West Coast food brand, aligned with the visitor brand, would support the marketing of commercial whitebait from the region.

There is already an annual whitebait festival in the region. The new tourism strategy and action plan will ensure that the event is well promoted and positioned and, more broadly, that whitebaiters who travel to the region during the season will be encouraged to stay longer and take part in more activities.

Conversely, tourism developments that might be progressed under the strategy and action plan, such as cycle trails, can impact on whitebait habitats. This needs to be taken into account when assessing the costs and benefits of such projects.

Similarly, mining projects that are facilitated as a result of improved access to conservation land or via streamlined permitting and consenting may have a detrimental impact on waterways and hence whitebait stocks.

The single window for regulatory approvals could also be used to streamline consenting for new salmon farming (or other aquaculture) developments.

What do stakeholders need to do to support the opportunity and growth in the sector?

Industry	<ul style="list-style-type: none"> • Complete the feasibility assessment on the potential of salmon farming in the region. • Assess the commercial value and potential of whitebaiting as part of the proposed research. • Support whitebait habitat and spawning site restoration work.
Communities	<ul style="list-style-type: none"> • Participate in research on whitebait stocks and the value of whitebait to the region. • Participate in work on restoring and protecting whitebait habitats and spawning sites.
Māori/iwi/hapū	<ul style="list-style-type: none"> • Consider options to invest in aquaculture, including salmon farming. • Participate in and support work on restoring and protecting whitebait habitats and spawning sites. • Participate in research on whitebait stocks and the value of whitebait to the region.
Local Government	<ul style="list-style-type: none"> • Support work on restoring and protecting whitebait habitats and spawning sites. • Support research on whitebait stocks and the value of whitebait to the region.
Central Government	<ul style="list-style-type: none"> • Oversee and provide support for the programme of activity to develop a sustainable wild whitebait fishery. • Continue to support R&D on ways to grow the aquaculture industry. • Continue to support education programmes such as Whitebait Connection.



OTHER SECTORS

This section covers three significant sectors on the West Coast region: dairy and related processing, construction and related services, and health services and aged care. While these sectors are and will continue to be important for the region's employment and economic growth, no specific proposals for accelerating growth in these sectors have emerged from the research and consultation for this study.

Dairy and related processing

Overview

Dairy and related processing is significant on the West Coast. In 2015, this sector contributed \$282 million in GDP (15 percent of the economy), 1,640 jobs (10 percent of employment), and at least \$390 million of exports (56 percent of regional exports). There is strong processing capability embedded in Westland Milk Products (WMP), with its major processing factory in Hokitika. WMP is New Zealand's second-largest dairy co-operative and has a significant international presence with exports to 50 countries.

Although the sector has grown relatively strongly over the long-term (e.g., employment has grown by 2.5 percent per year over the last 10 years), the sector is going through a challenging time due to the substantial drop in international prices since early 2014, on the back of growth in milk supply from Europe and the US and slower growth in demand from China. Employment growth and milk solid production in the region have slowed over the last 2 years.

The dairy pay-out is expected to slowly recover over the next few years. Forecasts suggest that employment in the sector in the region will fall over 2016–17, before recovering slowly from 2018.

Stronger resilience to commodity dairy product price shocks will be possible in future through WMP's investment in value-added products (infant nutritional products, EasiYo, UHT milk and cream), redesigned branding and market development in China. Growth in the sector over the longer term will be driven by the company as it continues to build on its higher-value products and market development strategies (for example, demand for higher quality output from farmers and year-long supply).

No specific opportunities for the sector have been identified that could be progressed through the study and action plan (beyond what WMP and industry groups are already doing). However, a range of opportunities suggested for other sectors and cross-cutting issues will benefit this sector. Improving road resilience is important as transport adds to the cost of sourcing milk across a long geographic area and in transporting the output to other regions. Accelerating the roll-out of broadband and dealing with mobile blackspots is also important as poor or no broadband connectivity in locations limits the use of technology to improve farm monitoring.



What is the sector's contribution and make-up?

Employing 1,641 people and generating \$282 million in GDP, the dairy and related processing sector is a significant sector on the West Coast, accounting for 15.1 percent of GDP and 9.7 percent of filled jobs (Table 23).

Table 33. Dairy & related processing, summary indicators, 2015

2015	Dairy & related processing	% of region
GDP (2010 \$m)	282.2	15.1%
GDP location quotient	4.6	
Filled jobs	1,641	9.7%
Employment location quotient	3.9	
Productivity (GDP/filled job) (2010\$)	171,913	156%
Exports (2015 \$m)	390.5	0.0%

Source: Infometrics regional database

With an employment location quotient of 3.9, people are much more likely to be employed in the sector on the West Coast than nationally.

The sector has high labour productivity, with each employee generating \$171,900 in GDP. This is 156 percent of the average GDP per filled job in the region.

The sector is also the major exporter for the region. The estimated \$390 million in export earnings in 2015 accounted for close to 56 percent of the region's total exports.²⁶

As the location of WMP's main processing plant, Westland accounts for just over 50 percent of employment in the sector (Figure 90). The second largest share of employment is in Buller (29 percent) with Grey accounting for a fifth of employees.

Figure 90. Dairy & related processing, employment, 2015

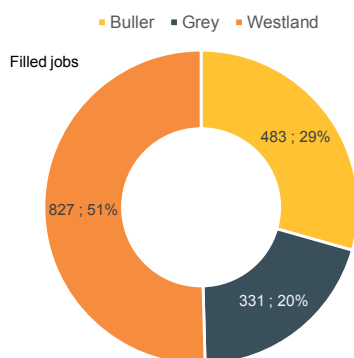
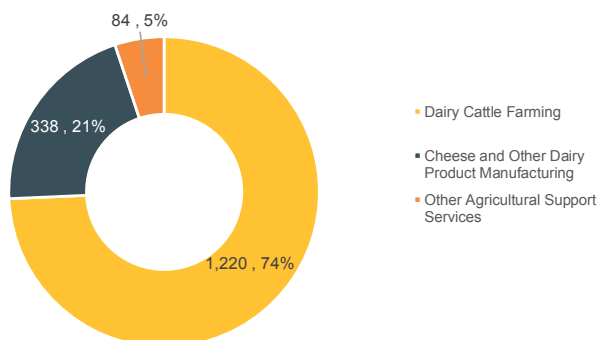


Figure 91. Dairy & related processing, employment by industry, 2015²⁷



Source: Infometrics regional database

Dairy cattle farming is the major employing industry, accounting for close to three-quarters of employment (1,220) in the sector (Figure 91). A further fifth of employment is in the processing of milk

²⁶ The export estimate is based on Infometrics modelling. We understand that the value of Westland Milk Product's exports exceeded this in 2015.

²⁷ Note that although the ANZSIC classification refers to 'cheese and other dairy product manufacturing', there is no cheese manufacturing on the West Coast.



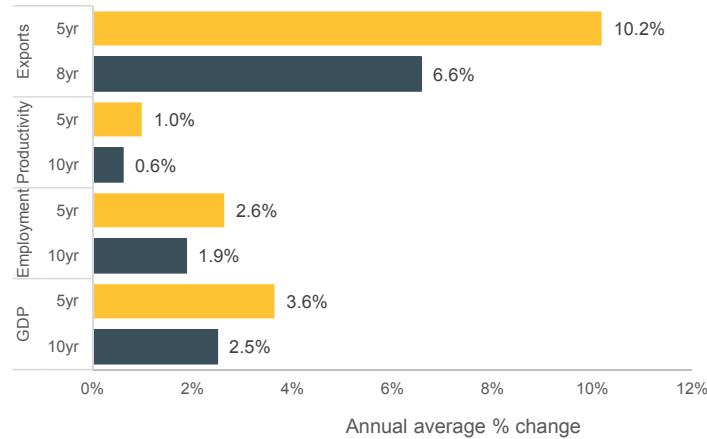
into other dairy products, while the agricultural support services sector accounts for 5 percent of employment in the dairy and related processing sector.

As shown in Figure 32, over the last 10 years the sector on the West Coast has experienced solid GDP and employment growth of 2.5 percent and 1.9 percent per year respectively.

The last 5 years has seen even stronger growth in sector GDP and employment of 3.6 percent and 2.6 percent per year respectively. However, this was weaker than the growth experienced by the sector nationally.

There has been strong growth in the value of dairy exports from the West Coast over the last 8 years and particularly over the last 5 years, with average growth of 10.2 percent per year.

Figure 92. Dairy & related processing, key indicators, 5yr and 10yr change



Source: Infometrics regional database

There have been small productivity gains in the sector of 0.6 percent per year over the last 10 years. The sector has experienced stronger productivity growth of 1.1 percent per year over the last 5 years.

Growth has slowed over the last 3 years, in response to lower dairy prices. Since 2012, employment grew on average by 1.9 percent per year (there was actually a decline in employment over 2012–2013, presumably related to the drought that occurred in the region over that period).

All of the industries within the dairy sector are strongly concentrated on the West Coast, which suggests that the region has real advantages in dairy (Table 34).

Table 34. Dairy & related processing GDP and employment by major industries, current, 10-year trends and location quotients

West Coast	GDP		Employment		Location Quotient	
	2015	2005-2015	2015	2005-2015	GDP	Employment
Dairy Cattle Farming	242.1	2.3%	1,220	1.1%	4.9	4.1
Cheese and Other Dairy Product Manufacturing	32.3	3.0%	338	4.1%	3.5	4.5
Other Agriculture and Fishing Support Services Ind04	7.8	0.0%	84	8.6%	3.5	2.4
Dairy & related processing	282.2	2.5%	1,641	1.9%	4.6	3.9

Source: Infometrics regional database

Dairy product manufacturing experienced the strongest growth in GDP over the last decade at 3.0 percent per year. There has also been strong employment growth in agricultural support services over the ten-year period.



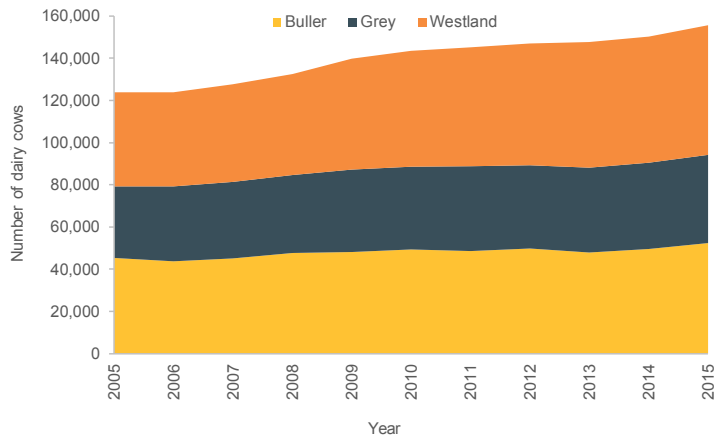
The dairy resource and production in the region

There are 376 dairy herds in the West Coast, with 35 percent in Buller, 23 percent in Grey and 42 percent in Westland. The region has 3 percent of New Zealand's dairy cows and 3 percent of dairy herds.

As shown in Figure 93, the total number of dairy cattle on the West Coast has grown over the last decade from around 124,000 to 155,000.

Cattle numbers have grown in all three districts.

Figure 93. Total dairy cattle on the West Coast, 2005–2015

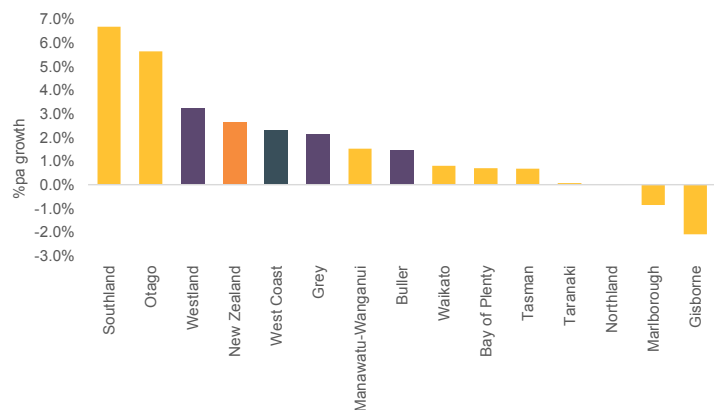


Source: Infometrics based on Dairy NZ/LIC statistics

This represents growth in dairy cattle numbers over the decade at 2.3 percent per year. This is close to the New Zealand average and higher than several comparable regions (Figure 94).

Westland experienced the strongest growth in dairy cattle at 3.2 percent per year.

Figure 94. Dairy cattle numbers, selected regions, 2005–2015 change



Source: Infometrics based on Dairy NZ/LIC statistics

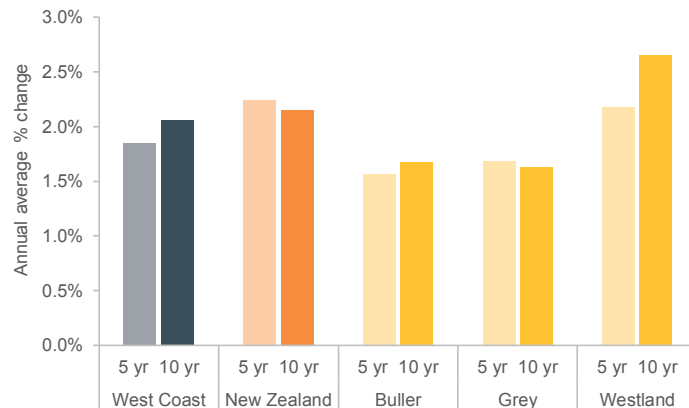


Growth in total land area in dairy production paints a similar picture to cattle numbers.

Westland has the highest 5- and 10-year growth rates in the region and its 10-year growth rate exceeded the nationwide average (Figure 95).

Land area committed to dairy farming has also grown steadily in Buller and Grey, but at a slower rate than nationwide.

Figure 95. Total hectares in dairy production, 5yr and 10yr change

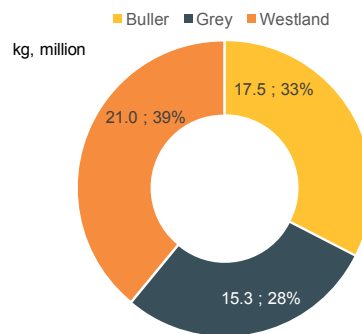


Source: Infometrics

In 2014/15 the West Coast produced around 53.8 million kilograms of milk solids, about 2.8 percent of national production.

Westland produced 21.0 million kilograms of milk solids in 2015 or 39 percent of the region's production, followed by Buller (33 percent) and Grey (28 percent) (Figure 96).

Figure 96. Milk solids production by district, 2014/15

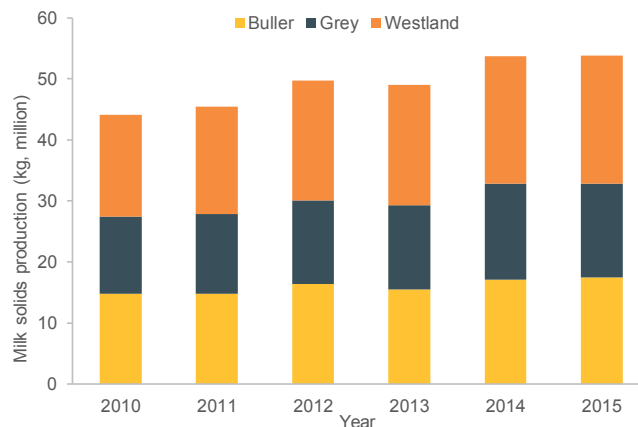


Source: Infometrics based on Dairy NZ/LIC statistics

Milk solid production on the West Coast has increased at an average rate of 4.0 percent each year from 2010–2015 (Figure 97), compared to 5.6 percent nationwide.

Westland has experienced the fastest growth of 4.7 percent per year over this period, followed by Grey and Buller with 4.0 and 3.4 percent per year respectively. There was a decline in 2013, undoubtedly related to the drought in the region over 2012/13.

Figure 97. Milk solids production by district, 2010–2015



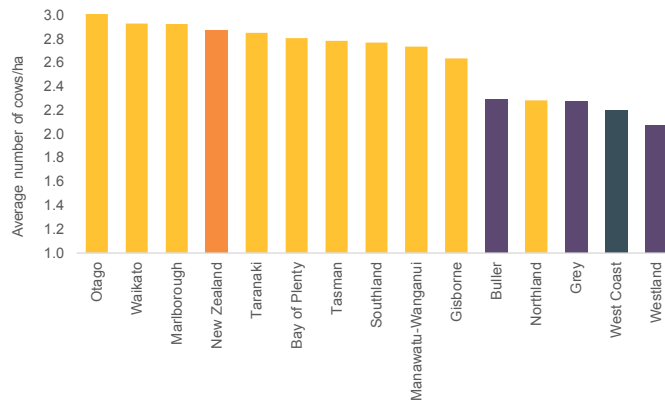
Source: Infometrics based on Dairy NZ/LIC statistics



Dairy farms on the West Coast are stocked at a lower rate than other regions.

The West Coast has 2.2 cows per hectare on average compared to close to 2.9 cows per hectare nationally (Figure 98).

Figure 98. Average number of cows per hectare, selected regions, 2014/15



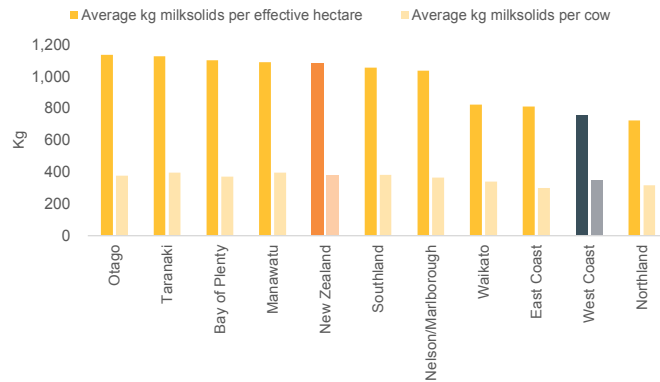
Source: Infometrics based on Dairy NZ/LIC statistics

Dairy productivity on the West Coast is low.

Dairy farms on the West Coast produced 760 kilograms of milk solids per effective hectare and 346 kilograms of milk solids per cow in 2014/15, compared to the New Zealand averages of 1,082 kilograms and 377 kilograms respectively.

Although dairy productivity has been growing over the last 5 years, it has been at a slower rate than growth nationally.

Figure 99. Dairy productivity, selected regions, 2014/15

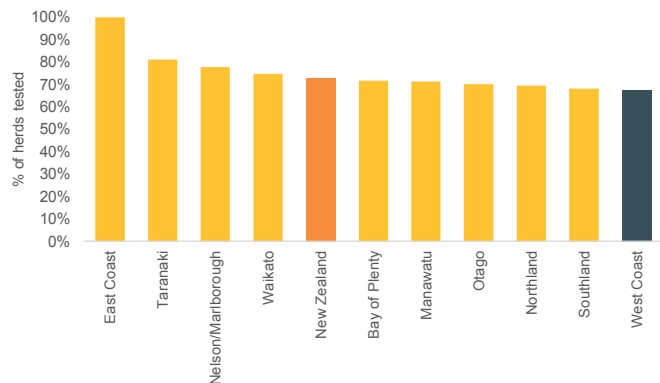


Source: LIC/Dairy NZ New Zealand, Dairy Statistics 2014/15

Herd testing is important for effective herd management and decision making – it enables farmers to benchmark animal performance within herd, within region, and nationally.

West Coast dairy farms also have a relatively low uptake of herd testing, with 67.3 percent of cows tested compared to 72.9 percent nationally (Figure 100).

Figure 100. Use of herd testing, selected regions, 2014/15



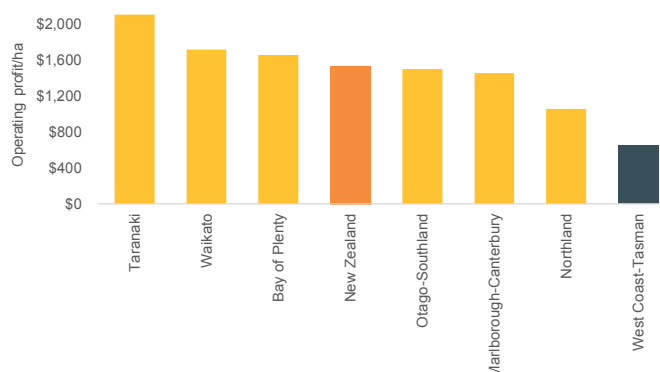
Source: LIC/Dairy NZ New Zealand, Dairy Statistics 2014/15



The average operating profit per hectare from the West Coast's dairy farms is very low, with farms on the West Coast and Tasman achieving \$654 per hectare, compared to \$1,537 per hectare nationally in 2014/15 (Figure 101).

It is unclear whether the West Coast's results are being pulled down by Tasman.

Figure 101. Operating profit per hectare, selected regions, 2014/15



Source: DairyNZ, 2014/15 Economic Survey

Table 35 shows that a higher proportion of dairy farms on the West Coast are owner-operators (77 percent) and a smaller proportion of total herds are operated by share-milkers (23 percent), compared to the national average of 67 percent and 33 percent respectively.

Table 35. Herd analysis by district and selected regions, 2015

	Total herds	Number of owner-operators	Number of share-milkers	Total cows	Total effective hectares	Average herd size	Average cows per hectare
Buller	131	102	29	52,300	22,793	399	2.29
Grey	87	63	24	41,901	18,411	482	2.28
Westland	158	123	35	61,334	29,608	388	2.07
West Coast	376	288	88	155,535	70,812	414	2.20
Southland	971	619	351	573,120	206,938	590	2.77
Otago	431	238	178	263,993	87,074	613	3.03
Taranaki	1,705	1,070	635	496,464	174,321	291	2.85
New Zealand	11,970	8,059	3,879	5,018,333	1,746,156	419	2.87

Source: LIC/Dairy NZ, New Zealand Dairy Statistics 2014/15

The major processing business in the sector in the region is Westland Milk Products. The farmer-owned cooperative is now New Zealand's second largest dairy co-operative with \$639 million turnover in 2014/15.

What is the current potential for growth?

Dairy sector growth is heavily dependent on offshore demand. The supply side is also dependent on climatic conditions and herd numbers.

- **Cattle numbers** – as noted, dairy cattle numbers have continued to grow in response to the higher prices that were experienced up until 2014. Although milk solid production is likely to continue to fall over 2016 and 2017 due to cutbacks in supplementary feeding and culling, cattle numbers nationally are expected to continue to grow slowly over the medium-term (Ministry for Primary Industries, 2015a; 2016) and will contribute to growth in milk solid production.



- **Soil and climatic conditions** – droughts and floods harm pasture cover, result in stock feed shortages and impact on animal health, reducing production. Although climate change is expected to increase the frequency of these weather events, this will only be over the very long-term.
- **Market demand** – the dairy and related processing sector is currently going through a difficult period due to a substantial drop in international prices since early 2014. A rapid recovery in prices is unlikely due to significant growth in supply from Europe and the US, and slower growth in demand from China. The dairy pay-out is not expected to return to \$6 per kilogram of milk solids until 2018 at the earliest (Ministry for Primary Industries, 2016), limiting further production increases in the short to medium term. However, there has been increased demand from Southeast Asian and North African countries, which may offset the fall from major markets. Well established farmers on the West Coast are less highly leveraged than farmers in areas with high levels of dairy conversion over the last decade, and so should be less critically affected by low dairy prices.

Export prices are expected to rebound in the medium-term as China recovers and as demand from Indonesia and Malaysia grows. Although dairy production in these countries will also grow, it is expected to grow more slowly than growth in demand driven by rising incomes and growing urbanisation.

- **Innovation and market development** – higher levels of growth and payouts will be possible through increased investment in value-added production. WMP has been investing in the development of infant nutritional products, EasiYo, retail butter and UHT milk and cream, including a significant investment in a nutritional dryer in Hokitika, which is already resulting in higher dairy payouts to suppliers. The company has also redesigned its Westgold brand and developed new relationships into China to sell into the food service and bakery market.
- **Productivity improvements** – whether increased milk solid and liquid production translates into increased payouts and employment depends on the extent of productivity improvements over the forecast period. Dairy farm management practices nationally continue to improve, including smarter breeding practices, improved diets, and better maintenance of pastures. A range of private and public-private projects are being undertaken on pastures, environmental management and new technologies which will be applied over the medium-long term. For example, WMP has been rolling out its Farm Excellence (FarmEx) programme, which sets production, environmental, animal welfare and sustainability standards for suppliers.

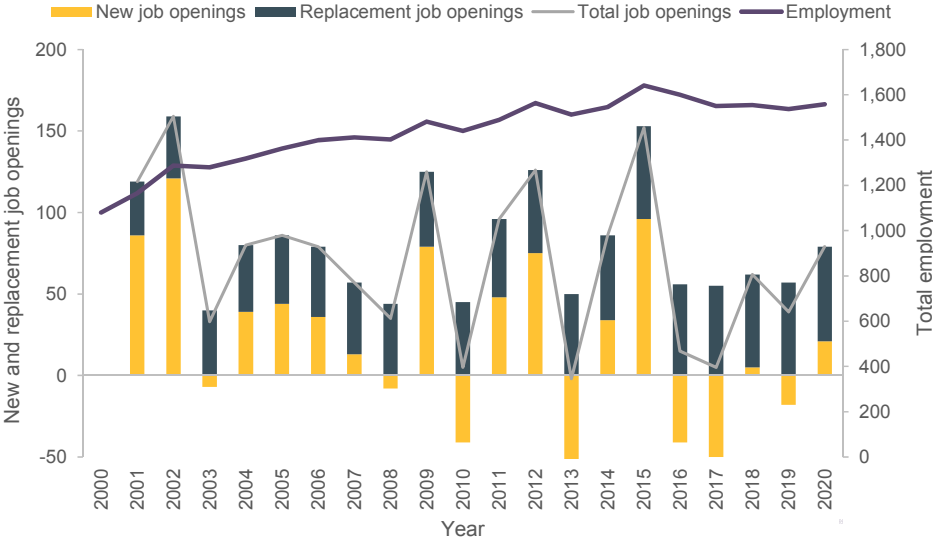
Overall, in the short- to medium-term (1-2 years), the research suggests that dairy output and employment on the West Coast will decline slightly. Over the medium- to long-term (3 years plus), milk production and payouts are expected to grow moderately on the back of improved prices and WMP's investments into higher value products. Productivity improvements over the period are likely to be achieved and the research suggests the industry will have only low to moderate growth in employment.

Infometrics' forecasts are consistent with this. They forecast a decline in employment in the sector over 2016 and 2017, before recovering from 2018. However, overall, employment in the dairy and related processing sector is forecast to decline by 83 jobs over the next 5 years, which is an average of -1.0 percent annually (Figure 102).



Although there is expected to be a fall in employment, it is expected there will be 283 job openings in the sector over the next 5 years due to natural churn and some people leaving the workforce. Hence it is expected there will be an average of 40 job openings in the sector per year between 2016 and 2020.

Figure 102. Dairy & related processing job openings and total employment, historical and forecast



Source: Infometrics
 Note: Shaded area is forecast

What are the strengths of and challenges facing the sector in the region?

Key advantages in the region underpinning sustainable growth in this sector are the:

- **Strong processing capability** embedded in WMP, with the major processing factory in Hokitika as well as one in Rolleston. It manufactures liquid milk, milk powder, butter, cream products, yoghurt and milk protein concentrates. WMP currently exports to 50 countries worldwide. In 2014, WMP opened its first offshore office in Shanghai, China.
- **Natural environment**, e.g., heavy rainfall and outflows to the sea mean that the impacts of run-off from farms on the environment are not as acute or as costly as in many other regions, although that is not to say there are not environmental impacts to be managed. Improved environmental management has been supported through the roll-out of WMP’s Farm Excellence initiative.

The major challenge is currently the low international prices and low payouts. These lower dairy pay-out prices will particularly affect more recent players in the industry, who invested on the basis of higher expected returns. Stronger resilience to commodity dairy product price shocks will be possible for the region in future through WMP’s investment in value-added products, redesigned branding and market development.



Returns are also related to low productivity (e.g., milk solids per cow and per hectare). The lower productivity on the West Coast is a result of the pasture quality, soil and climatic conditions. However, industry representatives noted that this is countered in the region through lower cost structures.

The region has experienced both droughts and floods in recent years, which harm pasture cover. Heavy rains and poor drainage soils (e.g., Pakihi soils in the region) can cause pugging and reduce production per hectare although, in some areas, this is managed by 'humping and hollowing' or flipping soil.

Feedback from other industry representatives also noted the following as challenges for the sector:

- Transport is a risk and adds to the cost of product both in sourcing milk from farmers across the long geographic area and in transporting output to other regions. Road resilience and maintenance of freight on the Midland Rail is critical.
- Poor or no broadband connectivity in some locations limits the use of technology to improve farm monitoring and can be a risk in the event of farm accidents.
- Although there are no major constraints associated with sourcing labourers, it can be difficult to retain younger people due to the long hours and hard work involved in farming.

What are the specific opportunities for growing the sector in the region?

Growth over the longer term will be driven by WMP as it continues to build on its higher value product and market development strategies (for example, demand for higher quality output from farmers and year-long supply).

No specific opportunities for the sector have been identified that could be progressed through the study and action plan beyond what WMP, Dairy NZ (e.g., monitor farms) and others are already doing in the region. However, opportunities suggested for other sectors and cross-cutting issues (discussed in other sections of this report) will benefit this sector, including:

- improving road resilience
- accelerated roll-out of broadband and dealing with mobile blackspots
- proposals for a centre of applied research and experiential leadership training.



Construction and related services

Overview

The construction and related services sector is large, representing about 9 percent of the region's GDP and 12 percent of jobs in 2015 (\$165 million GDP and close to 2,000 jobs). The sector has developed a range of capabilities in project management, infrastructure and building services off the back of the minerals and dairy sectors.

The sector has experienced relatively strong GDP and employment growth in the region over the last 10 years (around 4 percent per year each). However, growth has slowed over the last 5 years, with employment growing by less than 1 percent per year over the period. This is significantly slower than growth experienced by the sector across New Zealand. Construction activity, particularly residential and commercial, has fallen off in Buller and Grey following the decline in the minerals sector and in the local populations.

No specific opportunities for facilitating growth in the construction sector were identified during this study. The initial district workshops suggested that the study test the potential for construction businesses in the region to pool their resources and undertake joint marketing and collaborative work in other regions. However, sector feedback suggested that this had been previously attempted with the West Coast Construction Alliance and had not been successful. The costs of transport (e.g., for transporting heavy construction machinery) limits the markets that can be serviced from the West Coast to Nelson-Tasman and Christchurch, and these markets have proven to be highly competitive.

Sector feedback suggests that a combination of local government and central government work and tourism-related work will sustain civil construction companies in the region. For example, road maintenance, water and waste infrastructure, the new hospital in Greymouth, expansion of the aged care facility in Westport, and development and maintenance of trails such as Pike 29, West Coast Wilderness Trail, and Old Ghost Road. There is also a pipeline of private construction work, such as new subdivisions and the redevelopment of the Beachfront Hotel. Other hotel proposals may bring additional work in the medium-term.

What is the sector's contribution and make-up?

Employing 1,954 people and generating \$164.6 million in GDP, the construction sector is very large and accounts for 8.8 percent of GDP and 11.5 percent of filled jobs on the West Coast (Table 36).

The sector is only slightly concentrated in the region, with a location quotient of 1.1.

Table 36. Construction & related services, summary indicators, 2015

2015	Construction & related processing	% of region
GDP (2010 \$m)	164.6	8.8%
GDP location quotient	1.2	
Filled jobs	1,954	11.5%
Employment location quotient	1.1	
Productivity (GDP/filled job) (2010\$)	84,242	76%
Exports (2015 \$m)	0.2	0.0%

Source: Infometrics regional database

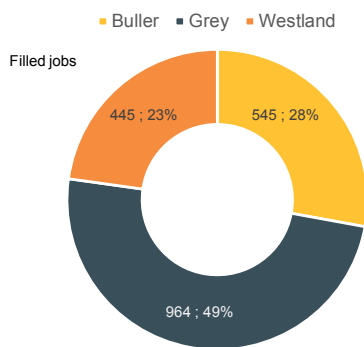
Productivity in the sector is just over three quarters of the regional average, at \$84,242. Exports are minimal.



As shown in Figure 103, the Grey district accounts for just under half of the employment in the construction sector, with Westland and Buller having relative similar employment contributions (23 percent and 28 percent respectively). This employment is not consistent with population splits, suggesting a stronger concentration of construction activity in the Grey district.

Civil construction dominates in the region. The four largest industries – heavy and civil engineering construction, road and bridge construction, house construction, site preparation services – account for close to two-thirds of employment in the sector (Figure 104). No other industry accounts for more than 5 percent of the sector’s employment.

Figure 103. Construction & related services, employment, 2015

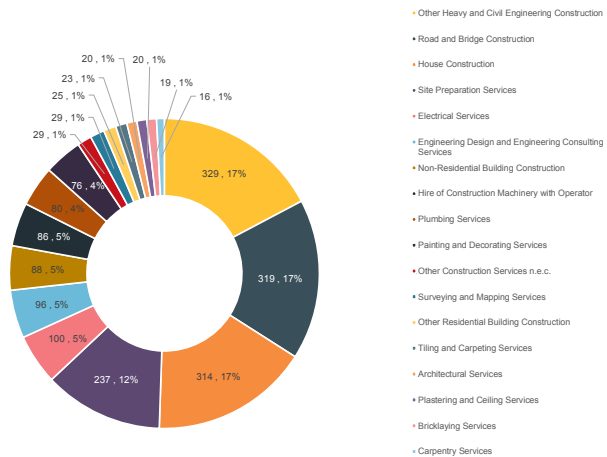


Source: Infometrics regional database

The sector’s estimated real GDP grew moderately over the last 5 years by 2.1 percent per year and employment only grew slowly (by 0.8 percent per year). Growth was stronger over the long-term than the medium-term, likely a result of the decline in minerals related construction activity in the last few years.

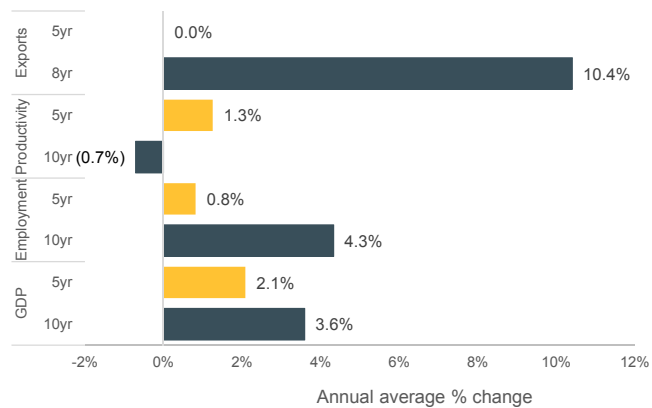
Growth in the sector in the region over the 5 years was well behind the sector nationally, which averaged 4.4 percent GDP growth and 2.7 percent employment growth each year.

Figure 104. Construction & related services, employment by industry, 2015



Source: Infometrics regional database

Figure 105. Construction & related services, key indicators, 5yr and 10yr change



Source: Infometrics regional database

Since 2013, construction employment on the West Coast has actually declined, by close to 90 jobs or by 2.2 percent per year. As noted above, this is likely tied to the decline in the minerals sector and the related decline in some local populations over that period.



Non-residential construction industries (other heavy and civil engineering construction, and road and bridge construction) are the two largest industries by GDP and by employment, followed by house construction and site preparation services (Table 37).

Table 37. Construction & related services, GDP and employment by major industries, current, 10-year trends and location quotients

	GDP		Employment		Location Quotient	
	2015	2005-2015	2015	2005-2015	GDP	Employment
Other Heavy and Civil Engineering Construction	42.9	6.7%	329	7.5%	2.2	2.4
Road and Bridge Construction	41.7	2.1%	319	2.9%	2.9	3.0
House Construction	17.3	3.1%	314	4.0%	1.1	1.1
Site Preparation Services	15.5	4.7%	237	5.5%	2.9	3.1
Electrical Services	6.6	2.0%	100	2.7%	0.7	0.7
Engineering Design and Engineering Consulting Services	5.5	5.3%	96	6.0%	0.3	0.5
Non-Residential Building Construction	4.8	-1.4%	88	-0.6%	1.0	1.0
Hire of Construction Machinery with Operator	5.7	12.9%	86	13.8%	9.3	9.8
Plumbing Services	5.3	3.3%	80	4.1%	0.9	0.9
Painting and Decorating Services	5.0	4.3%	76	5.1%	0.7	0.8
Other Construction Services n.e.c.	1.9	5.2%	29	6.1%	0.4	0.5
Surveying and Mapping Services	1.7	-2.4%	29	-1.7%	1.0	1.5
Other Residential Building Construction	1.3	15.6%	25	16.2%	0.8	0.9
Tiling and Carpeting Services	1.5	-1.3%	23	-0.5%	0.7	0.7
Architectural Services	1.1	5.1%	20	5.9%	0.2	0.3
Plastering and Ceiling Services	1.3	11.4%	20	12.3%	0.5	0.5
Bricklaying Services	1.2	12.6%	19	13.7%	0.9	0.9
Carpentry Services	1.0	-6.2%	16	-5.5%	0.6	0.6
Construction & related services	164.6	3.6%	1,954	4.3%	1.2	1.1

Source: Infometrics regional database

Several industries have grown very strongly over the last decade, including heavy and civil engineering construction, site preparation services, engineering design and consulting services, construction machinery hire, painting and decorating, residential building construction, plastering and ceiling services and bricklaying services. Only four industries declined over the long-term – non-residential building, surveying and mapping services, tiling and carpeting services, and carpentry services.

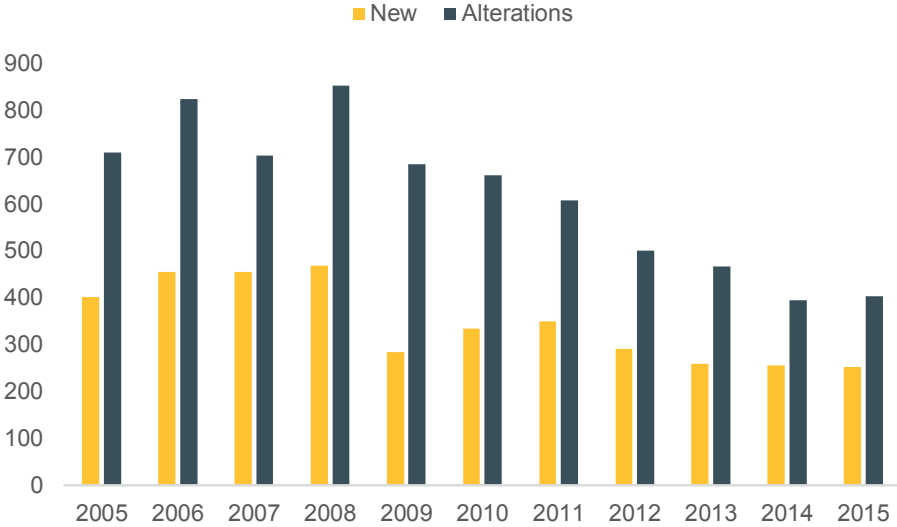
Only a few construction industries are concentrated in the region – construction machinery hire, road and bridge construction, site preparation services, and heavy and civil engineering construction. Again, this reflects the civil and non-building construction emphasis in the region.

Construction activity

The number of building consents in the region has fallen since the global financial crisis (Figure 106). Consents for new builds have fallen by 8.5 percent per year on average and consents for alterations have fallen by around 10 percent per year. However, while consents for alterations have consistently declined over the period, the number of consents for new builds has fluctuated.



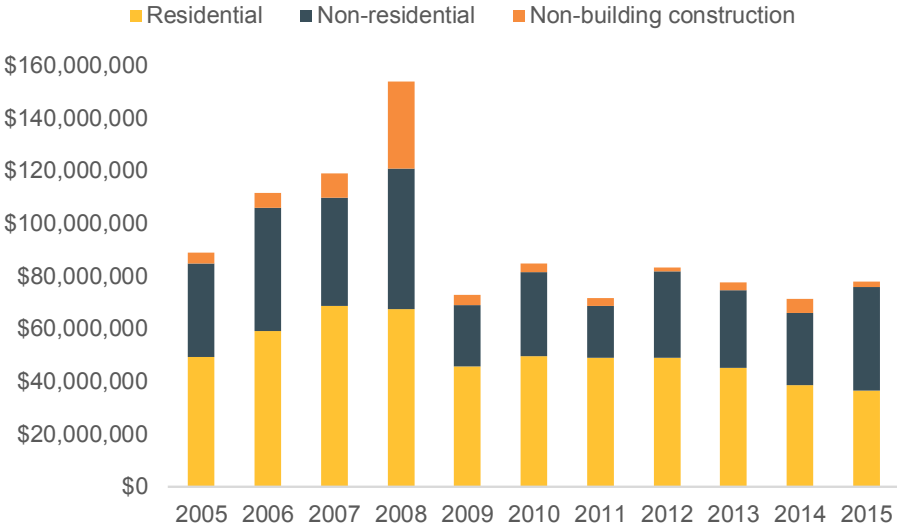
Figure 106. Number of building consents on the West Coast, 2005–2015



Source: Statistics New Zealand, Building Activity Statistics
 Note: December years

The value of building consents in the region fell dramatically after 2008 and has fluctuated up and down since then (Figure 107). The value of non-residential building consents has grown over 2014-2015.

Figure 107. Value of building consents on the West Coast, 2005–2015



Source: Statistics New Zealand, Building Activity Statistics
 Note: December years

In relative terms, the number and value of building consents over the last year has been quite low. The West Coast had the fourth lowest ratio of building consents per 10,000 population, with only Gisborne, Manawatu-Wanganui and Southland having a lower rate (Table 38).



Table 38. New dwelling consents, selected regions, 2016

	New dwellings consented per 10,000 people	Value of new dwellings consented per 10,000 people (\$millions)
Northland	54.8	16.8
Auckland	60.9	21.8
Waikato	73.3	22.5
Bay of Plenty	73.2	23.2
Gisborne	15.0	3.8
Hawke's Bay	23.6	9.0
Taranaki	43.5	13.7
Manawatu-Wanganui	24.1	7.3
Wellington	32.5	9.3
Tasman	70.9	22.8
Nelson	34.7	11.6
Marlborough	44.2	14.6
West Coast	28.7	7.6
Canterbury	106.6	35.0
Otago	72.0	28.0
Southland	23.8	7.1
New Zealand	60.5	20.2

Source: Statistics New Zealand
Note: Year to March

What is the current potential for growth?

The decline in the number and low growth in the value of building consents in the region, combined with the decline the minerals sector and local populations, suggests that growth in construction activity in the region may be quite limited. However, there is a range of construction work in the pipeline in the region.

- General infrastructure, e.g., road maintenance and bridge improvements, water and waste infrastructure upgrades
- Health-related work, e.g., the new Grey Base Hospital and Integrated Family Health Centre (valued at around \$78 million). Although Fletcher Construction is the main contractor, local companies are being subcontracted for some activities.
- Tourism-related work, e.g., development and maintenance of tracks and trails such as Pike 29, the \$6 million expansion of the Beachfront Hotel in Hokitika and potentially other hotel proposals.
- Urban development, e.g., a new subdivision in Hokitika, the Greymouth town centre development.

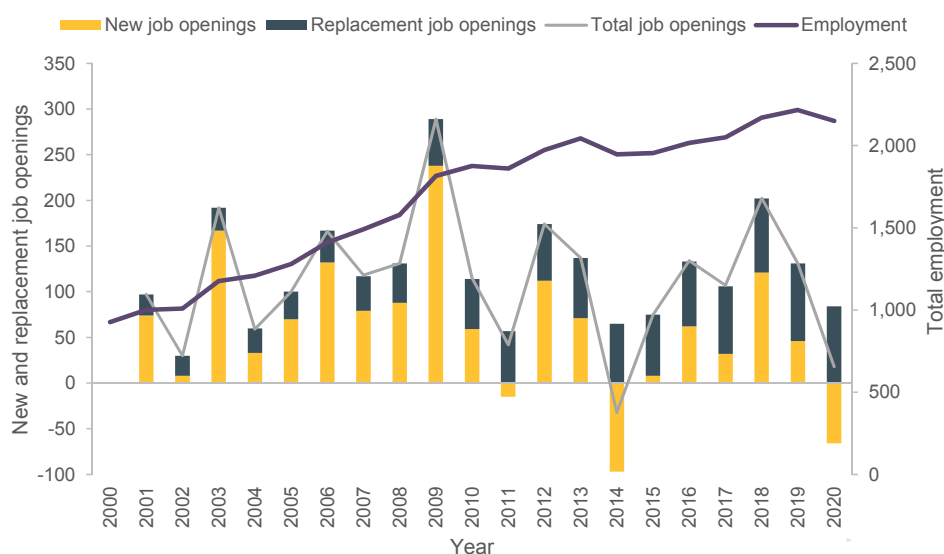
In addition, to the extent that construction companies on the West Coast can service other markets, growth in demand in other regions will also have an influence. Feedback from sector representatives indicated that only the closest markets of Canterbury and Nelson-Tasman were feasible due to the costs involved in moving equipment and in establishing management locally. In terms of these markets:



- The number and value of Canterbury residential construction consents are expected to decline significantly over the next few years as the peak of the rebuild activity has been reached, although an additional 14,000 detached house and 6,000 multi-unit dwelling consents are forecast to the end of 2021 (BRANZ and Pacifecon, 2016). Non-residential construction is forecast to grow and remain above \$2.4 billion until 2019 before declining to around \$1.7 billion in 2021 (BRANZ and Pacifecon, 2016). There is still a range of civil projects and strengthening and replacement of commercial buildings, recreation facilities, schools and churches to be undertaken, and new retirement villages to be developed.
- Economic (GDP) growth in Nelson has been strong (around 3.3 percent per year over the last 5 years) and the region has also experienced net inward migration and a growing population. A growing population will continue to drive demand for new housing and subdivisions.

Overall, based on sector feedback and what is known about the pipeline of construction activity and potential demand, we would expect moderate growth in the sector on the West Coast over the medium-term.²⁸ This is consistent with Infometrics forecasts. Over the next 5 years, the Infometrics forecasting model estimates that employment in the construction and related services sector on the West Coast will grow by 195 jobs, which is an average of 1.9 percent each year.

Figure 108. Construction & related services job openings and total employment, historical and forecast



Source: Infometrics
 Note: Shaded area is forecast

In addition to new jobs, it is estimated that there will be 395 job openings in the sector resulting from people leaving the workforce. Hence, overall, there is forecast to be an average of 118 job openings per year in the sector between 2016 and 2020.

²⁸ MBIE's short-term forecasts (Ministry of Business, Innovation & Employment, 2016) are very bullish and estimate that construction employment on the West Coast will grow by 650 jobs between 2016 and 2019, or by 9.3 percent per year. It does not appear that these forecasts have accounted for the recent decline in construction activity on the West Coast.



What are the strengths of and challenges facing the sector in the region?

The construction sector on the West Coast has developed a **range of capabilities** in project management, infrastructure and building services off the back of working with the minerals and dairy sectors. This is reflected in the concentration of employment in infrastructure and civil construction industries in the region. Key businesses in the sector include WestReef Services Ltd, which is the largest civil construction and maintenance company in Buller and employs around 60 staff; CYB Construction in Greymouth, which undertakes commercial and residential construction and employs around 30 staff; and Westroads Ltd in Hokitika, which specialises in road construction and maintenance and employs over 40 staff.

Feedback from the sector highlighted the following as key challenges:

- **Lack of scale to compete on major projects in most other markets** – there was an attempt to cooperate and create scale (and potentially jointly enter other regional markets) with the formation of the Construction Alliance in 2014, but it did not last (those involved did not see any advantages and self-interest won out). Representatives from the sector said there was increasing competition in the nearest market of Christchurch as the peak in the post-earthquake rebuild is reached.
- **Potential decline in local infrastructure projects** – despite civil construction holding up at the moment, there were some views that local government spending on infrastructure will remain static or decline in future if the population and rating base continues to decline.
- **Skills availability** – consistent with feedback from other sectors, sector representatives indicated that it can be difficult to fill management and technical specialist positions due to the aging workforce and because it can be difficult to attract these skills to the West Coast.

What are the specific opportunities for growing the sector in the region?

Other than the public and private projects in the pipeline noted already, no specific industry development opportunities have emerged for the construction sector that should be progressed through the study and action plan. However, other proposals will have spin-off benefits for this sector, including:

- investment in improving road resilience
- the tourism strategy and action plan, including the proposals to develop new iconic attractions and tourism product development and maintenance
- accelerated roll-out of broadband and dealing with mobile blackspots
- the Haast to Hollyford and Wangapeka road links and the proposed waste to energy facility, if these projects proceed.



Health services and aged care

Overview

The health services and aged care sector is also significant, representing around 4 percent of the region's GDP and 9 percent of jobs (\$80 million in GDP and 1,500 jobs in 2015). Some industries within it, namely hospital services and aged care residential services, have grown relatively strongly over the last decade (achieving around 2.5 percent per year growth in employment).

Two developments will support further growth in this sector's employment in the region.

- The population of older aged people in the region is expected to grow relatively fast (e.g., another 1,000 people aged 75 years plus over the next decade), which will increase demand for aged care services and home care. Based on relatively conservative assumptions, there will be demand for an additional 100 aged care beds over the next 10 years. There is an existing plan for and work underway to upgrade and extend the aged care facility in Buller (including a proposed retirement village).
- The Government is investing around \$78 million in a new hospital and integrated family health centre in Greymouth, with an increase in beds, operating theatres and services. The facility is expected to open in 2018.

The initial district workshops suggested that the study test the potential to develop the region as a centre for health services for retirees. However, sector representatives suggested this would be unrealistic, given that retirees tend to locate close to family and because the region does not have a full range of specialist care available.

Opportunities suggested for other sectors and cross-cutting issues will benefit this sector, particularly accelerated roll-out of broadband and dealing with mobile blackspots. A lack of broadband (particularly wireless) connectivity in several locations limits the use of health ICT solutions and improved services in the sector. A lack of connectivity is also clearly a risk in ensuring health services can respond promptly to emergency situations.

What is the sector's contribution and make-up?

Employing 1,493 people and generating \$79.8 million in GDP, the health services & aged care sector accounts for 4.3 percent of GDP and 8.8 percent of filled jobs on the West Coast (Table 39).

Table 39. Health services & aged care key indicators, 2015

2015	Health services & aged care	% of region
GDP (2010 \$m)	79.8	4.3%
GDP location quotient	0.8	
Filled jobs	1,493	8.8%
Employment location quotient	1.0	
Productivity (GDP/filled job) (2010\$)	53,422	48%

Source: Infometrics regional database

There is not a strong concentration of employment in this sector, suggesting that the West Coast has no particular advantages for health services. Labour productivity in the sector is very low at just under half the regional average. The sector does not export.



As shown in Figure 109, Most of the employment in the sector is in Grey district (69 percent), reflecting the location of the DHB and hospital, followed by Buller (19 percent) and then Westland (12 percent).

Figure 109. Health services & aged care, employment, 2015

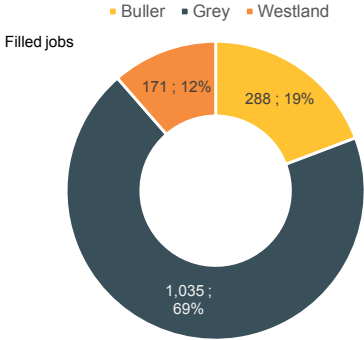
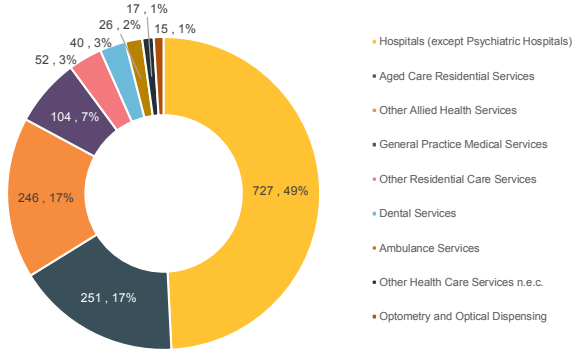


Figure 110. Health services & aged care, employment by industry, 2015



Source: Infometrics regional database

The three largest industries account for over 80 percent of employment in the sector (Figure 110). Hospitals account for half of the sector’s employment, with aged care residential services and other allied health services accounting for 17 percent each.

Figure 111 shows the change in GDP, employment and productivity in the health services and aged care sector over the last 10 and 5 year periods.

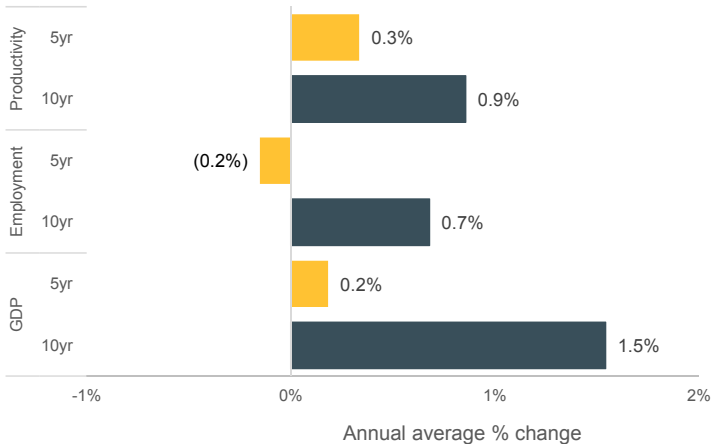
Over the last 10 years the sector has experienced GDP and employment growth of 1.5 and 0.7 percent per year respectively (Figure 111).

Growth was much slower over the last 5 years, with GDP increasing by 0.2 percent per year and employment actually falling slightly, by 0.2 percent per year.

It is possible that this is related to the fall in local populations since 2012 and/or a result of cost-cutting in the sector.

Labour productivity growth has been positive, increasing by 0.9 percent annually over the last 10 years.

Figure 111. Health services & aged care, key indicators, 5yr and 10yr change



Source: Infometrics regional database

Table 40 presents GDP, employment and location quotients for the industries that make up the sector in 2015. It also shows the ten-year trends in GDP and employment by industry.



Table 40. Health services & aged care, GDP and employment by major industries, current, 10-year trends and location quotients

	GDP		Employment		Location Quotient	
	2,015	2005-2015	2,015	2005-2015	GDP	Employment
Hospitals (except Psychiatric Hospitals)	38.7	3.4%	727	2.5%	1.1	1.5
Aged Care Residential Services	13.6	3.4%	251	2.4%	0.9	1.1
Other Allied Health Services	13.0	(3.5%)	246	(4.2%)	0.8	1.0
General Practice Medical Services	5.6	2.1%	104	1.1%	0.7	1.0
Other Residential Care Services	2.8	7.5%	52	6.4%	0.4	0.5
Dental Services	2.1	6.4%	40	5.3%	0.6	0.8
Ambulance Services	1.4	(3.6%)	26	(4.2%)	1.1	1.4
Other Health Care Services n.e.c.	0.9	28.2%	17	27.7%	0.3	0.4
Optometry and Optical Dispensing	0.8	22.1%	15	20.9%	0.7	0.9
Health Services and Aged Care	79.8	1.5%	1,493	0.7%	0.8	1.0

Source: Infometrics regional database

Hospital and ambulance services are strongly concentrated in the region and aged care services are moderately concentrated. Hospitals, aged care residential services, other residential care services and dental services have grown quite strongly over the last decade. Other allied health services and ambulance services have declined.

The West Coast DHB is the major employer in the sector, employing over 1,000 people. It also owns and manages three facilities in Greymouth, Westport and Reefton, five general practices and two rest-home facilities in Westport and Reefton.

What is the current potential for growth?

Population growth and demographic factors are strong determinants of demand for health and residential care services. As noted earlier in the discussion on the *Economic Context*, there is forecast to be limited population growth in the region, although the aging population will underpin some increased demand for health and aged care services.

Based on Statistics New Zealand's medium population projections, the population in the region is projected to grow from around 33,000 in 2013 to 34,000 in 2023, an average of 0.3 percent per year. However, the population of the older-aged population is expected to grow much faster. For example, the population of:

- 65 year olds and over is expected to grow at 3.3 percent per year over the period, from around 10,600 people to 14,650.
- 75 year olds and over is forecast to growth at 3.9 percent per year, from 2,120 to 3,100 or around 100 people per year.

Aged care service users, such as retirement village residents, tend to be aged 75 years plus. Based on a 12 percent rate of demand for retirement villages for this age group and average village occupancy on the West Coast of 50 residents, this suggests potential demand on the West Coast of around two new villages over the next 10 years (assumptions based on Jones Lang LaSalle, 2014) and associated labour requirements.



Other than the growing and aging population, other drivers of growth in health services and aged care will be (NZ Treasury, 2013, Jones Lang LaSalle, 2014):

- an increased focus by the health sector on in-home care
- greater acceptance of retirement village type of living and increased demand for this type of service
- higher incomes and higher expectations for health service delivery.

However, demand-driven employment growth will be tempered by:

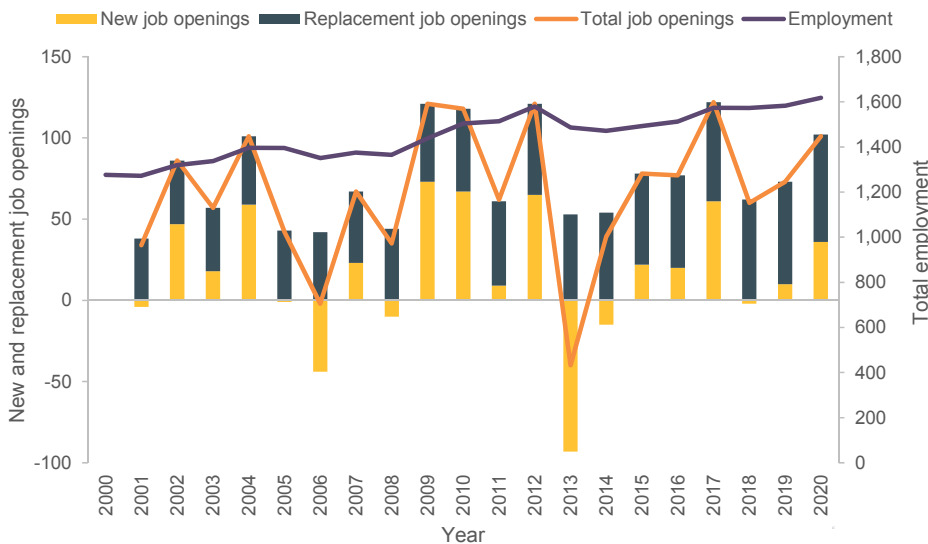
- funding in the public health system – funding constraints/demand for productivity improvements may limit growth in the workforce
- innovation and technology - improvements in some treatments (e.g. the prevention of dementia) and ICT (e.g., tele-monitoring) may reduce the number of people requiring health or aged care services.

Short-term employment forecasts (Ministry of Business, Innovation and Employment, 2016) estimate that health and community services employment will grow by 2.8 percent per year on the West Coast over 2016–2019 compared to 3.5 percent per year nationally.

Overall, we would expect moderate to strong growth in health services employment in the region over the next 5 years. Consistent with this, Infometrics forecasts moderate employment growth in the next 5 years for the sector in the region (Figure 112). The sector is forecast to grow employment by 1.6 percent per year or 125 jobs.

In addition, there is forecast to be an additional 309 jobs openings resulting from people leaving the workforce (e.g., due to retirement, moving out of the sector or region). Hence, overall there is forecast to be a total of 433 openings in the industry over 2016–2020, or an average of 87 per year.

Figure 112. Health services & aged care job openings and total employment, historical and forecast



Source: Infometrics



What are the strengths of and challenges facing the sector in the region?

Although the region has a small population base to cover for health care, it has **one of the largest geographic areas**, which can make it difficult to ensure that health services get to everyone in a timely way. It often requires patients or health workers to travel long distances and travel can be hampered by lack of access to motor vehicles and public transport (7 percent of households in the region did not have a vehicle in Census 2013).

To mitigate this risk, **the DHB is developing the region into an exemplar of rural health care**, for example using tele-health through video-conferencing. This provides remote communities with access to specialist advice without the inconvenience of travelling long distances. Since 2010, more than 12,000 video and telemedicine consultations have taken place (West Coast DHB, 2015a). However, a lack of broadband (particularly wireless) connectivity in several locations limits the further use of ICT solutions and improved services.

Growth in this sector will be tempered by available funding in the public health system. The Government is looking for cost-effective delivery of health services. Positively, the Government is investing around \$78 million in a new hospital and integrated family health centre in Greymouth, with an increase in beds, operating theatres and services. The facility is expected to open in 2018.

The aging population will result in greater demand for specialist services, e.g., for heart disease, stroke, cancer, dementia, and put pressure on the workforce and funding. However, the West Coast has lower rates of registered health professionals, pharmacists, GPs, medical specialists and midwives per capita than the rest of New Zealand. Feedback from sector representatives suggests that **it can be difficult to attract GPs and specialists to the West Coast full-time or retain them** and that there is a heavy reliance on locums, which makes it more difficult to maintain consistency of care. There is not sufficient work to keep specialist providers active full-time.

Feedback from the sector also indicated that operating health services as businesses can be more difficult in the region because of limited demand.

What are the specific opportunities for growing the sector in the region?

There is an existing plan for and work underway to upgrade and extend the aged care facility in Buller (O'Connor Home) including a proposed retirement village. Other than this existing project and the development of the new hospital, there do not appear to be specific opportunities for growing jobs and incomes in this sector that could be progressed through the study and action plan.

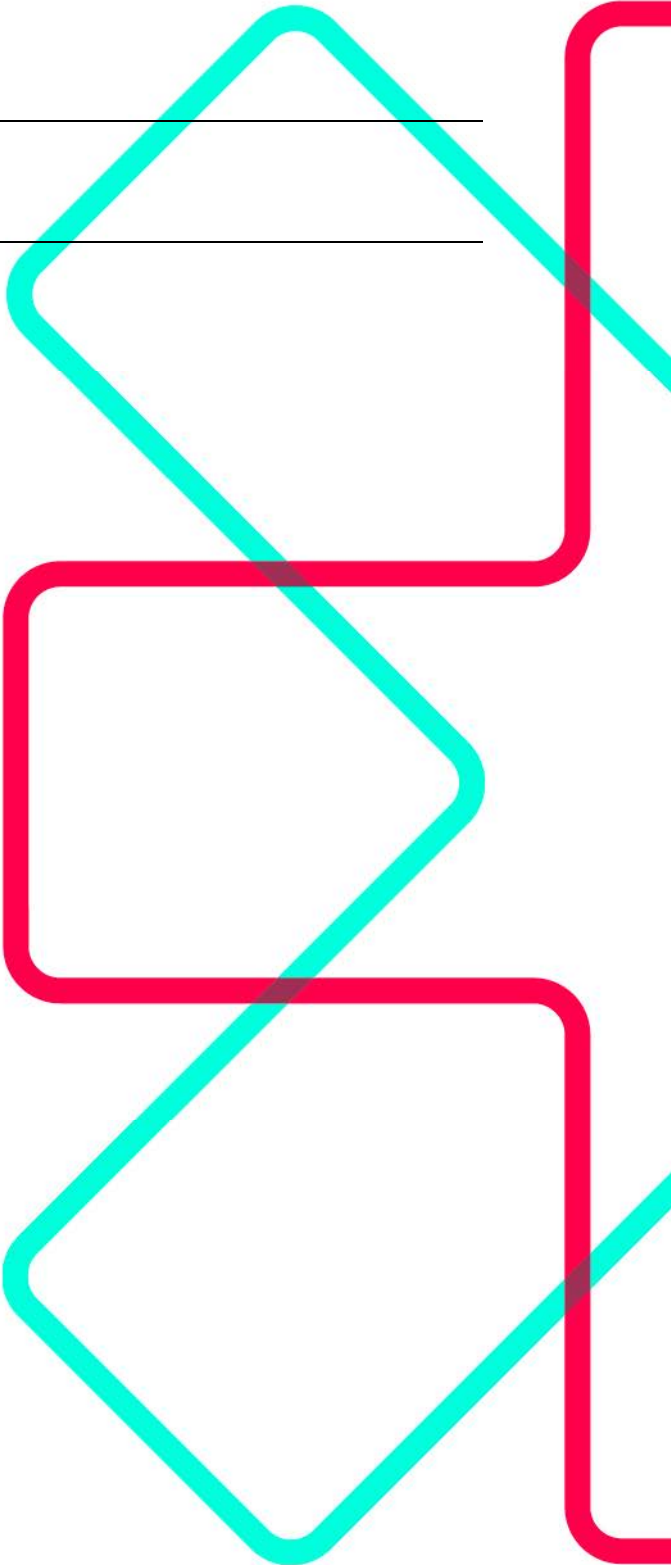
The initial district workshops suggested that the study test the potential to develop the region as a centre for health services for retirees. However, sector representatives suggested this would be unrealistic, given that retirees tend to locate close to family and because the region does not have a full range of specialist care available. As noted above, it can be difficult to attract specialists to the West Coast full-time. As such, the cost to access such services tends to be higher as users have to travel to Christchurch. It was also noted that actively attracting retirees to the region would put pressure on a range of health services and resources, and these are stretched already.

Although specific opportunities have not been identified, the following cross-cutting opportunities will benefit this sector: accelerated roll-out of broadband and dealing with mobile blackspots, the centre of applied research, and the expansion of experiential leadership programmes.



SECTION 5:

Cross-Cutting Opportunities



TRANSPORT

Overview

The West Coast's remoteness and distance from the main employment and business centres in the South Island and elsewhere in New Zealand means it is very dependent on having safe and reliable transport links. There is one major rail link and four main road links providing connections to the rest of the country. There are limited air services in Hokitika and Westport and two river ports in Greymouth and Westport.

Despite the West Coast's having less than 1 percent of New Zealand's population, the state highway network within the region accounts for 8 percent of the total length of the national state highway network. State highways comprise over 30 percent of the length of the total road network in the region, almost three times as high as the national average. The performance of the state highways is therefore particularly important for the West Coast.

Key road transport challenges for the region include long distances and lengthy travel times, route security, network resilience and road safety. There are also many one-lane bridges throughout the region (36 on SH6 alone) and some of these are approaching the ends of their useful lives and will need to be replaced.

A large number of hazards can disrupt the road network, including ice and snow, falling trees, rockfalls, flooding and landslides. Disruptions or closure can result in considerable increases in the travel distances between key locations because of the limited number of routes into the region. For example, for much of SH6, diversion distances are in excess of 500 kilometres.

The road conditions and the high number of visitors to the West Coast contribute to the highest rate of road fatalities and serious injuries per capita nationally. Between 2011 and 2015, 21 percent of road crashes on the West Coast involved overseas licence holders, compared to only about 6 percent of crashes nationally.

Despite these issues, the routes within and serving the West Coast are given a low resilience prioritisation in the State Highway Activity Management Plan 2015-2018. The expenditure proposed for the West Coast in the 2015-18 National Land Transport Programme is less than 1 percent of total expenditure nationally. This is broadly in line with the population, and also reflects the relatively low traffic flows, but it provides limited resources to address resilience and safety issues, especially given the length of the state highway network and the high road fatalities and injury rates in the region.

Because of the length of the road network, its multiple and unpredictable hazards, and the limited resources available, the main approach of NZTA is to attempt to respond to problems as they occur rather than attempt to prevent them occurring in advance. This includes having resources and plans to meet possible disruptions, especially if these can be anticipated. One problem that the region faces in identifying and responding to disruption is in the south, where a 200 kilometre section of SH6 has no cellphone coverage.

Although there are resource constraints, NZTA is investing in a range of work to improve the road transport network including:



- the construction of the Mingha Bluff to Rough Creek realignment project
- finalising the investigation and consenting for the replacement of the Taramakau Bridge
- responding to the washouts on the Waiho River at Franz Josef, including lifting the bridge
- identifying roads in the north of the region for the next tranche of high productivity motor vehicle routes
- implementing the Visiting Drivers Project to improve road safety with a focus on visitor education and signage
- increasing the number of slow vehicle bays on key routes.

There are no plans at this stage to invest in increasing rail or flight capacity in the region. Any changes will be dependent on commercial decisions which, in turn, are influenced by industry, visitor and population growth in the region and resulting demand.

Opportunity

Given the road transport challenges the region faces, further investment is required to proactively manage resilience across the region's roading network and to accelerate some planned projects, such as additional bridge strengthening. In addition, the case for investment in upgrades on routes to key visitor icons should be assessed. The roads to be assessed would depend on the priorities determined through the tourism strategy and plan.

There are two road proposals that could have a significant impact on jobs and economic development in the region but which require feasibility assessments and business cases to assess their technical and commercial feasibility and the full range of costs and benefits. These are the Haast to Hollyford road and the Wangapeka road link proposals. Given their significance and the likely divergent views on their merits, the feasibility studies and cases need to be robust, using resources, advice and information from a combination of industry, local government and central government. The aim should be to ensure that decisions on whether to progress the projects any further are definitive, based on the best quality information.

What does the transport network in the region look like?

The West Coast's remoteness and distance from the main employment and business centres in the South Island and elsewhere in New Zealand means it is very dependent on having safe and reliable transport links to these areas.

As shown in Figure 113, the transport network servicing the West Coast is fairly sparse, with one major rail link and four main road links providing connections to the rest of the country (SH6 to Nelson, SH7 to Christchurch, SH73 to Christchurch, and SH6 to Wanaka). There are also limited air services out of Hokitika and Westport and two river ports in Greymouth and Westport that now largely service the fishing industry.



Figure 113. Key features of the West Coast transport network



Source: New Zealand Transport Agency (2015). South Island Freight Plan

The road network and use

The road network in the region covers 871 kilometres of State Highway and 1,885 kilometres of local roads (NZTA, 2015b). Despite the West Coast having a population of less than 1 percent of the New Zealand total, the state highway network within the region accounts for 8 percent of the total length of the national state highway network (West Coast Regional Council, 2015e). State highways comprise over 30 percent of the length of the total road network in the region, almost three times as high as the national average of 11 percent. The performance of the state highways is therefore particularly important for the region.

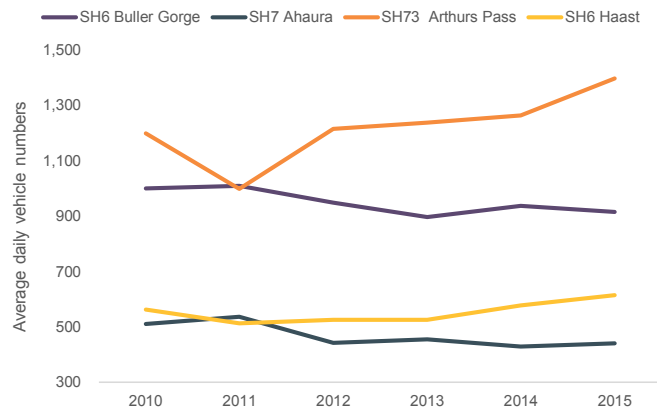


In general, traffic flows on the West Coast's state highways have remained broadly stable over 2010-2015 (Figure 114).

There has been some decline in flows on the routes to the north, which probably reflects declining activity in the minerals sector and further declines could be expected after 2015.

The routes further south (i.e., SH73 and SH6 through Haast) have experienced some increases in traffic in recent years (around 5 percent per year over the last 3 years), likely reflecting the growth of tourism in the region.

Figure 114. Vehicle flows on key road links on the West Coast



Source: NZTA (2016). State Highway volumes by region

The decline across SH73 Arthurs Pass in 2011 probably reflects the fall in traffic after the Christchurch earthquake.

Traffic volumes in the region are typically low outside the main urban centres, less than 1,500 vehicles per day in many rural areas (NZTA, 2016). Greymouth gets around 9,000 vehicles per day on some routes and Hokitika up to 5,100 vehicles (NZTA, 2016).

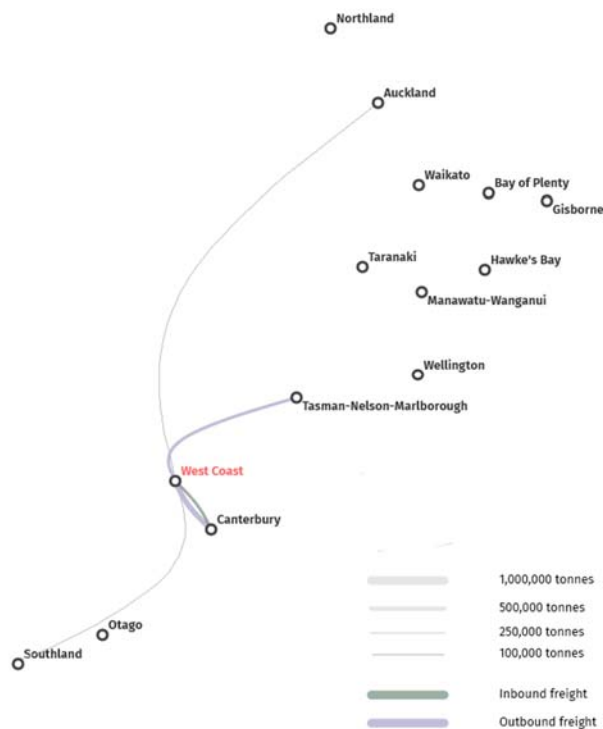
In terms of freight, 38 percent of the region's 6.85 million tonnes of freight was transported within the region, 46 percent went out of the region and 16 percent came into the region when last estimated in 2012 (Deloitte, 2014). Of this, around 3.9 million tonnes of freight was moved by road (57 percent). Of the 3.2 million tonnes being exported out of the region, close to 90 percent went to Canterbury (Deloitte, 2014).

The road freight task in 2012 equated to around 350 heavy vehicle movements per day. Freight flows by road in the region are dominated by the movements of milk and dairy products, logs and the distribution of manufactured and retail goods. Manufactured and retail goods are typically delivered from distribution centres in Christchurch on a daily basis so depend critically on a reliable road network.

Figure 115 summarises the main freight flows to and from the region.



Figure 115. Road freight volumes to and from the West Coast, 2012



Source: New Zealand freight volume visualisation <http://schiff.co.nz/interactive/nzfreight/>

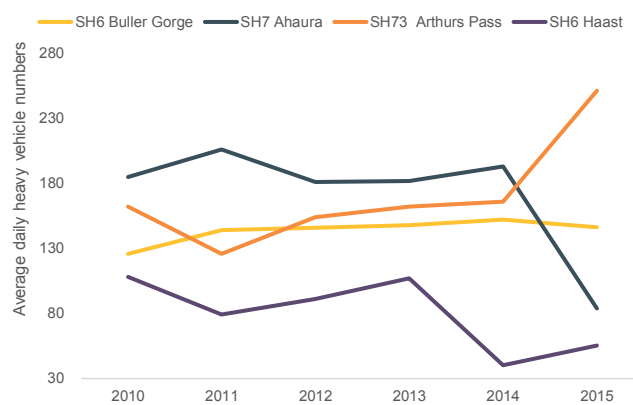
As shown in Figure 116, heavy vehicle traffic has increased on SH73 at Arthurs Pass since 2011 (NZTA, 2016).

Heavy vehicle flows via SH7 at Ahaura declined sharply over 2014 to 2015, likely reflecting the decline in the minerals sector.

Flows via SH6 through the Haast Pass declined sharply over 2013 to 2014, probably reflecting in part the effects of the landslip at Diana Falls in late 2013.

Flows on SH6 at the Buller Gorge have remained relatively constant over 2011 to 2015.

Figure 116. Heavy vehicle flows on key road links on the West Coast



Source: NZTA (2016). State Highway volumes by region



Heavy vehicle flows on all the longer distance routes in the region are relatively low. Even the busiest route of SH7 at Ahaura, which provides a connection with Nelson, has a flow of less than 200 heavy vehicles per day (NZTA, 2016).

Not surprisingly, given the long distances involved and the small population of the region, the West Coast does not have a public transport network. It is the only region in New Zealand without a public transport network. Representatives from some sectors indicated that this risks isolating some groups in the community, such as the elderly. The region does operate the Total Mobility scheme in Greymouth, Westport and Hokitika, which subsidises the use of taxi services by people with impairments (the scheme is subsidised by the WCRC and NZTA) (West Coast Regional Council, 2015b).

BDC and WDC (with NZTA financial assistance) also subsidise the provision of taxis generally in Westport and Hokitika to ensure the services are offered (West Coast Regional Council, 2015b).

There are a small number of commercial passenger transport operators. InterCity offers daily buses from Fox to Greymouth and Nelson to Greymouth, via Westport, Punakaiki and Ross, and two bus services offering daily transport to and from Christchurch.

It will be important to continue and potentially expand these passenger transport services over the long-term, given the expected increase in older-aged people on the West Coast (as discussed in the *Economic Context* section).

The rail network and use

The West Coast has around 420 kilometres of rail track in its network between Ngakawau in Buller and Hokitika in Westland (Development West Coast and Minerals West Coast, 2012). It is connected to the national network by the Midland Rail Line. KiwiRail currently operates five coal trains and two general freight trains in each direction daily over the Midland Line, although this can vary with the level of traffic available. The Hokitika minor line carries around one train a day on weekdays from Westland Milk to Greymouth.

The Midland Rail Line has been one of the busiest in the KiwiRail network, carrying around 2.5 million tonnes per year in the period leading up to 2013, or about 36 percent of the region's freight (about 2.4 million tonnes from the Coast for export to Lyttelton and 0.1 million tonnes into the Coast (Deloitte, 2014)). However, with the recent decline in coal production, the volumes of coal carried by rail have fallen from 2.1 million tonnes to 1.5 million tonnes over 2015 (KiwiRail, 2015). There has also been a cessation of the gold ore traffic from Reefton. We understand that this has been offset to an extent by an increase in milk and dairy traffic to and from the Westland Milk plant.

The Midland Line also supports the daily TranzAlpine return passenger service between Christchurch and Greymouth, which is an important tourist link. We understand that passenger numbers on this service have been growing (there were 120,000 passengers over 2014/15) and that the train can reach capacity in peak season.



Airport network and use

There are two airports with scheduled services, in Hokitika and in Westport. There are also several smaller airstrips, such as at Karamea and Franz Josef. Scheduled flights to and from Hokitika and Westport were cut back in 2015, with Air New Zealand withdrawing entirely from operations to Westport and cutting the number of services to Hokitika to just two return flights to Christchurch each day, with a capacity of 50 people per flight. With the cessation of Air New Zealand services to Westport, flights are operated by Sounds Air which operates between 1-3 flights each day to Wellington, via small planes with a capacity of 9 passengers.

Sounds Air have a partnership agreement with the BDC for 6 years (Sounds Air also received a loan from Development West Coast (DWC) to purchase a plane). Feedback suggests that the numbers using Sounds Air to and from Westport have been steady but middling overall (prior to Solid Energy's decline, flights were at capacity). Passengers are primarily commuter, with a small number of tourists. Sounds Air have been responsive to requests for changes to scheduling and have been flexible in meeting delays caused by weather or mechanical events. There have only been two cancellations by Sounds Air in the first year of operation.

Buller has undertaken a promotion to encourage greater numbers of air travellers, but we were informed that this has not been particularly successful.

It is estimated that around 80 percent of the travellers through Hokitika airport are commuters – with limited use of the air service by visitors. The airport indicated that the new service has been well-used and that occupancy rates on weekdays are high.

Ports and coastal shipping

The West Coast has no deep water ports. The main port is Westport, which has cargo handling facilities for vessels up to 16,000 deadweight tonnes (or 131 metres in length) and is served by road and rail transport (Development West Coast and Minerals West Coast, 2012). The Port formerly mainly supported the coastal shipping of cement from the Holcim cement plant, which contributed around 80 percent of the Port's revenue. In recent years, movements of cement through the Port have been in excess of 400,000 tonnes per year, shipped to the North Island. However, Holcim ceased operations at the end of June 2016, leaving the Port with little demand. The Port also provides facilities for fishing vessels, but there is not a large commercial fishing fleet.

The Port harbour requires dredging due to a build-up of silt and gravels on the bar. Holcim previously paid for 100 percent of the Port's dredging costs. With the loss of Holcim's revenue, Westport Harbour Ltd has decided to minimise (or halt altogether) the dredging of the harbour. BDC is keeping the dredge for 3 years in case of any future business requiring the Port to be operational.

The Port of Greymouth is primarily a fishing port, although it also receives imports (e.g., of fertiliser) and has capacity for vessels up to 8,000 deadweight tonnes or up to 109 metres in length (Development West Coast and Minerals West Coast, 2012). It is served by road transport, with rail one kilometre away. The Port's facilities have been upgraded in recent years, particularly through the development of Westfleet's processing factory and its improvements to the wharf. The Port lagoon can also be subject to build up of silt and requires dredging. GDC has purchased a dredge for this purpose.



The region also has Jackson Bay Wharf located south of Haast, which provides a base for local and commercial fishing vessels.

What are the major challenges impacting on the region’s transport network?

Distance and travel times

The travel times by road from Greymouth and Hokitika to the nearest major centres outside the region are generally more than three hours (Figure 117). Even between Westport and Nelson, the travel time is just under three hours, highlighting the isolation of the region.

Figure 117. Road travel distances and travel time from West Coast centres

Origin	Destination	Distance (km)	Time (hours)
Hokitika	Christchurch	256	3.16
	Nelson	326	4.09
	Dunedin	549	6.50
	Queenstown	487	6.16
	Westport	139	1.56
Greymouth	Christchurch	252	3.16
	Nelson	287	3.39
	Dunedin	545	6.50
	Queenstown	525	6.46
	Westport	101	1.26
Westport	Christchurch	328	4.01
	Nelson	221	2.53
	Dunedin	645	8.14
	Queenstown	625	8.11

Source: <http://www.newzealand.com/int/travel-times-and-distances-calculator>

The daily TranzAlpine train service takes around four and a half hours to travel between Christchurch and Greymouth.

The long travel times by road and rail impact on the ability of the region to attract visitors and workers from the larger settlements to the north and east and highlight the importance of providing a good level of service on the connecting road links.

Air travel significantly reduces the travel time to two main centres and adjoining areas. It only takes around 40 minutes to travel between Westport and Wellington, and only around 35 minutes between Hokitika and Christchurch. However, there can be long travel times to and from Grey/Hokitika and Wellington and Auckland (e.g., a return trip within the day between Auckland and Hokitika currently involves almost 7 hours of flying and transit time). In addition, costs can be prohibitive to some groups



within the community, with a one-way ticket from Wellington to Hokitika costing up to \$373.²⁹ and \$219 from Wellington to Westport.³⁰

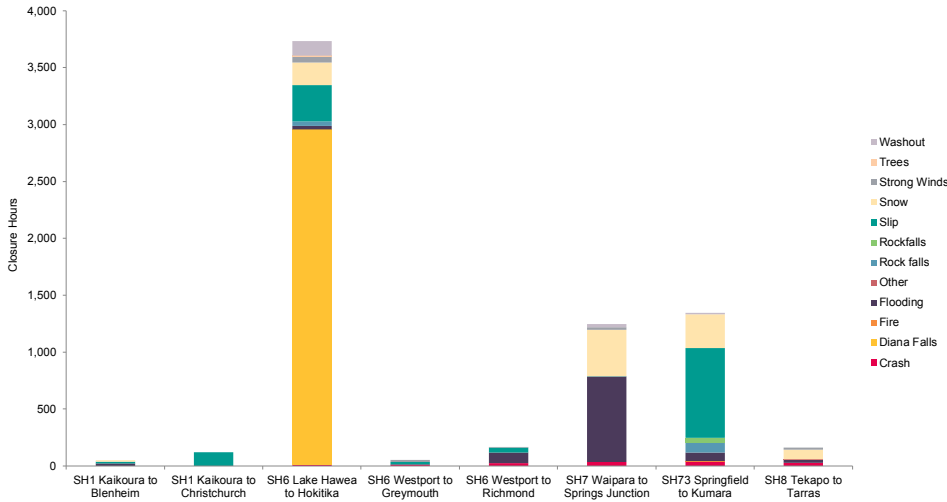
The very limited air services operated from West Coast airports and the long travel times and distances to airports outside the region limit the role of aviation in serving the needs of tourists and other travellers into and out of the region.

Route security and road network resilience

Although the flows of traffic on the roads on the West Coast are relatively low, there are risks with the resilience of the network as a result of the topography and climate. A large number of hazards can give rise to disruptions across the road network, including ice and snow, falling trees, rockfalls, flooding and landslides (GHD and Option One, 2005; West Coast Regional Council, 2015a). For example, there were multiple washouts along the network down the coast of the region after a heavy rain event earlier this year.

The total delays over the last decade on key West Coast routes compared to Canterbury roads are highlighted in Figure 118, with over 3,500 closure hours on SH6 Lake Hawea to Hokitika. Although the picture is dominated by the closure caused as a result of the Diana Falls slip (responsible for close to 3,000 of these closure hours), the closures caused by slips and washouts on this road have also been relatively large compared to most of the other routes identified.

Figure 118. Total road closure duration on selected South Island roads, last 10 years (closures > 4 hours)



Source: TREIS and Network Consultants

²⁹ Air New Zealand booking site (accessed on 29 August 2016 for a flexiplus fare to arrive in the morning on the 31st August). The cheapest one-way ticket to Hokitika was \$323. If booking a month in advance on the same flight, the cheapest ticket drops to \$178 and the most expensive to \$228. Ticket prices can range from \$178 to \$464 depending upon the time of travel.

³⁰ Sounds Air website (accessed on 29 August 2016). There is a \$20 discount if booking online and a \$30 discount for a ten trip voucher.



An indicator of the severity of hazards is the costs of addressing the problems arising, which are set out in Figure 119 to Figure 121.

Landslips have affected most of the road network on the Coast over 2009–2016, with the highest costs being incurred in addressing slips in Buller (although noting that these figures do not cover the Haast to Wanaka portion of SH6, which has been subject to a major landslide).

The incidence of ice and frost has been more scattered, with more significant costs faced south of Hokitika and around Reefton.

Flooding has particularly affected the Westport to Greymouth route, and the Buller Gorge area.

Figure 119. Costs for addressing landslips on West Coast and link roads, 2009–2016



Source: NZTA

Figure 120. Costs for addressing ice and frost on West Coast and link roads, 2009–2016



Source: NZTA

Figure 121. Costs for addressing flooding on West Coast and link roads, 2009–2016



Source: NZTA



Disruptions or closure can result in considerable increases in the travel distances between key locations because of the limited number of routes into the region. For much of SH6, diversion distances are in excess of 500 kilometres and this also applies to sections of SH73 and SH7 that provide alternative routes to and from the West Coast (Figure 122).

A particular example of this was the closure of the route at Diana Falls near Haast in 2013 (closed entirely for 11 days and closed at nights for several months while repairs were completed), which increased the distance between Haast and Wanaka from 142 kilometres to some 883 kilometres.

A disruption on the main access route east at Arthurs Pass would increase the travel distance between Hokitika and Christchurch from 245 kilometres to 368 kilometres via SH7 and Hanmer Springs.

Disruptions such as these clearly have a major impact on local residents, businesses and visitors that want to use the routes, particularly if they have no alternatives.

Figure 122. State highway connectivity and potential diversion lengths in case of disruption



Source: NZTA (2014). State Highway Network Resilience National Programme Business Case.



Despite these issues, the routes within and serving the West Coast are given a low resilience prioritisation in the State Highway Activity Management Plan 2015–2018 (Figure 123). SH73 has been given a priority 4 and the remainder have been given the lowest rating priority 5.³¹

One problem that the region faces in identifying and responding to disruption on the network is the lack of cellphone coverage in the south of the region, where there is a 200 kilometre section of SH6 without coverage (see the *Telecommunications* section of this report).

The lack of coverage can mean that the response to events on the network can be relatively slow, making the targets of rapid response to events or even providing advance warning about them difficult to achieve. This also has an impact on response time to crashes.

Figure 123. Resilience priority routes



Source: NZTA

The region has a large number of one-lane bridges. For example, there are 36 one-lane bridges on SH6 on the West Coast alone. Several are approaching the ends of their useful lives and will need to be replaced, such as the bridges at Ahaura³² and Stony Creek.

With the high number of visitors already, and the aim to continue to grow visitors to the region, the high number of one-lane bridges, particularly those on the main tourist routes, become more of a concern.

³¹ This priority rating is a national measure. The assessment methodology gives emphasis to greater relative national impacts, which is driven by both value of goods and the number of people potentially affected by an outage if it occurs. The NZTA is currently reviewing this methodology.

³² NZTA is planning to replace Ahaura Bridge.



Road safety

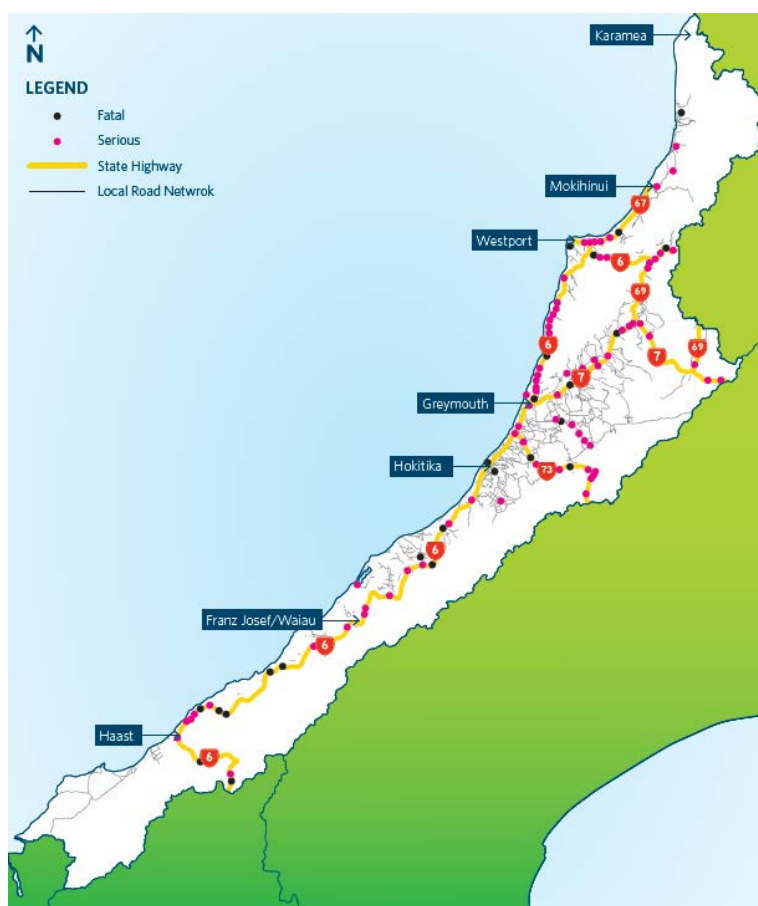
The roads on the West Coast can be narrow, winding and steep in places, and a reasonable proportion of local roads (45 percent) are not sealed. The West Coast also has the most single lane bridges of all regions. These factors result in difficult conditions for visitors that are not used to driving on such roads. With a growing visitor economy, the number of buses, campervans and tourist drivers also means increasing numbers of vehicles that travel at slower speeds, which can lead to frustration in areas with a lack of passing opportunities.

Nationally the state highway network road network is risk assessed through a safety star rating process known as KiwiRAP. The rating system allocates a rating range from 1 (highest risk) through to 5 (safest). The rural West Coast network has a KiwiRAP star rating of 2 or 3. All rural routes on the West Coast are two-way undivided networks. Major sections of the state highway within the region have narrow seal widths and the majority of the region's rural roads do not have sealed shoulders which makes for an unforgiving environment when something goes wrong.

A map showing where crashes occurred on the West Coast is presented in Figure 124. Some key crash statistics for the period of 2011-2015 are:

- 36 fatal crashes caused 41 fatal casualties
- 125 serious injury related crashes caused 160 serious injury casualties
- fatality and serious injury related road trauma had a social cost of \$274 million
- 73 percent of total injury crashes were on the State Highway – 59 percent of these being on State Highway open road
- 72 percent of total injury crashes were loss of control on a bend or straight road
- Fewer crashes occur in winter (July, August and September).

Figure 124. Regional crash map, West Coast, April 2011–March 2015

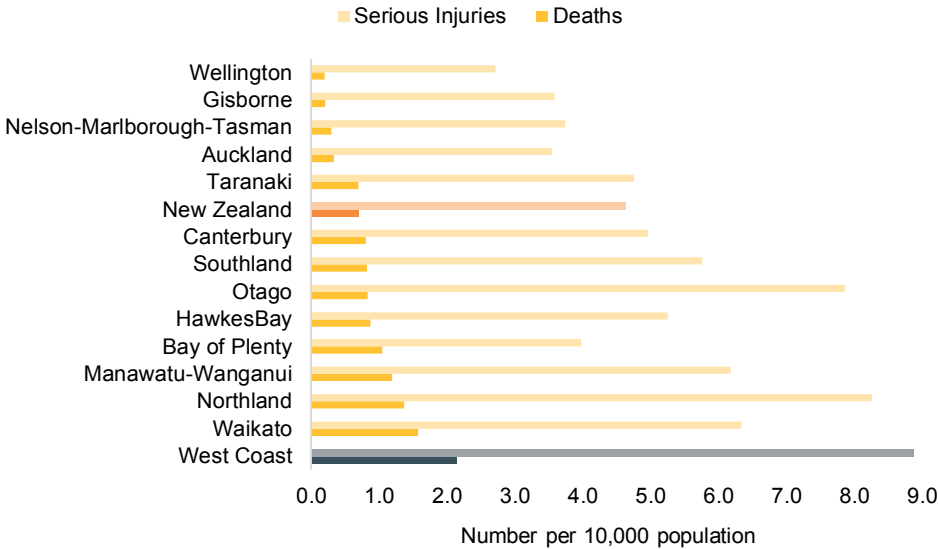


Source: NZTA,



The West Coast has the highest number of road fatalities per 10,000 population and the highest number of serious injuries from road crashes per 10,000 population in New Zealand (NZTA, 2016b). As shown in Figure 125, the West Coast had 2.14 deaths and 8.87 serious injuries as a result of road crashes per 10,000 population in 2015 compared to 0.7 deaths and 4.64 serious injuries across New Zealand.

Figure 125. Deaths and serious injuries as a result of road crashes per 10,000 population, New Zealand regions, 2015



Source: NZTA, Regional Quarterly Road Safety Outcomes
 Note: As of March 2016

Between 2011 and 2015, 21 percent of road crashes on the West Coast involved (although were not necessarily caused by) by overseas license holders³³ (Ministry of Transport, 2016). Only about 6 percent of crashes nationally involve an overseas license holder.

The proportion of crashes involving overseas license holders over the period was particularly high in Westland at 37 percent, which was the highest of all local authority areas in New Zealand (Ministry of Transport, 2016).

When last assessed, the roads with the highest fatal and serious crash rates were SH7 to Reefton, SH6 from Haast to Wanaka, and SH6 between Westport and Greymouth and Westport and Murchison (Figure 126).

³³ Note overseas licence holders includes short term visitors, students and recent immigrants. A person can drive on an appropriate overseas license or international permit for up to 12 months in New Zealand from when they last entered New Zealand.



Figure 126. Personal risk ratings of West Coast roads



Source: Adapted from KiwiRAP 2012

Limited resources to invest in the road network

The expenditure proposed for the West Coast in the 2015–18 National Land Transport Programme is less than 1 percent of total expenditure nationally. This is broadly in line with the population, and reflects the NZTA assessment, which is based on relatively low traffic volumes, low risk and low resilience prioritisation. However, it does mean that there are limited resources to address safety and resilience issues, especially given the length of the State Highway network in the region.



Some of the councils in the region will also need to fund an increasing share of investment in the road network over the next few years. The normal Funding Assistance Rate³⁴ for GDC and WCRC is decreasing by 1 percent each year over 2015–2018, remaining static for WDC, while it is increasing by 1 percent each year in BDC.

A specific potential issue for Buller is that the designation of the road to Karamea, which is currently designated as a Special Purpose Road and is 100 percent funded by NZTA, is being reviewed. A re-designation to a local road would mean that the Funding Assistance Rate of 63 percent would apply. BDC has indicated that it would not be able to afford its contribution, particularly given it is also facing a declining rating base. NZTA is still reviewing options for this road.

As part of its review of local government arrangements, the Local Government Commission (LGC) has, in association with the West Coast Mayors and Chair Forum, commissioned work on options for efficiencies in roading arrangements for the West Coast. This work, which is likely to be released early next year, is to identify ways where savings can be made in planning and implementing road maintenance, renewals and improvements.

Flight schedules

Concerns were raised by several industry and stakeholder representatives about the current schedule of Air New Zealand flights to and from Hokitika, which does not provide for a full day of work either in the region or in destinations (and requires staying over for an extra night for early morning or late afternoon meetings). The schedule is changing in October with morning flights being brought forward by up to 30 minutes and afternoon flights departing around 30 minutes later, although this is not likely to significantly alter the situation for most business travellers (i.e., they will still need to stay another night to make morning or late afternoon meetings).

We consider that the current limited flight schedule is a constraint on business traveller and visitor movements to and from the West Coast.

Future of rail

Because of the high proportion of total freight traffic on the Midland Line that has historically consisted of coal, there have been concerns that the decline of coal could potentially impact on the economic viability of the line. However, discussions with KiwiRail have suggested that services to and from the West Coast will continue. Other potential uses are considered to be broadly sufficient to support the operation of the route over at least the short term. There may also be potential for attracting other cargo (e.g., see the waste-to-energy proposal in the section on *Energy*).

The major constraint to any future expansion of rail freight is apparently a shortage of suitable rolling stock.

³⁴ Funding Assistance Rates exist to assist approved organisations and the NZTA to co-invest to achieve: optimal national land transport outcomes within the combined financial resources; an integrated and appropriately consistent land transport network throughout the country; and to appropriately share the cost of the land transport network between land transport system users and local communities, recognising the national and local benefits that are derived from investment in the network.



Future of the Port of Westport

The future of the Port of Westport is uncertain. There is no obvious trade to replace cement from Holcim at Westport. Even if the Port was able to transport a combination of product (e.g., coals, fertiliser, garnets), we understand that this would be limited to 5,000 tonne loads once a week and the economics would at best be marginal.

In the past the Port was also used for the export of coal by barge, which was transhipped onto a larger vessel elsewhere. This approach was originally proposed for the output of the Pike River coal mine, but the plan was subsequently changed to rail (the port adds another step in the supply chain). With the large volumes of coal on the West Coast there is always a chance that such a proposal might re-emerge but, over the medium term at least, the depressed nature of the export coal market and the need to transport some of the product for domestic users are likely to mean that rail continues as the favoured mode.

Feedback from consultation suggested that, given its limited use, there would not be a significant economic impact if the Port was no longer operational. One risk is a loss of skills if people managing the port and dredge leave the region, which will need to be replaced if there is a turnaround in demand for shipping (we note that there are discussions between Greymouth and Buller on sharing the harbourmaster across the ports). More significantly, the district and region would lose the option of coastal freight being available for minerals if the sector recovers or if new sectors develop over the long-term.

What is the outlook for travel and freight?

Given that the West Coast's population is not forecast to grow over the medium-term, transport network use will largely depend on visitor and freight growth. An ageing population and people without licenses are likely to increase demand for passenger transport services.

As previously noted in the section on *Tourism*, MBIE's tourism forecasts for 2016–2022 suggest that visitor arrivals nationally are forecast to grow by 5.4 percent per year. Assuming that the West Coast at least achieves this level of visitor growth (both international and domestic), visitor numbers to the region could increase from around 904,000 in 2015 to 1.175 million by 2020 or by around 270,000 visitors, i.e., around 750 additional visitors per day by 2020.

Translating this into increases in vehicle numbers is difficult because visitors will use different transport modes, and their decisions will be affected by fuel prices and transport options available. Assuming simply that visitor growth results in equivalent growth in vehicle movements (excluding heavy vehicles), such an increase in visitors could result in the number of daily light vehicle movements on roads in the region increasing by 30 percent by 2020. For example, this could mean an extra 420 light vehicle movements daily on SH73 at Arthur's Pass, an extra 275 light vehicle movements daily on SH6 Buller Gorge and an extra 185 light vehicle movements daily on SH6 Haast.



The South Island Freight Plan (NZTA, 2015) estimates that the freight task for the West Coast will grow by 2.7 million tonnes over the 30 years to 2042, mainly due to growth in liquid milk, aggregate and limestone/fertiliser volumes (growth in coal freight will depend on recovery in prices). Freight is estimated to grow by 1.4 percent per year in the 10 years to 2022 (NZTA, 2015). This equates to 12 percent more heavy vehicle movements daily on roads in the region by 2020 compared to 2012. This could mean another 20 heavy vehicle movements per day on SH73 at Arthur's Pass in 2020 compared to 2015 and smaller increases on SH6 Buller Gorge and SH6 Haast. However, growth in coal freight may be less than previously forecast and will depend on a recovery in prices, so the overall increase may be less. The downturn in dairy prices may also impact on these forecasts in the short-medium term.

The same Plan estimates very little growth in rail freight or an increase of 0.11 million tonnes by 2042 (NZTA, 2015), which will not impact on the rail infrastructure required.

Overall, it is likely that the roading network will need to cope with a moderate increase in vehicle movements in the medium-term (and although they are moderate in volume terms, they are sizeable given existing flows). It is also important to note that it is not just the expected increase in vehicle movements that matters for future investment decisions. Greater numbers of visitors will also use the roading network for cycling and walking, increasing the safety risk.

What investment is being undertaken on the region's transport network?

Because of the length of the road network, the multiple and unpredictable hazards potentially affecting it and the limited resources available, the main approach of NZTA is to attempt to respond to problems as they occur rather than attempt to prevent them occurring in advance. This includes having resources and plans to meet possible disruptions, especially if these can to some extent be anticipated. As an example, NZTA has invested to remove the threat of disruption at Diana Falls following the major landslip in 2014. NZTA has also proposed investigating spot treatments of areas at risk to rock fall and slips on SH73, SH7 and SH6 (West Coast Regional Council, 2015a).

As part of the Government's package of funding for regionally important state highway projects in 2015, funding has also been allocated to accelerate the construction of the Mingha Bluff to Rough Creek realignment project, bringing it forward by 5-6 years (with construction now underway), and to finalise the investigation and consenting process for the replacement of the Taramakau Bridge.

NZTA has been investigating possible responses to the washouts that occurred on the Waiho River at Franz Josef this year, and has proposed lifting the Waiho Bridge by another 2 metres. There may be a longer term solution that diverts the road away from the river, although this work would have to be supported by a full business case and as part of the broader work proposed on infrastructure at Franz Josef (as discussed in the section on *Tourism*).



Although routes for High Productivity Motor Vehicles (HPMVs) have been developed elsewhere in New Zealand, weak structures and the limited freight demands on the West Coast have meant that similar upgrading of routes has not yet occurred. In addition, structures on SH6 to the south of the region are unsuitable for 50MAX vehicles and this precludes the movements of these heavier vehicles on the routes to and from Otago via Wanaka and Queenstown.

However, NZTA has identified roads in the north of the region for the next tranche of HPMV routes (Figure 127), from Murchison to Westport (SH6) and from Murchison to Greymouth and then on to Hokitika (including SH69 and SH7).

Figure 127. Tranche 2 HPMV routes



Source: NZTA

There are also a number of safety improvements planned. An important element of this is the Visiting Drivers Project that aims to improve road safety for domestic and international visitors, while maintaining New Zealand’s reputation as an attractive and safe tourist destination.

The project has a range of initiatives that strengthen all parts of the roading system – safe vehicles, safe speeds, safe road and roadsides, and safe users – and that complement each other to collectively achieve a more beneficial impact. The initiatives cover the entire tourism supply chain: planning, booking, in-flight, arrival and journey.

The project has a roads and roadsides engineering focus in Otago, Southland and the West Coast and the Government has made funding available through the 2015–2018 National Land Transport Programme for a road safety engineering programme on the State Highway and the local road network.

The aim is to ensure:

- drivers are well informed, and that they have chosen a suitable vehicle and are prepared for New Zealand driving conditions
- roads and roadsides support a safe journey and experience, with good rest spots and opportunities for photography stops, and increased safety measures on key tourist routes such as the use of signage and markings at known hazards and accident blackspots



- New Zealand actively looks after its visitors, supporting them to enjoy their experience, and rescuing and caring for them when crashes occur.

It is also intended that road safety and the performance of the network in general will be improved with the provision of a number of slow vehicle bays along SH6, SH7 and SH73. These reduce the interactions between slow moving (including tourist and heavy freight vehicles) and faster moving traffic and help reduce the frustration and dangerous driving behaviour that might otherwise arise. By improving journey times and travel time reliability, these will also contribute to the performance of the network.

The district councils are also investing in upgrades to local roads, including some that are on-route to key tourism attractions. For example, WDC is funding the widening and sealing of the road leading to the Hokitika Gorge.

There are no plans at this stage to invest in increasing rail or flight capacity in the region. Any changes will be dependent on commercial decisions which, in turn, are influenced by industry, visitor and population growth in the region and resulting demand.

What are the specific opportunities to improve the transport network in the region?

1. Additional investment to improve road resilience and upgrade key visitor routes

We believe there is a case for expanding the limited funding currently available for proactively managing resilience across the region's roading network and accelerating some planned projects. Reasons include:

- the importance of reliable connections between the West Coast and other centres to support business connections and freight flows
- the number of weather events that impact on the security of the network
- large diversion distances that result from disruptions
- forecast growth in visitor numbers and road network use.

Expanding funding could include bringing forward priority projects identified in the Regional Land Transport Plan that are currently proposed for 2018–2021, such as additional bridge strengthening and replacement projects.

In addition, to support an increase in visitors to an extended set of icons such as at Karamea, and noting that increased marketing of these areas is likely to result in an increase in traffic on roads that were originally designed for much lighter flows, the case for investment in upgrades to these routes should be assessed (e.g., the road to and from Oparara Arches). The roads to be assessed would depend on the priorities determined through the tourism strategy and plan (as noted in the section on *Tourism*). Although part of the funding for these new routes could come from NZTA, there would need to be some matching funding from local resources. We consider that upgrades to specific roads to



support the development of new visitor icons is beyond 'business as usual' infrastructure and hence could be a candidate for DWC or other Government regional economic development investment support.

The opportunity to look at increasing investment in network resilience and potential visitor route upgrades can be taken as part of the mid-term review of the Regional Land Transport Plan which is about to commence and is to be completed by mid-2018. As noted, the LGC work on options for improving how the region plans and implements road maintenance, renewals and improvements should also be considered as part of this proposal.

Our assessment of the proposal

This proposal is based on clear issues that the region faces in managing resilience and catering for expected growth in visitor numbers and traffic, and is consistent with local and national priorities and initiatives to enhance the performance of the transport system. For example, the Government Policy Statement on Land Transport 2015/16–2024/25 includes priorities on:

- ongoing investment in the State Highway network, including increasing the percentage of the network open to high productivity network motor vehicles
- increased investment in the local road network
- investment in regional improvements on roads outside the major centres, particularly those that provide links to key freight or tourist centres
- increased investment in cycle networks
- ongoing investment in improving network resilience
- maintaining investment and improving returns in road safety.

A range of other relevant central government initiatives are noted below.

Relevant current Central Government initiatives
<ul style="list-style-type: none">• Connecting New Zealand – the government’s policy direction for transport.• Government Policy Statement on Land Transport 2015/16–2024/25.• Funding support through the National Land Transport Programme 2015–2018.• State Highway Activity Management Plan 2015–2018.• Safer Journeys 2010-2020 Strategy and Safer Journeys 2016–2020 Action Plan.• The Visiting Drivers Project.• Local Government Commission and West Coast Mayors and Chair forum work on options for the West Coast to improve road transport planning and implementation.• The KiwiRail Turnaround Plan.

We believe that the benefits of increased and accelerated investment in road resilience and road upgrades on new visitor routes will be significant, although their magnitude relative to costs cannot be quantified at this stage given the specific projects are yet to be identified. Benefits will include:



- improvements in travel time reliability, which will reduce vehicle operating costs, enhance the visitor experience and improve freight productivity
- improving the connectivity to the major centres in the South Island, making the region a more attractive location for those moving from outside the region who may wish to retain their ties with family and friends and business contacts outside the region
- improving the reliability of the connections between the rural areas and the larger towns within the region to facilitate access to medical, educational, employment and other opportunities
- reducing social and economic costs due to crashes (e.g., reduction in loss of life, emergency and health care, reduction in vehicle repairs, reduction in delays on affected routes)
- an increase in jobs in the construction sector associated with resilience projects and upgrades, and an increase in spending on related services in the region.

The complexities associated with this proposal include aligning the process with the tourism strategy and plan, proving the case for road upgrades to the new set of iconic attractions and for bringing priority resilience measures forward, and identifying local funding to support investment in the road network.

Overall, this proposal ranks highly on our criteria. The potential impact is large and the benefits will flow across the region.

As noted, existing local and national work and initiatives can be leveraged. It has an international dimension by supporting freight and visitor traffic.

The proposal rates lower on practicality because of the time it will take to assess investment priorities and to account for other proposals such as the visitor strategy and plan.

Table 41. Assessment of the road resilience and key visitor route upgrade proposal

Criteria	Assessment
Validity	High
Potential impact	High
Practicality	Medium
Regionally significant	High
International orientation	Medium
Ability to leverage local/regional work and investment	High
Consistency with national priorities	High
Overall assessment	High

2. Feasibility studies and business cases for major proposals that may increase diversion options and support growth in visitor traffic

Two major road projects have been proposed in the north and the south of the region: the Wangapeka road link and the Haast-Hollyford road. Our suggestion is that the feasibility and strategic case for both projects be developed by the proponents, with appropriate support, advice and information provided by central and local government to ensure that the processes and assessments are robust. The Haast to Hollyford proposal, in particular, has involved years of debate on the potential merits and considerable resources have been invested, but only partial information about the costs and benefits is



available. Our suggested proposal is aimed at ensuring that decisions on whether to progress the projects any further are definitive, based on the best quality information.

1. Wangapeka Road Link

BDC has proposed constructing a 56 kilometre road connecting Little Wanganui, just to the south of Karamea, through to the Motueka Valley and to Wangapeka to the west. It would provide a more direct connection to Nelson from Karamea and Westport and another road link north. The proposal indicates that the road would almost halve the distance by road from Nelson to Karamea to 169 kilometres. Initial reports suggest that it will be challenging to construct and expensive to maintain as it would need to pass through and over mountainous terrain.

Potential benefits and costs

The road involves passing through the Kahurangi National Park and so potentially would have significant environmental impacts. It would likely increase the traffic flows flowing south from Little Wanganui to Westport and potentially increase the number of visitors to Buller.

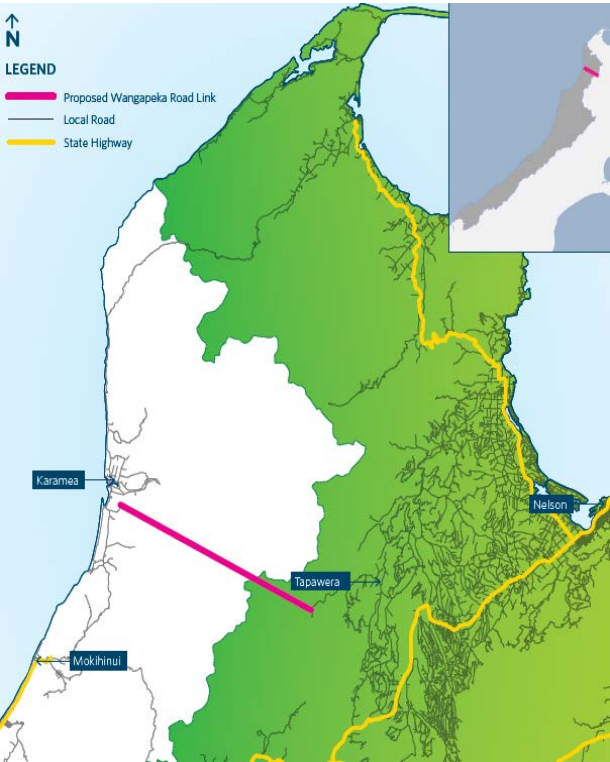
We received feedback from several stakeholders during this study that the road may not result in major benefits to Karamea if visitors continue on to Westport and do not overnight in the area.

In order to judge the potential impact and regional significance of the proposal, the business case for the road and particularly its local and regional economic benefits need to be developed. This case will need to consider the extent and scale of potential opportunities along the route and how these might be realised, as well as potential negative impacts on other areas that might result from the displacement of visitors (e.g., lower visitor flows through the Buller Gorge area).

Our initial assessment of the proposal

As yet there are no details of this scheme that allow us to judge its validity or practicality. Geotechnical, engineering and resource management investigations are required. Construction and ongoing maintenance costs need to be determined. It will require a combination of central and local government funding and resources.

Figure 128. Proposed Wangapeka Road Link



Source: NZTA



Our preliminary view is that it is probable that the costs (including construction costs and environmental impacts) will be substantial relative to the quantifiable benefits. The case is only likely to stack up if there are significant broader and strategic benefits to the region, for example related to regeneration of some areas of Buller, increased visitor expenditure and flow-on business benefits, and improved route security from having another road option to the north. There are also other proposals currently being assessed (e.g., the waste to energy project discussed in the section on *Energy*) which, if they are developed, will increase the demand for freight between Nelson-Tasman and the West Coast. These will also need to be taken into account when developing the case.

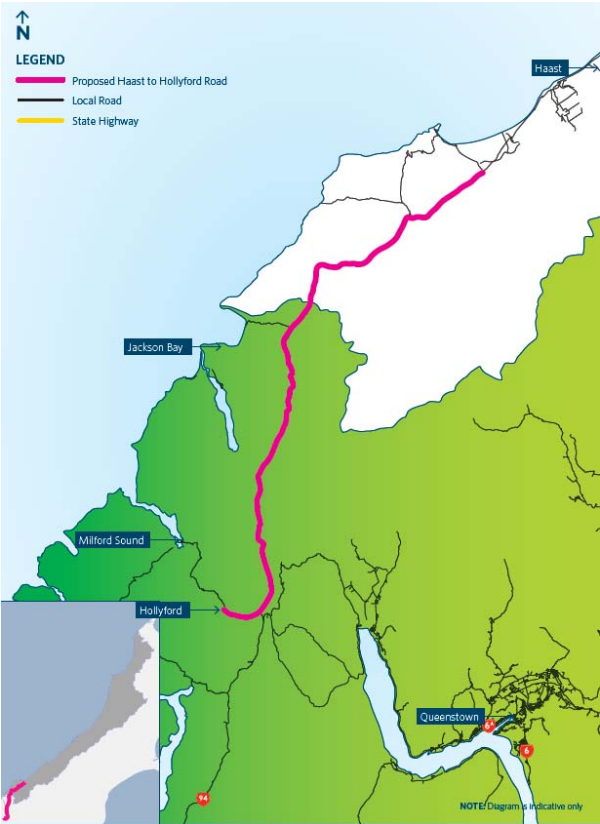
The BDC has instigated an initial assessment and it will include an interim strategic case for the project. This will need to identify and quantify the impacts on the local economies that might underpin the case for progressing the development of the route. We suggest that central government agencies, such as NZTA, MBIE and DoC, provide advice and information to guide the development of this assessment. A proposal could also be submitted to the West Coast Regional Transport Committee to include the work on the Wangapeka link road in the Regional Land Transport Plan when reviewed in 2017.

2. Haast to Hollyford Road

A road between Haast and Milford Sound has been proposed for several decades by various parties. It is now being progressed by Haast to Hollyford Highway Ltd (HHL).

The concept is for an inland toll road between Cascade and close to Te Anau, traversing Westland and Southland District Council areas, three conservation areas, the Fiordland National Park and Mt Aspiring National Park and the Te Wai Pounamu World Heritage Area. The proposed road is 136 kilometres long, of which 38 kilometres is already partly formed. It will reduce the travelling distance between Haast and Milford Sound by 355 kilometres.

Figure 129. Proposed Haast to Hollyford Road



Source: NZTA



Potential benefits

HHL's benefit estimates suggest that up to 1,500 construction and related jobs will be created for Westland and Southland (Haast to Hollyford Ltd, 2016). If it proceeds, the road will create a nationally significant tourism route by creating a loop between Westland, Milford Sound and Queenstown, which is likely to attract more visitors and result in higher demand for food services and accommodation in lower Westland.

HHL estimates 750,000 users of the road in the first year, increasing by 6 percent per year up to a maximum of 2.25 million (Haast to Hollyford Ltd, 2016).

The road would also provide an alternative route in the area should the existing route be closed. There will potentially be a broader range of benefits such as regeneration of the Haast township and surrounds, potential educational and recreational benefits from being able to access a greater area of national parks, and opportunity benefits from reduced travel times. However, the scale of these may be limited and may be offset by the overloading of visitor facilities in Milford, which would now become more accessible.

HHL estimates suggest that it could collect annual revenue of \$27 million–\$57 million based on toll charges of \$40 per traveller (Haast to Hollyford Ltd, 2016).

Potential costs

HHL's cost estimates indicate that resource consents will cost \$5 million–\$6 million and that road and bridge construction will cost \$220 million–\$250 million. Annual maintenance costs are estimated at \$2 million–\$3 million (Haast to Hollyford Ltd, 2016).

There will be impacts on the environment, which have not yet been quantified but which are likely to be substantial and raise significant consenting issues. It is also possible that the road could displace visitors to some areas on the current Haast to Milford route (e.g., at Wanaka).

Process

HHL have indicated that they have secured an investor and construction partner to design, build, finance and maintain the road for a period of 30 years. As such, no funding from central or local government is being requested for construction and maintenance.

The councils on the West Coast have indicated support for the road in principle. Southland District Council has also supported the proposal being sent to the Otago-Southland Regional Transport Committee for consideration.

The road will require resource consents, detailed environmental impact assessments and amendments to National Park Management Plans. HHL has suggested that the road be 'called-in' as a project of national significance by the Minister for the Environment to facilitate the resource consent process (with consent decision-making then being made by a Board of Inquiry). The process will also require consultation with iwi. Makaawhio have noted their objection to the road.



Our initial assessment of the proposal

As with the Wangapeka Road proposal, there is not yet sufficient information available for us to judge the merits or viability of the scheme. It is likely to be regionally significant. Westland will likely benefit more than the rest of the region and there may even be fewer travellers north of Hokitika. As HHL itself has indicated, the existing cost and benefit estimates need to be updated and technical and environmental impact assessments are required. The cost and benefit estimates also need to be extended to cover a broader range of factors (for example, environmental costs, potential displacement of visitors from other areas, flow-on benefits to the economy, broader regeneration benefits for South Westland and the impact on Milford Sound).

We consider that a full business case (using the Treasury Better Business Case guidelines) is required to clarify, once and for all, the case for this road. Given the scale of the project, the suggestion that the project be called-in, and the requirements involved in developing such a case, we suggest that relevant central government agencies (e.g., MBIE, MfE, DoC, NZTA) engage with HHL and the councils to advise on the process and to provide resources and information they have access to. This will ensure that the case will be robust. It will also reveal sooner rather than later whether access to the conservation estate will be possible.

Overall, these two proposals rank relatively low on our criteria, largely due to the current limited evidence available. The case for these roads has not been proven. Although the potential benefits of these roads could be significant, the benefits will likely be captured mainly by the two districts that the roads connect to and we consider that the direct and indirect costs are likely to be high.

Table 42. Assessment of the feasibility and business case work for the proposed major road projects

Criteria	Assessment
Validity	Low
Potential impact	High
Practicality	Low
Regionally significant	Medium
International orientation	Medium
Ability to leverage local/regional work and investment	Low-Medium
Consistency with national priorities	Low
Overall assessment	Low-Medium

We also note that there is limited work to build on for the Wangapeka proposal, although there has been considerable work undertaken that can be used for the Haast-Hollyford assessment.

Despite this low rating, we consider the work on the feasibility assessment and business cases for both projects should be progressed so that the proponents and region are not left in doubt about the merits or otherwise.



What other opportunities will impact on the transport network?

We have already noted that the development of the tourism strategy and plan, including identification of new iconic attractions, improved marketing and promotion, and development of additional cycleways, will help to shape the case for additional and accelerated investment in road network resilience and potential road upgrades. Other key opportunities of relevance are the:

- infrastructure improvements at Franz Josef
- region securing UFB, RBI and mobile black spot funding, which will increase response times to hazards and crashes in areas where there is currently no or very limited coverage
- review of DWC's investment approach and its role in economic development. This should clarify the types of infrastructure investment that DWC can support that are consistent with its objectives.

In addition to the proposals recommended in this report, there were other opportunities suggested to improve the transport network during the consultation process but these are speculative at best.

- The potential for link flights between Hokitika and Westport (picking up passengers in Hokitika to fly on to Wellington early in the morning and coming back from Wellington at night). There would likely be sufficient demand but the case for doing this will need to be considered by the airlines and will be a commercial decision.
- The development of a deep water port and expansion of coastal shipping. The case for a deep water port would require a significant increase in freight movements suitable for shipping, such as coal and other minerals, water, fuel, biomass. The short distance between ports in New Zealand and need to minimise transport costs associated with handling of freight between modes tends to make coastal shipping uneconomic, except for manufactured and retail products (which tend to move between the main centres).



What do stakeholders need to do to support the opportunities?

Industry	<ul style="list-style-type: none"> • Co-invest in local road upgrades to access visitor attractions where required. • Provide advice on the potential benefits and costs associated with the Wangapeka and Haast to Hollyford road proposals.
Communities	<ul style="list-style-type: none"> • Provide advice on the potential benefits and costs associated with the Wangapeka and Haast to Hollyford road proposals.
Maori/iwi/hapū	<ul style="list-style-type: none"> • Provide advice on the potential benefits and costs associated with the Wangapeka and Haast to Hollyford road proposals.
Local Government	<ul style="list-style-type: none"> • Work with NZTA to identify priority resilience projects that could be expanded or accelerated as part of the mid-term review of the Regional Land Transport Plan. • Continue to invest in maintaining the local road network. • Provide resources, advice and information to support the feasibility assessments and business cases for the Wangapeka and Haast to Hollyford road proposals.
Central Government	<ul style="list-style-type: none"> • Work with local government to identify priority resilience projects that could be expanded or accelerated as part of the mid-term review of the Regional Land Transport Plan. • Provide resources, advice and information to support the feasibility assessments and business cases for the Wangapeka and Haast to Hollyford road proposals. • Continue to invest in maintaining the state highway and road network. • Continue to invest in road safety improvements and information initiatives, such as the Visiting Drivers Project. • Confirm funding arrangements for the current Special Purpose Roads in Buller and Westland Districts. • Finalise arrangements for mobile blackspot funding.



ACCESS TO NATURAL RESOURCES

Overview

The West Coast has an extensive range of natural resources and amenities, which underpin key sectors such as tourism, minerals and dairy.

The West Coast has 1.9 million hectares of public conservation land, five national parks and part of the World Heritage Area, unique landscapes, wetlands of international significance, a rich marine ecosystem, and a range of mineral deposits.

There are relatively few significant water-use pressures and water and air quality is generally good.

These natural resources can also create risks and hazards which need to be managed and that can be costly to mitigate. Several hazards result from the very steep topography and climatic conditions, including coastal erosion, flooding and landslides. Many areas on the West Coast, such as Franz Josef, are susceptible to more than one of these hazards.

There are clear tensions between economic development and the management of natural resources impacting on many of the key sectors. Tensions to do with the use of natural resources in some areas will only grow as pressures on the resources increase in spite of their relative abundance. For example, the nationally significant natural landscapes and wilderness experience that are key to West Coast's tourism offering are potentially in conflict with extractive industries. Managing this tension and attempting to achieve the highest combination of social, cultural, environmental and economic benefits through the use and protection of natural resources is one of the greatest challenges facing the West Coast.

The region and central government are investing heavily in several areas to better manage natural resources, including investment in protection works and Resource Management Act (RMA) processes.

Opportunity

Opportunities for improving the management of natural resources in the region have been noted in relation to key sectors and other cross-cutting issues. These include identifying and assessing stewardship land of low conservation value, developing and enhancing tourism icons, future-proofing infrastructure at key locations, and developing a single window for dealing with permits, land access applications and consents.

Another opportunity is to take a more strategic and regional approach to decision-making on the use of natural resources through a spatial plan. The spatial plan would lay out how and where the West Coast is expected to grow over the long-term, the location and form of future development, and the transportation routes and amenities needed to facilitate such growth. There are several benefits to a spatial plan, particularly that it would provide more certainty for investment by showing what types of investments should and can be made and where. It could also be used to improve the coordination of



investment with central government on priority issues such as transport. However, it is likely to be time consuming and costly to develop.

In the absence of having statutory status, ensuring effective implementation may also be difficult. It may be better to make progress towards a spatial plan in stages by initially improving the evidence base and adopting other options for improving resource management decision-making, such as a single unitary plan and joint planning processes.

What is the quality of the region's natural resources?

The key economic development opportunities on the West Coast are underpinned by its abundant natural resources that are variously relied on for their inherent value (minerals), experiential value (outstanding natural landscapes), as inputs to agricultural production (water and soils), or for their assimilative capacity (the ability of air, land and water to assimilate pollutants). Maintaining the balance between development and the quality of the natural resources is hence critical for the region's future.

Land

The West Coast is unique for its dramatic landscapes and rugged coastlines that fall from the Southern Alps to meet the Tasman Sea. Much of its native bush cover remains in-tact and it's known for its unspoilt mountains-to-sea panoramas. Within these landscapes lie glaciers, lowland forests, lowland wetlands, forest-encircled lakes, coastal bluffs, lagoons, estuaries, beaches and unique coastal limestone formations.

As shown in Figure 130, DoC manages 1,912,000 hectares or close to 85 percent of the land area in the region.

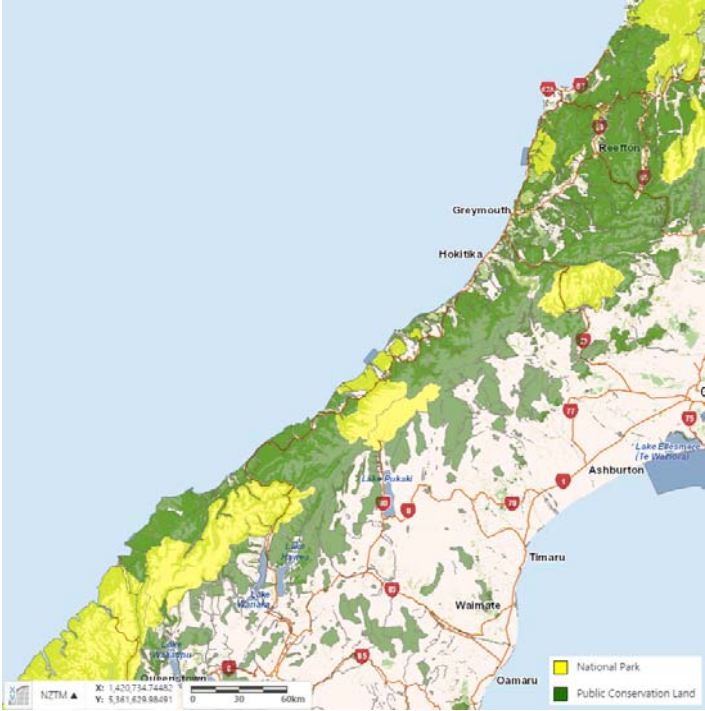
As noted in the section on *Tourism*, some of the region's most unique landscapes and landforms are:

- the Oparara Arches
- the Denniston Plateau
- Cape Foulwind
- Pancake Rocks in Punakaiki
- the Franz Josef and Fox Glacier valleys
- the Alpine Fault (one of only four sites in the world where the zone between two continental plates is visible on land)
- the Hokitika Gorge
- Lake Brunner, Lake Kaniere, Lake Matheson and Lake Mahinapua
- the Kaarst landscapes and cave systems of Paparoa and Kahurangi National Parks
- the Blue Pools of Haast Pass.



These landscapes and landforms not only attract people to visit and stay in the region but also support a unique sense of place and identity for West Coast communities.

Figure 130. Conservation estate on the West Coast



Source: DoC Maps

A number of the landscapes have been identified as being of national and international conservation importance, including those in the Te Wahipounamu South-West New Zealand World Heritage Area.

Biodiversity

The West Coast also contains outstanding examples of diverse habitats and ecosystems. As noted in the West Coast Conservation Management Strategy (Department of Conservation, 2010, p.16):

“There are few other places in New Zealand where this occurs to the same extent and few places in the world where Gondwanaland ecosystems remain intact.”



The West Coast has:

- **Habitats for native New Zealand plants and animals** – these include kiwi, kea, kaka, large carnivorous land snails, giant weta, geckos, including some of the most significant natural habitats for threatened species. Threatened or uncommon species in the region include three species of kiwi, the kaka, blue duck *whio* and Westland petrel *taiko*.
- **Wetlands of international significance** – these include the Karamea estuary, Lake Ianthe, Whataroa Coastal Wetlands, Groves and Harman Swamps, Whataroa Ecological Region Coast Wetland Complex, Tawharekiri Lakes, North Westland Ecological Region Lakes Complex.
- **A diverse marine environment** – the coastal area contains significant numbers of fish and marine wildlife, including seals, dolphins, whales, seabirds, some of which are rare (e.g., Fiordland crested penguin *tawaki*, Hector’s dolphin *aihe*).
- **Coastal estuaries** – the Okarito Lagoon is one of the most naturally intact large estuaries in New Zealand and there are several other coastal lagoons in the region.
- **A range of rivers** that provide freshwater biodiversity, including the Heaphy River, Karamea River, Mokihinui River, Buller River, Grey River, Maruia River, Ahaura River, Fox River, Hokitika River, Okarito River, Cook River, Karangarua River, Paringa River, Haast River and Cascade River. Several of these are important for recreational activities such as trout fishing and kayaking and, as noted in the section on *Fishing and aquaculture*, also provide important sites for whitebaiting.
- **Indigenous forests** – the West Coast has most of New Zealand’s unmodified indigenous forest, including kahikatea and rimu. As noted in the section on Forestry and wood processing, in recent years these have also provided a source of material for the indigenous wood processing industry.

Water resources

Land, Air, Water Aotearoa³⁵ describes the West Coast region’s water resources as follows:

“The region has an abundance of water and many very large river systems, aquifers and lakes and very little water allocated.”

Compared to other regions there are relatively few significant water use pressures on water bodies on the West Coast. However, some seasonal pressures are emerging due to agricultural intensification for irrigation such as in the upper Grey Valley (West Coast Regional Council, 2015e).

³⁵ LAWA is a national repository for information on natural resources contributed to by regional councils.



The West Coast's State of the Environment reporting suggests a mixed picture in regards to water quality. Several areas are showing signs of improvement in a number of water quality measures that may be attributed to better environmental management, while nitrogen concentrations are rising in some areas due to agricultural intensification and acid mine drainage. In a minority of catchments, water clarity is deteriorating (West Coast Regional Council, 2015e).

The quality of most lakes and coastal areas were suitable for swimming when last measured, although some river sites exceeded water quality guidelines.

Lake Brunner has been an area of focus for improving water quality, as the quality has declined since the early 1990s with nitrate levels increasing due to agricultural activity. However, farmers in the region, in collaboration with WCRC, WMP, Dairy NZ, AgResearch, NIWA and NZ Landcare Trust, have invested heavily on measures to improve water quality, including retiring land, upgrading effluent systems, fencing off streams and adding 21,000 new plants to banks to prevent sediment from entering waterways. Water quality in the Lake is currently relatively pristine.

Air quality

The region has a generally high standard of air quality because of its exposure to wind and limited heavy industry. Some urban areas are affected by particulate matter in winter due to burning coal and wood for heat, particularly Reefton as it has generally lower wind speeds and polluted air can get trapped over the town. To date in 2016, air quality in Reefton has exceeded the national environmental standard limit for particulate four times.³⁶

Minerals

The section on *Minerals and related processing* noted the vast range of minerals that are available in the region. The majority of these are gold, coal and mineral sands, as shown in Figure 131.

A 2010 mineral resources assessment undertaken by the Institute of Geological and Nuclear Sciences for Minerals West Coast provides detailed information about the significant mineral resources of the West Coast region. Key findings include that at that time there were (GNS, 2010):

- Over 800 million tonnes of in-ground coal resources³⁷ (over 75 percent of which is bituminous). Buller and Greymouth coalfields provide all of New Zealand's bituminous coal. Easily accessible hard-coking coal is becoming scarce in West Coast coalfields, which means that blending from different mines is required to meet export specifications.
- Around 2.4 million ounces of gold (on-shore and off-shore). The Reefton Goldfield contains the most significant gold deposits. There is also gold concentrated into placer deposits in several areas, including in alluvial gravels and beach deposits.

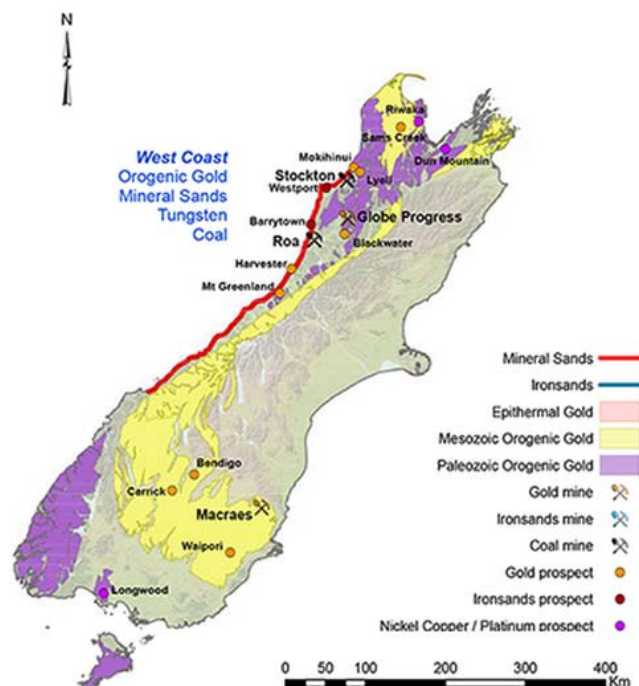
³⁶ <http://www.wcrc.govt.nz/our-region/state-of-the-environment/Pages/Air-Quality.aspx>

³⁷ The latest MBIE estimate suggests that it is around 500 million tonnes.



- Around 30 million tonnes of ilmenite (titanium ore) beach sands. Although a pilot mineral sands processing plant was established at Punakaiki in the 1980s, there has not been any other mining of the resource since then.
- Abundant quantities of aggregates, mainly gravel deposits in river and stream channels and glacial river and beach deposits. There are also a few hard rock quarries. About 40 sites have been approved for extraction.
- Large deposits of limestone, with a belt of limestone between Charleston and Punakaiki, the Cobden limestone near Greymouth, and Waitakere Limestone at Cape Foulwind. Holcim was a major user of limestone for cement production.
- Deposits of a large range of metallic and non-metallic minerals, including antimony, mica, clay, fluorite, chromium, copper, tin, tungsten, uranium, pounamu, silica, and garnet.

Figure 131. South Island mineral resources



Source: Modified from New Zealand Petroleum and Minerals.

<http://www.nzpam.govt.nz/cms/investors/our-resource-potential/minerals/minerals-resources-guide>

Note that the estimates do not mean that all of these quantities are recoverable. For example, Minerals West Coast estimates that 205 million tonnes of coal are recoverable.³⁸

Overall, the region has a high quality of land, ecosystems, water, air and mineral resources on which to continue to grow key sectors and maintain a high quality of life and well-being.

³⁸ http://www.mineralswestcoast.co.nz/westcoast_coal.aspx



What challenges does the region face from the natural environment?

The major challenges the region faces from the natural environment arise from managing the impact of environmental change and natural hazards on the economy and communities.

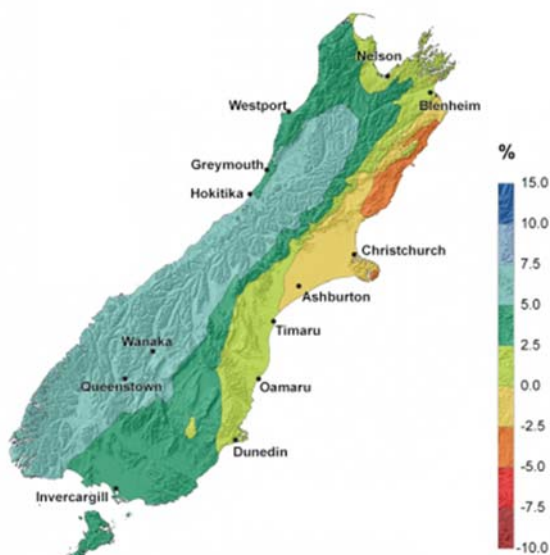
Changing weather patterns

As shown in Figure 132, the West Coast is expected to become wetter over the next several decades, particularly in winter and spring (NIWA, 2008). For example, in Hokitika, average annual rainfall is likely to increase by 5 percent by 2040 and 8 percent by 2090. Seasonal projections indicate that winter rainfall is likely to increase by 21 percent by 2090 and very heavy rainfall events are likely to become more frequent throughout the region. This suggests that flooding is likely to be more frequent in the region.

The 'middle of the range' climate change predictions for the West Coast suggest that temperatures are likely to be 2.0°C warmer by 2090, compared to 1990. The number of frosts could decrease by around 20–70 days per year. Although this sounds positive, more intense storm events as well as sea level rise, hence coastal erosion, are expected. Continued reduction in ice volume and glacier length is also expected.

These are very long-term forecasts and in the medium-term outlook for this study, climate change is unlikely to have a significant impact. However, the region should consider these long-term implications when considering the location of housing, industry and town developments.

Figure 132. Projected annual mean precipitation change between 1980–1999 and 2030–2049



Source: Adapted from NIWA (2008). Climate change scenarios for New Zealand.

<https://www.niwa.co.nz/our-science/climate/information-and-resources/clivar/scenarios>



Natural hazards

The West Coast's steep terrain, exposed coast line and low-lying coastal settlements are susceptible to a range of natural hazards, such as floods and landslides. Often more than one hazard occurs during major events.

Their effects range from short-term road closures and power outages to creating significant damage to public amenities, private property and infrastructure, longer-term disruptions to transport and communications, and in extreme cases, loss of life (floods, landslides, earthquakes, avalanches have all caused loss deaths in the region). These have significant social and economic consequences (West Coast Regional Council, 2015c).

Reducing the costs of natural hazards requires capability to respond and recover from natural hazard events as well as up-front planning that, where possible, avoids locating inappropriate land uses in high risk areas (or without adequate safeguards).

Several areas of the West Coast are vulnerable to more than one of these natural hazards. As noted in the section on *Tourism*, the plight of Franz Josef and its susceptibility to multiple hazards is a current issue that needs managing. A GNS report has recommended that the costs and benefits of progressively moving the town away from the Alpine Fault are be assessed, noting that the town is vulnerable to earthquakes, landslides and flooding from the Waiho River.³⁹ The risk of flooding is the most immediate concern as it is subject to considerable aggradation and, as discussed earlier, has already burst its banks this year. As we previously recommended, options for infrastructure improvement and a long-term plan for Franz Josef should be developed as a priority.

Coastal erosion

Coastlines on the West Coast are dynamic, changing position in response to prevailing weather conditions, the amount of sediment available in the coastal system, the frequency of extreme weather events and sea levels. Coastal erosion is generally occurring because of a lack of new sediment reaching beaches after storm or erosion events (DTEC Consulting, 2002; Allis 2016).

There are several areas on the West Coast where these natural fluctuations and erosion of the shoreline are directly impacting on local settlements. High risk areas have been identified as Hector, Ngakawau and Granity, Punakaiki village, Rapahoe, Hokitika (NIWA, 2015).

In several cases, the issue is not necessarily the fact that the coastlines are eroding but that developments have been located too close to the sea to take account of these natural effects (Allis, 2016). In addition, building coastal defences in one location can result in erosion in another area.

Two areas in the region have been subject to significant erosion this year: the Cobden foreshore, where temporary rockwork was washed away and the car park affected and had to be closed; and at Punakaiki, where tides eroded around ten metres of coastline in front of the local camp.

³⁹ Mills, L. (2016). *Scientists: Safer to Move Franz*. Article in Greystar, 26 April 2016.



Flooding

River floods are the most frequent natural hazard in the region. The majority of towns and settlements on the West Coast are built on coastal floodplains and are regularly affected by flood events. Previous research suggests that flood damage/disruption occurs on average three times per year in the region (DTEC Consulting, 2002).

River flooding is largely caused by the effects of accumulation of sediment in rivers (aggradation), intense, long duration rainfall events combined with steep topography. In addition, when these conditions are combined with high tides and low-pressure weather systems they exacerbate coastal flooding. The effects of flooding can include (DTEC Consulting, 2002):

- destruction of pasture, fences, farm buildings and equipment as well as loss of animals in rural areas
- damage to homes, businesses and streets, sewage back-up, and general closure of services for periods after flooding in urban areas⁴⁰
- pollution and contamination of ground water, rivers and town water supplies due to overflowing rubbish and septic discharge sites.

All key sectors of the economy can be affected, including dairy and related processing, tourism, ICT, health services and aged care (for example, an aged care facility was flooded in Hokitika in the 2015 floods).

Landslides

Landslides are another frequent hazard due to the steep topography in combination with heavy rainfall or earthquakes and can cause damage to property, transport routes and tourism facilities such as walking tracks. Events can range from individual rocks to large portions of the mountainside falling. The potential for landslides can be exacerbated by changes in land use (e.g., replacing forest with pasture) and developments (e.g., undercutting or overloading slopes) (DTEC Consulting, 2002).

As was discussed in the section on *Transport*, landslips have affected most of the road network on the Coast over 2009-2016. Damage to the transport network is the most common impact of landslides, although there can also be damage to farmland and houses (and loss of life as occurred in the Diana Falls slip last year and in the Murchison landslide).

Previous research has estimated that landslide events cause inconvenience or damage around two times per year (DTEC Consulting, 2002).

⁴⁰ All major towns in the region can be affected. There have been significant floods in Greymouth (e.g., 1988), Westport (e.g., 2012), Hokitika (e.g., 2015), Karamea (e.g., 1998), Franz Josef (e.g., 2016).



Earthquakes

Although infrequent, earthquakes are a significant risk to the communities and economic development of the West Coast. The region sits alongside the Alpine Fault and there are several active faults in the region. The previous major earthquakes, Murchison in 1929 and Inangahua in 1968, caused widespread destruction and loss of lives, and these occurred on local faults. It is estimated that there is a 65 percent chance of a major movement of the Alpine Fault occurring by 2050, and an 85 percent chance of it occurring by 2100 (DTEC Consulting, 2002).

Managing natural resource use and economic development

As has been noted throughout this report, in any one location, some sector activities that rely on the natural resource base may be exclusive of one another, while others may be complementary.

The tension between some activities is already evident and will only grow as pressures on the resources increase, despite their relative abundance. For example, the nationally significant natural landscapes and wilderness experience that are key to the West Coast's tourism offering are potentially in conflict with extractive industries. While the need for high water quality for freshwater fish is complementary with the tourism offering, it may potentially be at odds with agricultural intensification that could impact on freshwater habitats and water quality.

Managing this tension and attempting to achieve the highest combination of social, cultural, environmental and economic benefits through the use and protection of natural resources is one of the greatest challenges facing the West Coast (and other regions).

Key mechanisms for managing this balance are RMA processes. Representatives from several sectors considered there was room to improve the way that RMA processes are managed in the region. Although this has been particularly highlighted in the discussion on the *Minerals & related processing* sector, it was also noted in relation to tourism developments, horticulture, food and beverage and dairy and related processing sectors. Apart from the concerns about long timeframes involved in finalising consents when there are environmental objections, there were also views that resource management processes were being duplicated across councils and that in some areas there was a lack of consistency in policies and rules for the same activities across the Districts.

What investment is being undertaken to improve the management of natural resources?

Infrastructure such as flood banks, drainage networks and erosion protection works are important natural hazard risk management measures. The WCRC manages hundreds of kilometres of natural hazard protection infrastructure with a value of \$54.06 million in 2014, representing approximately 70 percent of the value of total assets held by the council (West Coast Regional Council, 2015d).

As discussed in the section on *Transport*, Central Government is also investing in a range of measures to improve the resilience of transport infrastructure to hazards, including raising the bridge across the Waiho River.



There are also several projects underway to improve resource management processes:

- Under the Regional Economic Development Plan, the councils in the region have committed to work together to ensure that within 2 years RMA plans are consistent across district boundaries as far as is practical, and to develop a 'red-carpet not red-tape' philosophy to case-manage key projects through regulatory processes. For example, the district councils have committed to a joint building consent service including standardised documentation and sharing of expertise.
- The Resource Legislation Amendment Bill 2015 includes a number of proposed changes to improve resource management processes, such as (Ministry for the Environment, 2015; Kensington Swan, 2016):⁴¹
 - providing for a national planning template to be created, to set out the structure, format and some content for all plans, which will help reduce variation in interpretation of similar rules across districts
 - introducing two new plan-making options – a streamlined planning process (in which councils can ask the Minister for the Environment for a plan-making process that suits their local circumstances) and a collaborative planning process to provide for greater upfront consultation to resolve resource management issues and reduce litigation later
 - introducing a 10 day working time limit for determining simple, fast track applications
 - setting some limits on who can be involved in resource consent applications and who can appeal decisions.
- The LGC, in association with the West Coast Mayors and Chair Forum, has commissioned a report on options to improve resource management planning, consenting and compliance monitoring services. The outcomes of the work are to be released in early 2017. Options to be considered include:
 - having integrated resource management services for the region, including a shared RMA planning, consenting and compliance team
 - having an integrated resource management plan for the region.

What other opportunities are relevant?

Several opportunities related to natural resource use and management have been discussed in other sections of this report, including:

- the development and enhancement of natural tourism icons and attractions
- future proofing infrastructure (some of which will be related to natural amenities and in the DoC estate) and identifying mechanisms for funding infrastructure improvements
- exploring the potential to charge user fees for access to some natural attractions on conservation land where demand is high and growing

⁴¹ The West Coast councils supported these proposed changes, in principle, in their submission on the Amendment Bill.



- identifying areas of land of low conservation value stewardship land
- developing a single window for dealing with permits, land access applications and consents
- the collaborative process for facilitating mining and environmental protection in the Buller Coalfield area.

The number of related proposals is not surprising, given the important of the natural resource base to a range of sectors in the region.

What other specific opportunities are there to improve the management of natural resources in the region?

Over and above those proposals, there is the opportunity to take a more strategic and regional approach to decision-making on the use of natural resources through a spatial plan.

A regional spatial plan

As discussed, typically an assessment of proposals to use resources for developments is made on a case-by-case basis against resource management plans. This case-by-case assessment significantly reduces certainty for investment, the community and the environment and can limit the ability to proactively pursue particular economic, social or environmental outcomes.

Another approach is to create a platform to compare the costs and benefits of alternative uses of the resources at a more meaningful scale. With this in mind, various agencies, most recently Local Government New Zealand (LGNZ), have put forward the case for the wider use of regional spatial planning “to enable a vision to be set for an area that deals with competing resource uses and objectives and provide certainty about the outcomes envisaged for particular areas” (LGNZ, 2016; p. 4).

The spatial plan would effectively be an overarching strategic plan that lays out how and where the West Coast region is expected to grow over the long-term, the location and form of future development, and the transport routes and amenities needed to facilitate such growth.

There are various options that could be considered to implement a spatial plan in the region ranging from preparing a full plan through a formal agreement between the councils to more simply undertaking a stocktake of existing plans and negotiating any areas of duplication or trade-offs across the councils (Boffa Miskell, 2016).

If a more formal approach is taken the first step would be to identify the information requirements and governance and decision-making arrangements that would enable spatial planning to be successful.

Information requirements

Spatial information would be required on the economic, sociocultural and environmental values of the West Coast region, with input from a range of central and local government agencies, stakeholders and the community. It would appear that reasonable information currently exists on the presence of



mineral resources, and on areas of outstanding natural character and landscapes. However, information on the biodiversity and conservation values of a significant amount of land (e.g., stewardship land) is poor. The evidence could be built-up over time, prioritising those areas and resources where the greatest opportunities or potential for conflicts exist.

Governance and decision-making arrangements

There is significant experience of spatial planning in New Zealand that can be drawn on to inform what governance and decision making arrangements may be required. Governance arrangements typically include representation from the various councils and iwi, with an independent chair, and advisory or operational groups involving industry, government agencies and community groups.

The key elements for a successful spatial plan would be that:

- there is a commitment and willingness to collaborate amongst the local government, central government and iwi stakeholders
- it is initiated with a clear mandate and agreement to resource and implement
- it is undertaken through a collaborative process
- it is multi-dimensional, considering economic, environmental, social and cultural drivers.

Our assessment of the proposal

The influence of a spatial plan is somewhat limited to the extent that it does not have legal weight in subsequent decision-making. However, although statutory status is preferable, several spatial plans, e.g., Tauranga/Western Bay of Plenty's Smart Growth Strategy, have had significant benefits without this.

Key benefits of a spatial plan include (see, for example, Boffa Miskell, 2016):

- providing more certainty and confidence for investment through a better understanding of what types of investments can or should be made and where
- improving coordination with central government on priority issues, such as transport
- efficiency savings, assuming the spatial plan results in fewer differences in plans, policies and planning processes across councils (savings not only to councils but also stakeholders)
- providing a joint approach to natural hazard management
- providing a common information base (e.g., about growth forecasts) across councils.

However, it is likely to be time consuming and costly to develop a spatial plan for the region given the additional evidence that would need to be gathered, the need to set up new/different governance arrangements, the need to go through the processes of consultation and submissions etc. Additional resources will need to be found across the councils, which are already stretched. The relationship between the spatial plan and other plans (e.g., District Plans, Long-Term Plans, Regional Land Transport Plan) would need to be worked through. Ensuring its implementation and application over time, assuming it has no statutory status, may be difficult, particularly when political leadership changes.



It may be that other options, such as a single unitary plan or common planning templates and joint planning processes across the councils could achieve several of the benefits at a lower cost, although these would not go as far in identifying future priorities for growth, investment and conservation. Indeed, the development of a spatial plan could be done in stages if the region decides initially to implement other options for improving resource management processes.

This proposal rates moderately on our criteria as although such a plan will certainly be regionally significant and have a range of benefits, the real impact of a spatial plan is difficult to determine. As noted it could be time and resource heavy. However, there are lessons and expertise to draw on from other areas of New Zealand which could facilitate the process.

Table 43. Assessment of the regional spatial plan proposal

Criteria	Assessment
Validity	High
Potential impact	Medium
Practicality	Low
Regionally significant	High
International orientation	Low
Ability to leverage local/regional work and investment	Medium
Consistency with national priorities	Medium
Overall assessment	Medium

The outcomes of the LGC work should be considered in assessing an approach to spatial planning.

What would stakeholders need to do to support this opportunity?

Industry	<ul style="list-style-type: none"> • Provide advice as required during the consultation process for a Spatial Plan. • Make submissions on the draft Spatial Plan.
Communities	<ul style="list-style-type: none"> • Provide advice as required during the consultation process for a Spatial Plan. • Make submissions on the draft Spatial Plan.
Māori/iwi/hapū	<ul style="list-style-type: none"> • Participate in the governance group for the development of a Spatial Plan. • Provide advice during the consultation process. • Make submissions on the draft Spatial Plan.
Local Government	<ul style="list-style-type: none"> • Establish and resource the process for developing a Spatial Plan. • Invest in improving the spatial evidence base for the region. • Establish and participate in the governance group for the development of the Spatial Plan.
Central Government	<ul style="list-style-type: none"> • Provide advice and information to improve the spatial evidence base. • Provide advice on the process. • Participate in advisory groups as required.



TELECOMMUNICATIONS

Overview

There is limited availability of ultra-fast broadband (UFB) in the region. UFB is available in Greymouth, most schools and hospitals/health centres. Rural Broadband Initiative (RBI) phase 1, which aims to connect 90 percent of homes and businesses outside UFB phase 1 areas, was 87 percent complete on the West Coast as at June 2016.

Census 2013 showed that a smaller proportion of households in the region had internet access than most other regions. Almost 70 percent of households in the region had internet access in 2013, while nationally close to 77 percent of households had access.

There is limited mobile coverage on the West Coast, particularly in South Westland, where there is a 200-kilometre black spot between Fox Glacier and Makarora. Household access to mobile phones is more limited on the West Coast than in other regions, with 73 percent of households reporting in Census 2013 that they had access to a mobile phone compared to close to 84 percent across New Zealand.

Surveys in the region have found that the lack of an available service or a very slow service are the main reasons why people are not connected to broadband. All sectors consulted with as part of this study expressed concerns about limited broadband, Wi-Fi and telecommunications access.

The councils in the region prepared the West Coast Digital Enablement Plan as part of an application for UFB/RBI/Mobile black spot funding in 2015. The objectives of the plan are: 100 mega-bits per second (Mbps) in all areas of 300 people or more; 100 Mbps in areas within reasonable reach of the main trunk services; the installation of 4G, wireless or VDSL service providing a minimum 20 Mbps where the cost of fibre is prohibitive due to distance or the number of users; and provision of mobile phone coverage across the State Highway network, including special purpose roads. DWC supported the application with \$1 million of funding.

Opportunity

The key opportunity is for the West Coast to secure funding support for the extension of UFB/RBI and mobile network coverage and for the roll-out of the extension and digital enablement initiatives to be undertaken as soon as feasible. This will need to occur once the commercial negotiations between Crown Fibre Holdings (CFH) and potential suppliers has been completed and policy on RBI and mobile black spot funding has been finalised (scheduled for the end of 2016).

What does the telecommunications network and access in the region look like?

Like the road network, the telecommunications network in the region is sparse.



ADSL is the slowest broadband connection available on the copper network, delivering up to 10 Mbps of download speed but only 1 Mbps of upload speed, and this is achieved only up to a few kilometres from local cabinets. ADSL has the greatest coverage across the West Coast, including:

- the main centres in Buller of Karamea, Westport, Punakaiki, Reefton and Inangahua and along key road networks (Figure 133)
- most of the populated areas of Grey (Figure 134)
- Hokitika and smaller towns in Westland up to Fox but then no coverage further south, including in Haast. There is also limited coverage along the state highway between the towns in Westland (Figure 135).

Figure 133. ADSL coverage in Buller



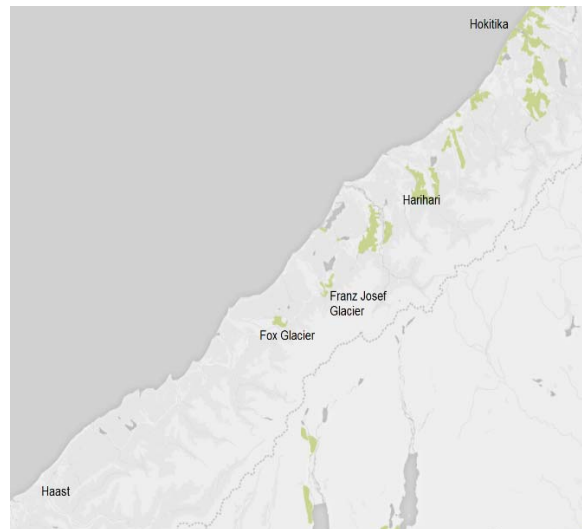
Source: National Broadband Map

Figure 134. ADSL coverage in Grey



Source: National Broadband Map

Figure 135. ADSL coverage in Westland



Source: National Broadband Map



VDSL is the fastest broadband service on the copper network, delivering around 20 Mbps of download speed although that speed is only achieved in locations up to 800 metres from cabinets. Upload speed is around 10 Mbps.

VDSL on the West Coast is located mainly around town centres, including:

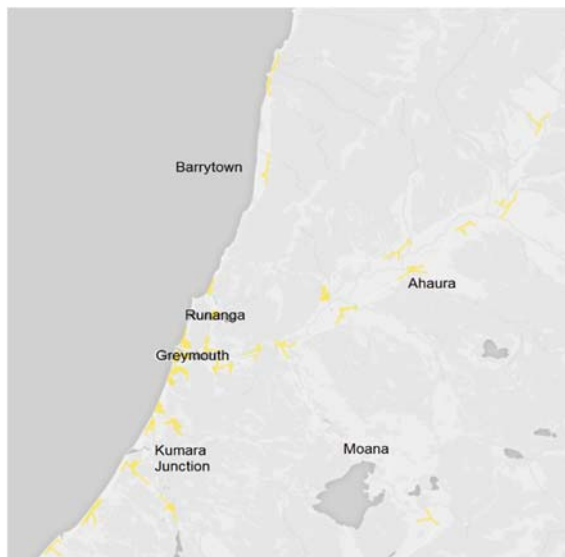
- the main centres in Buller of Karamea, Westport, Punakaiki, Reefton and Inangahua but more limited access than ADSL between the centres (Figure 136)
- most of the populated areas of Grey (Figure 137)
- the main towns in Westland, with no coverage south of Fox (Figure 138).

Figure 136. VDSL coverage in Buller



Source: National Broadband Map

Figure 137. VDSL coverage in Grey



Source: National Broadband Map

Figure 138. VDSL coverage in Westland



Source: National Broadband Map



Fibre provides for speeds of 100 Mbps or more allowing the use of multiple devices and faster upload as well as download.

There is limited availability of UFB in the region. As can be seen from Figure 139 to Figure 141, UFB is largely restricted to specific areas, which are typically schools and health centres.

Almost all state schools on the West Coast have access to fibre as does the Reefton Hospital, West Coast DHB and Hokitika Health Centre (one school has access to remote wireless broadband at Haast).

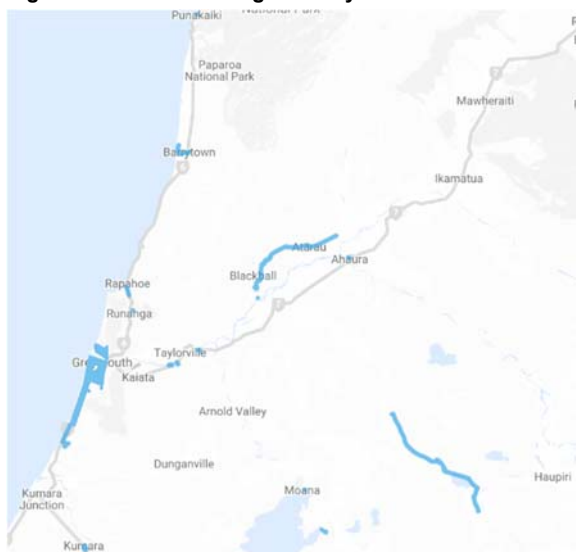
The exception is Greymouth. Chorus completed its UFB build in Greymouth at the end of 2015, providing almost 4,500 households and businesses with access to fibre.

Figure 139. Fibre coverage in Buller



Source: Chorus RBI map

Figure 140. Fibre coverage in Grey



Source: Chorus RBI map and National Broadband Map

Figure 141. Fibre coverage in Westland



Source: Chorus RBI map



The West Coast has wireless broadband coverage in most coastal areas and in the main towns as shown in Figure 142, although it is very limited in South Westland. It provides for around 5 Mbps of upload and download speed.

3G mobile coverage reportedly extends down the coast of the region from Karamea to Franz Josef and Fox (Figure 143). However, much of this is fair to limited coverage, with areas of good coverage restricted to the main towns of Karamea, Westport, Greymouth, Reefton, Moana, Hokitika, Hari Hari, Franz Josef and Fox. 4G is confined to the main settlements.

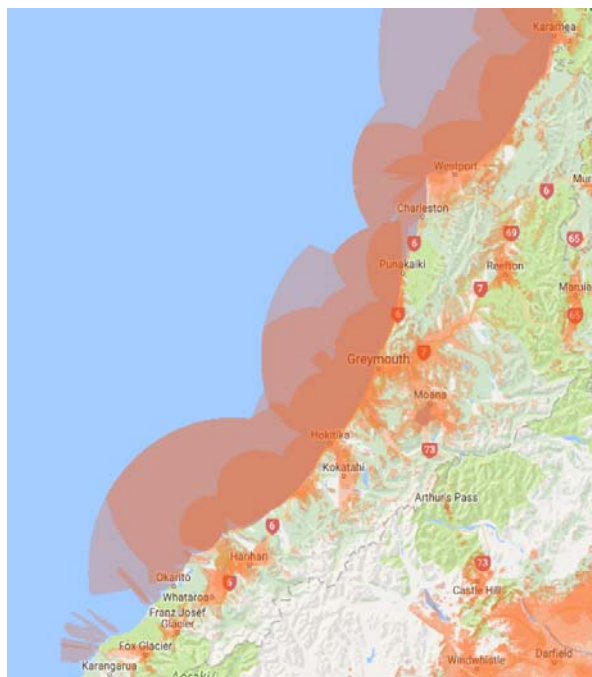
2G coverage is more extensive, along most of the highways, but again ends around Fox (Figure 144).

Figure 142. Wireless coverage on the West Coast



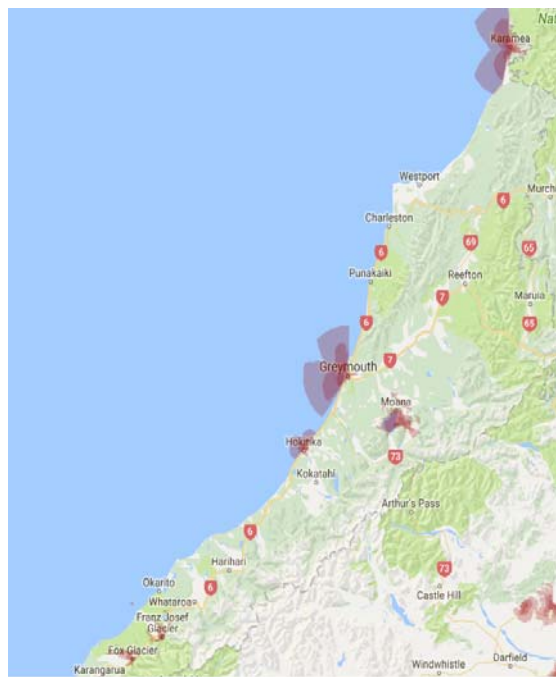
Source: National Broadband Map

Figure 143. 3G coverage on the West Coast



Source: www.vodafone.co.nz/network/coverage

Figure 144. 4G coverage on the West Coast



Source: www.vodafone.co.nz/network/coverage/



Overall, telecommunications coverage is variable. It is reasonable around the main centres on the Coast but there are also some major gaps in coverage in parts of the region, particularly in south Westland, where there is a 200 kilometre black spot between Fox Glacier and Makarora. Lower speed broadband is quite widely available but UFB is less accessible.

There is no current official information on business use of the internet on the West Coast. However, in a survey on digital technology in 2015 (Buller District Council, 2015c), 40 percent of business respondents⁴² indicated that internet service was provided via broadband through the phone line, 33 percent through ADSL, 9 percent via VDSL and 1.5 percent through fibre. As such, most of the businesses are using relatively slow broadband services.

Not surprisingly, Census 2013 showed that a relatively small proportion of households in the region had internet access. Almost 70 percent of households in the region had internet access in 2013, while nationally close to 77 percent of households had access. A slightly smaller proportion of households in Buller reported having access to the internet – 68 percent – than in Grey and Westland (Table 44).

Positively, there was a large increase in the proportion of households that had internet access between the 2006 and 2013 censuses – by almost 20 percent on the West Coast compared to a 16 percent improvement across New Zealand.

Table 44. Percentage of households who have access to the internet, 2006 and 2013

Year	West Coast	New Zealand	Buller	Grey	Westland
2013	69.6%	76.8%	67.9%	70.4%	70.5%
2006	49.8%	60.5%	46.8%	50.7%	52.0%

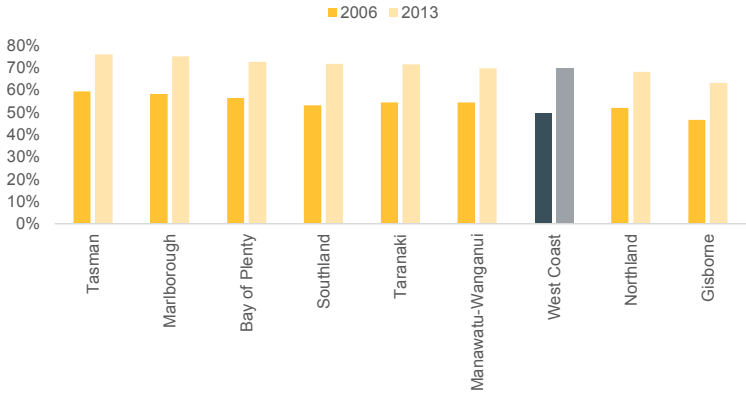
Source: Statistics New Zealand, Census

The West Coast’s household internet access rate is relatively low compared to other smaller, distant regions. Only Northland (68 percent) and Gisborne (63 percent) had a smaller proportion of households with internet access (Figure 145).

⁴² 132 respondents



Figure 145. Percentage of households who have access to the internet, selected regions, 2006 and 2013



Source: Statistics New Zealand, Census

Similarly, household access to mobile phones is more limited on the West Coast than in other regions, with 73 percent of households reporting access to a mobile phone compared to close to 84 percent across New Zealand (Table 45).

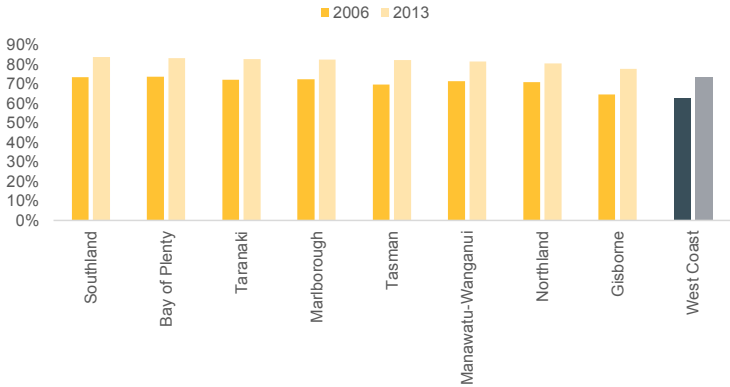
Table 45. Percentage of households who have access to a mobile phone, 2006 and 2013

Year	West Coast	New Zealand	Buller	Grey	Westland
2013	73.2%	83.7%	71.1%	76.6%	70.8%
2006	62.6%	74.2%	60.3%	66.0%	60.4%

Source: Statistics New Zealand, Census

As shown in Figure 146, this is by far the lowest proportion in New Zealand, behind Gisborne (78 percent) and Northland (80 percent).

Figure 146. Percentage of households who have access to a mobile phone, selected regions, 2006 and 2013



Source: Statistics New Zealand, Census



What are the major challenges impacting on the region's telecommunications access and use?

Key challenges impacting on telecommunications access and use in the region are:

- **Limited demand** – The small population base in the region, and pockets of very small communities spread throughout the region, means there is very limited demand in any one area and hence a limited ability to recover the investment in broadband from the local customer base. These investments will almost certainly not be made in the absence of additional public investment.
- **Limited service and perceived cost** – councils in the region surveyed the public and businesses and consulted with community groups in 2015 about barriers to broadband take-up. Almost 50 percent of businesses⁴³ were dissatisfied with internet services (Buller District Council et al, 2015c). The main findings were that:
 - 68 percent of those not connected at home were not connected because of lack of availability⁴⁴
 - 10 percent of those not connected cited cost as the main issue
 - 16 percent of those not connected considered that the existing service was too slow; 58 percent of those connected considered the service was too slow. Only 13 percent said the internet speed at work was very good. 25 percent said it limited activities or found it impossibly slow and meant they were unable to perform tasks.
 - 34 percent of business respondents⁴⁵ were dissatisfied and 14 percent were very dissatisfied with their current internet connection (44 percent were satisfied or very satisfied).
- **Lack of understanding of available services** – The consultation undertaken in 2015 also found that people did not understand the difference between the speeds and quality of services across ADSL, VDSL and UFB and what would be suitable for their needs (Buller District Council et al, 2015b). There was also a lack of understanding of what was needed to get connected including equipment, costs and security management.
- **Lack of capability** to make the best use of broadband – The West Coast Councils' Digital Enablement Plan (discussed below) notes that a growing number of the community have limited digital skills and limited opportunity to benefit from digital technology, including a lack of understanding about which digital services will make an impact on, or improve, business performance. The 2015 survey found that the greatest use of internet was for relatively simple tasks: ordering products (97 percent), researching information (96 percent), social media (96 percent) and watching movies (50 percent) (Buller District Council et al, 2015c).

⁴³ 131 respondents

⁴⁴ 436 respondents

⁴⁵ 131 respondents



What are the impacts of limited connectivity?

Limited connectivity presents a real safety risk. As discussed in the section on *Transport*, the West Coast has the highest number of serious and fatal road crashes per capita and the greatest number of crashes involving overseas license holders. A lack of mobile coverage on some areas of the State Highway network, particularly south of Fox and on several local roads, results in increased response times to accidents and potentially less effective emergency care.

All sectors consulted with as part of this study raised concerns about limited broadband and telecommunications access. For example:

- a wood processing firm noted that it could not provide online training for staff due to a lack of connectivity
- organisations in the health sector confirmed the delays that can result in responding to emergencies in some areas when there is limited coverage
- representatives from the dairy sector indicated that limited access can be a barrier to the use of monitoring and benchmarking technology and also that it can be a risk to getting help to farms in the event of accidents
- representatives from the tourism sector said that visitors expected broadband and mobile access and that limited connectivity can be a factor impacting on their decision to stay in some locations. A poor impression can be taken back to friends, family and colleagues overseas
- stakeholders noted that limited broadband coverage may discourage ICT firms from being attracted to the region.

More generally, limited connectivity constrains the extent of e-commerce that is possible, including online sales, materials tracking, marketing and quality control; online education opportunities; tele-medicine and tele-health. 96 percent of business respondents⁴⁶ to the 2015 survey on the West Coast Digital Enablement Plan strongly agreed or agreed that fast internet is critical for their business to succeed (Buller District Council et al, 2015c).

What investment is being undertaken to improve telecommunications access and use?

Broadband and mobile extension

At a national level, the Government established the UFB initiative in 2010 to bring faster internet to 75 percent of New Zealanders by 2019, and to bring UFB to all schools, hospitals and 90 percent of businesses by the end of 2015. The Government committed \$1.35 billion to the initiative, with further investment by UFB partners.

⁴⁶ 134 respondents



As noted, schools and health care centres have been connected on the West Coast and fibre has also been established in the Greymouth urban area.

The Government also established the RBI to address broadband needs of rural New Zealand. \$300 million was invested by the Government, with further investment from RBI partners. Under this programme 86 percent of rural New Zealand households and businesses will be able to access broadband peak speeds of at least 5Mbps by June 2017. High priority rural users (schools, libraries and hospitals) have access to a fibre service that can deliver 100Mbps. In addition, 49 remote rural schools can access 10Mbps through wireless connections.

When last reported in June 2016, RBI was 87 percent complete on the West Coast (Ministry of Business, Innovation and Employment, 2016a). New cell towers were established in Lake Brunner, Kumara, Ross, Blackball, Barrytown, Camerons, Dobson, Gladstone, Hector, Kaniere, Karamea, and 36 cabinets were upgraded (Ministry of Business, Innovation and Employment, 2016b).

The UFB programme was extended last year. UFB2 has the goal of increasing the population coverage to at least 80 percent by 2022 and up to an additional \$210 million is being invested. A list of additional towns to receive fibre are to be determined following a competitive bid process.

RBI2 is a \$100 million contestable fund to provide broadband coverage into more rural and remote areas. RBI2 has the goal of expanding fast broadband outside of UFB1 and UFB2 areas to achieve the greatest population coverage able to access at least 5 Mbps. The fund is being allocated through an open tender process.

The Government has also established the Mobile Black Spot Fund, a \$50 million contestable fund. The aim of the Mobile Black Spot Fund is to provide mobile emergency calling, voice and data coverage by subsidising the construction of infrastructure to cover selected segments of State Highways, particularly where there are benefits from providing calling access to emergency services, and tourist sites where access would improve the visitor experience.

MBIE issued a registration of interest last year for local authorities to be part of the UFB2, RBI2 and the Mobile Black Spot Fund by indicating how they would support the deployment and to produce a "Digital Enablement Plan" to outline how they would increase digital engagement in their communities to make best use of the extended digital infrastructure.

The Councils on the West Coast provided a joint response and Plan. The objectives of this response and Plan are:

- 100 Mbps (fibre to door) in all areas of 300 people or more
- 100 Mbps in other areas within reasonable reach of the main trunk services
- Where the cost of fibre is prohibitive due to distance and number of recipients, then installation of 4G, wireless or VDSL service providing a minimum of 20 Mbps
- Provision of mobile phone coverage across the State Highway network throughout the West Coast including Special Purpose roads.

DWC agreed to provide up to \$1 million to assist in the extension of services.

The plan proposes a range of initiatives to encourage digital uptake including:

- promoting broadband availability through a variety of media



- local community and business forums on how to use broadband
- free hotspots
- a digital expo, including workshops on using digital technology.

As noted earlier, the Government has also introduced a broader Digital Economy Work Programme, which includes initiatives designed to improve the level of digital capability in businesses and communities, such as digital enablement workshops, the digital journey diagnostic tool and NZTE's digital enablement services.

Relevant current Central Government initiatives in this area

- UFB and RBI investment.
- Mobile Black Spot Fund.
- Māori Digital Technology Development Fund
- Land Access for Telecommunications consultation.
- Digital Journey Tool.
- Digital Business Academy offered through NZTE.
- NZTE Better by Digital Programme.
- Computers in Homes funding support.

Existing local initiatives

Several initiatives have been established to encourage broadband uptake and use, which will support further roll-out of digital technology. In addition to EPIC Westport and Tech Space, noted earlier in the discussion about the *Creative and ICT* sector, there is:

- a number of school programmes, such as Toki Pounamu – a cluster of ten schools in Grey who have joined an outreach programme following the exemplar of Manaiakalani in Auckland, which is focused on ensuring all students have their own digital device and that teachers are trained in digital technology
- free access to PCs and internet and computing classes through libraries
- Computers in Homes, which provides training, technical support, refurbished computers and internet to families
- digital literacy programmes, including those offered through WestREAP and BullerREAP
- investment in telemedicine, including high definition video links set up in eight towns, allowing for remote consultations with specialists (Varnosafaderani, 2013).

It is also possible for schools in the region to share their fibre connections with their communities by providing wireless broadband services, i.e., for the schools to become a digital hub. There can be technical and capacity limitations for some schools to do this.



What are the specific opportunities to improve the telecommunications network and access in the region?

The key opportunity is for the West Coast to secure funding for extension of UFB/RBI and mobile network coverage and for the roll-out of the extension to be undertaken as soon as feasible. There has already been considerable time between registrations of interest and digital enablement plans being submitted and decisions being made. We appreciate that the process for the extension of services is contestable. However, if the West Coast is not identified for extension, then the potential of key sectors in the region will be constrained, particularly tourism, ICT and health. There are also very few areas in New Zealand that are key tourism routes and have limited coverage that exists in South Westland.

If the West Coast is selected, it will also be important for clarity to be provided about the timeframe for implementation. This provides certainty for investment decisions and for the implementation of digital capability initiatives. Assuming that both the commercial negotiations between CFH and potential suppliers for UFB2 are finalised and that policy decisions on RBI and mobile black spot funding occur before the end of 2016, implementation could begin from 2017 (although this may not be the case). We assume that the implementation timetable will be determined in consultation with West Coast councils and that the additional funding provided by DWC will be taken into account when determining implementation timeframes and coverage.

To make the most of the roll-out, the region will also need to implement digital enablement initiatives. Our view is that the current Digital Enablement Plan, while a good start, is not consistent in its approach across districts (e.g., several more initiatives are planned for Buller and Grey than Westland) and doesn't cover all the necessary bases (e.g., there are relatively few initiatives currently planned to develop digital capability in businesses). We consider it would be preferable to take the best elements of that plan and combine them with the elements suggested as part of the proposed digital economy action plan. This includes the proposed extension of EPIC's services and expansion of programmes to grow digital competence in businesses.

Our assessment of the proposal

There is a clearly identified need for improved broadband and mobile coverage on the West Coast. The total cost involved in implementation is, at this stage, unknown although funding may be available from the central government funding allocations and from the DWC contribution.

The benefits from the extension of broadband and mobile coverage, coupled with initiatives to increase use by the community and businesses, are significant, enabling opportunities for improved productivity, innovation and connections. Previous studies have found that:

- businesses with broadband are around 10 percent more productive than firms with no broadband and there are bigger impacts for rural than urban firms (Grimes, Ren and Stevens, 2009)
- businesses with substantial online sales are up to 25 percent more productive than the average firm in that industry (Glass, Davies, Hefter and Blick, 2014)



- firms that use a fibre connection are up to 12 percent more productive than firms that do not have fibre (Glass et al, 2014).

There are a range of potential benefits for key sectors on the West Coast.

- Tourism businesses will benefit not only through improved marketing but also online booking systems (which reduce costs) and customer feedback systems. Tourism operators making more extensive use of internet services are 12 percent more productive than the average tourism firms (Glass et al, 2014).
- Dairy farmers will be better able to monitor the performance of their farms in areas such as herd productivity, use of fertiliser or use of irrigation, benchmark against others, and share information with suppliers and customers.
- Health services organisations, particularly the DHB, can offer more telemedicine and tele-health options and improve the delivery of health care. Emergency services will be able to improve their response time to accidents and emergencies in remote locations, potentially resulting in reductions in the costs of accidents and loss of life.
- Educational institutions can offer online courses at all levels of schooling and for adult education, particularly to remote areas, and improve the level of interaction amongst student, parents and teachers through online forums.

A recent study also estimated that employees in firms in New Zealand with a fibre connection have value added levels 29 percent higher than employees in firms without a fibre connection (Murray, Davies, Blick and Ryan, 2016). The study estimates that if an additional 10 percent of employees gained access to UFB across New Zealand, then GDP would increase by 1.62 percent over the year (Murray et al, 2016). Assuming the results apply equally across regions (although regional results are likely to vary depending on sector make-up), this would suggest that regional GDP could increase by around \$30 million if UFB was available to 10 percent more employees on the West Coast region.

However, as with UFB 1 and RBI 1, implementation is likely to take some time (several years).

Table 19 summarises our assessment of the proposal. Overall, the proposal rates highly on our criteria. The issue is regionally significant, impacting on all districts, and is well aligned with local and national priorities.

Broadband and mobile extension will have a positive impact on a range of communities and a range of key sectors. It also supports internationalisation by providing for direct access to customers and suppliers offshore.

Table 46. Assessment of the accelerated roll-out of digital technology proposal

Criteria	Assessment
Validity	High
Potential impact	High
Practicality	Medium
Regionally significant	High
International orientation	High
Ability to leverage local/regional work and investment	High
Consistency with national priorities	High
Overall assessment	High



What other opportunities are relevant?

Clearly the proposal for the digital economy action plan fits hand-in-glove with this proposal and will encourage faster take-up and broader benefits to the economy than the extension of broadband and mobile coverage alone.

Other proposals of relevance include:

- the tourism strategy and action plan – efforts to draw visitors to a wider range of attractions and further north will be more successful if visitors are better able to access information about attractions and confirm accommodation options online and if they can travel with confidence that they will be connected at all stages of the journey
- the proposed expansion of experiential leadership programmes (see the section on the *Education* sector) could include online training components
- measures to improve road resilience and safety will be supported by an improved ability to quickly communicate road closures and crashes. We note that if the proposals for the Wangapeka and Haast to Hollyford road links do go ahead then those journeys will have limited mobile and broadband connectivity, which may need to be resolved.

What do stakeholders need to do to support the opportunities?

Industry	<ul style="list-style-type: none"> • Invest in up-skilling and digital technology to increase productivity. • Communicate the benefits of the use of digital technology to other businesses.
Communities	<ul style="list-style-type: none"> • Participate in and support programmes to increase digital literacy such as Computers in Homes. • Support young people/rangātahi to develop digital skills and capabilities.
Māori/iwi/hapū	<ul style="list-style-type: none"> • Increase whanau, tamariki, and rangātahi digital education and literacy.
Local Government	<ul style="list-style-type: none"> • Implement digital enablement initiatives, in partnership with industry, iwi and central government. • Be exemplars through the adoption of e-government services (e.g., adoption of online documentation and payments)
Central Government	<ul style="list-style-type: none"> • Build support for businesses in the region to develop digital competency and encourage technology adoption, for example through NZTE’s digital programmes. • Finalise the implementation of UFB2, RBI2 and mobile blackspot funding.



ENERGY

Overview

The West Coast electricity load is mostly supplied from the National Grid through the longest transmission route in New Zealand, via Canterbury, Kikiwa and Inangahua. Local generation is provided by a range of hydroelectric power stations.

There are two electricity distribution companies in the region – Buller Electricity and Westpower. Buller Electricity supplies Karamea in the north to Meybill Bay near Punakaiki in the south. Westpower services from Lyell in the north to Pāringa in the south.

Electricity demand on the West Coast increased over the 2000s on the back of growth in dairy and minerals and key customers such as Westland Dairy, Pike River mine, Solid Energy and Holcim. As a result, Transpower, Westpower and Buller Electricity commenced work on projects to increase supply capacity on the Coast. Following the decline in the minerals sector, demand for electricity on the West Coast has fallen significantly and there is now plenty of capacity, particularly in Buller.

There are efficiency and security of supply issues. On average, it is estimated around 8.5 percent to 13 percent of electricity is lost transmitting electricity from the national grid to the West Coast's distribution companies' networks. The transmission distance also has an impact on the cost of power and presents a risk to the security of supply if transmission problems occur along the route. Major disruptions can also result from significant weather events in the region.

Two key energy generation projects that are planned in the region are the Waitaha hydro scheme and the Ngakawau Restoration project. Both will involve significant spending and create jobs in the region. Both projects will proceed if they are commercial and they do not require any support through this study or action plan process. However, it may be useful for DWC or a new economic development organisation to work with the companies involved in the projects to determine how the broader benefits during construction and operation can best be captured by the region.

Opportunity

There is a proposal to establish a waste-to-energy plant in Buller that would generate 60 megawatts (MW) of power annually. The facility would take a combination of local feedstocks (e.g., solid municipal waste and waste coal) and solid waste from the South Island.

A new company, Waste Energy (WC) Ltd, has been formed to manage the project and an advisory board has been formed involving BDC and Buller Electricity. Potential investors and a site have been identified.

The rationale for establishing the facility in Buller is to have ready access to waste coal, which will help to ensure minimum energy levels are generated and will also keep transport costs down.

A feasibility assessment and preliminary business case is underway. Construction of the facility will provide an estimated 1,000 jobs over 12–18 months, and operating the facility will initially require around 65 jobs. Although the potential impacts are significant, there are still key questions about its



validity and practicality to be answered. The assessment and case should be finalised so that the viability of the project can be determined, including key risks and how they might be managed, the full range of costs and benefits, as well as whether there is any role for local or central government in facilitating the project.

What does the electricity network in the region look like?

As shown in Figure 147, the West Coast region is connected to the National Grid via a 220/110 kV interconnection at Kikiwa and two 66 kV circuits from Coleridge. The West Coast load is mostly supplied from the northern infeed, through the longest transmission route in New Zealand via Canterbury, Kikiwa and Inangahua.

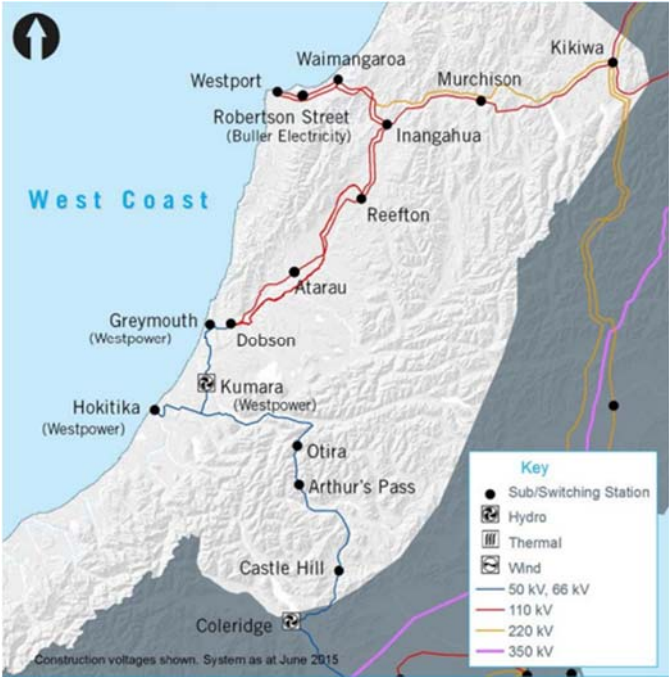
There are two electricity distribution companies in the region – Buller Electricity and Westpower:

- Buller Electricity supplies around 4,600 consumers over 150 kilometres from Karamea in the North to Meybille Bay near Punakaiki in the South.
- Westpower services about 13,400 consumers over 2,250 kilometres of power lines from Lyell in the North to Paringa in the South.

Both companies also operate businesses that perform maintenance and electrical contracting services to local communities.

Current electricity supply capacity into the West Coast via the transmission grid is 60MW.

Figure 147. Transmission into the West Coast



Source: Transpower (2015). Transmission Planning Report.



Local generation is provided by a range of hydroelectric power stations. There is one embedded generator onto the Buller network – the Lake Rochfort 4MW hydro scheme near Westport (owned by Kawatiri Energy). Embedded generation onto the Westpower network includes:

- Arnold Power Station (Trustpower) – a 3MW scheme on the Arnold River near Lake Brunner
- Dilmans/Duffers/Kumara Power Stations (Trustpower) - a 10MW combined scheme at Kawhaka creek near Kumara
- Inchbonnie Power Station (Inchbonnie Hydro) – a 1.7MW scheme situated between Greymouth and Hokitika (commissioned this year)
- Kaniere Forks/McKays Creek (Trustpower) – a 1.2 MW combined scheme on the Kaniere River near Hokitika.
- Amethyst (Westpower) – a 7.7MW scheme on the Amethyst River near Hari Hari
- Wahapo (Trustpower) – a 3.5MW scheme at Lake Wahapo near Hokitika

The local generation capacity is 30 MW, for total capacity on the West Coast of 90MW.

What is the demand for electricity?

Electricity demand in the region increased from the mid-2000s on the back of growth in dairy and minerals and key customers such as Westland Dairy, Pike River mine, Solid Energy, OceanaGold and Holcim:

- maximum demand in the Buller network increased from under 8MW in 2007 to 11 MW by 2011
- maximum demand in the Westpower network increased from around 40MW in 2007 to close to 55MW in 2011.

Due to this growth and expected continued growth at the time, Transpower, Westpower and Buller Electricity commenced work on projects to increase supply capacity on the Coast. For example, in 2011 Transpower completed significant upgrades of transmission services to the Coast, effectively doubling supply capacity. Over 2010-2013 Westpower completed the Amethyst hydro scheme, not only for commercial reasons, but to increase the security of supply and to reduce losses in transporting electricity to the region.

Following the decline in the minerals sector, and the closure or mothballing of several major customers that were mines and facilities (e.g., Pike River, Spring Creek, Reefton, Roa), demand for electricity in the region has fallen. Maximum electricity demand in 2015 was estimated at close to 48MW in Westpower's network and around 10MW in Buller Electricity's network.

Transpower's forecasts from 2015 estimate that demand is forecast to grow on average by 1.3 percent per annum over 2015 to 2030. Buller Electricity estimates that maximum demand will remain under 11MW for the six years to 2021. Westpower estimates that maximum demand will grow relatively slowly from around 48MW in 2016 to 50MW in 2021.



What are the major challenges that may impact on the electricity network?

A combination of the small population base on the West Coast, the transmission distance, and the relatively small number of major energy customers underpin several challenges impacting on the network:

- **Transmission loss** – on average it is estimated that around 8.5 percent to 13 percent of electricity is lost transmitting electricity from the national grid to the region's distribution companies' networks. This represents a cost to the region in terms of energy loss and financial costs.
- **Retail prices are very high** due to the small market over which transmission and distribution costs can be spread. Retail prices in Westport are the third highest in New Zealand and prices in Greymouth are the fifth highest in New Zealand.
- **Risk of disruption** – the reliance of the region on the main interconnection link presents a risk to the security of supply if transmission problems occur along the route. The distribution networks in the region are also vulnerable to major weather events. For example, a storm in April 2014 knocked out power to 4,300 Buller Electricity customers.
- **Declining market** – as noted above, the contraction of the minerals sector has had a major impact on electricity demand. Buller Electricity has lost more than 50 percent of demand from the closure of Holcim and other mineral operations. This is cutting into revenue and may have flow-on impacts on employment. On the positive side, it is encouraging Buller Electricity to identify efficiencies and options for making areas of Buller energy self-sufficient.
- Similar to the consenting issues discussed in the section on the *Minerals and related processing sector*, companies have faced **lengthy delays and high costs in getting new generation projects established** due to concerns about the environmental impacts. For example, during the 2000s two hydroelectric schemes halted due to lengthy consent processes:
 - A proposed hydro scheme on the Arnold River near Greymouth was shelved after 11 years of planning. Trustpower first applied for consents in 2006, which were granted in 2008 and then subject to two years of appeals. They received consent from the Environment Court at the end of 2010. By that time the overall costs had increased significantly and demand for electricity in the region was starting to decline. The scheme is on-hold.
 - A proposed hydro scheme on the Mokihinui River was shelved because of high costs and risks to the project getting resource consents.
- There is also the **potential that capacity charges will not reflect the current economic situation in the West Coast** through the current Transmission Pricing Review.⁴⁷ Submissions by both Buller Electricity and Westpower on the review expressed concerns about the proposed

⁴⁷ Positively, changes in the Area of Benefit charge that were originally being considered (based on a retrospective approach to charging to cover the cost of earlier network investment decisions) have been addressed through a new threshold of \$50 million for prior investments.



capacity charge. The current proposal for the capacity charge is based on the average maximum demand over the previous 10 years. Hence the charge will not initially reflect the reduction in capacity that has been brought about by the decline in the minerals sector and the departure of major customers such as Spring Creek, Pike River, OceanaGold and Holcim. This means that consumers in Buller's and Westpower's networks will effectively be paying more for capacity charges due to operations that have now closed or been mothballed. Final decisions on the transmission pricing methodology are still to be made so the approach to capacity charging may alter.

What investment is being undertaken to improve energy supply?

The most significant energy generation projects currently planned in the region are:

a) Waitaha hydro scheme

This is a proposal by Westpower to build, own and operate a 16-20MW hydro scheme in the Upper Waitaha catchment. Westpower lodged its application for concessions for the scheme with DoC in 2014. The application has recently been approved in principle, subject to submissions and a final decision.

The project is likely to have a moderate to large economic impact by increasing employment and expenditure during construction and as a result of its operation. For example, Westpower has estimated that around 80 percent of the \$80-\$100 million construction costs will be spent on the West Coast and that the project will generate 20 FTE jobs over the construction period. It should also reduce transmission losses and improve the security of supply in the region. We do note that it will be of greater significance to Westland and Grey than Buller.

There will be environmental and recreational costs related to the impact of the scheme on the river catchment area that will need to be considered. For example, there will be impacts on the landscape, flora and fauna, and on kayaking on the river. These effects are being assessed through the review of the concession application.

The proposal is a commercial one and Westpower has not sought any support through the study or action plan process.

b) Ngakawau Restoration Project

This is a hydro scheme which is also designed to divert acid mine drainage from coal mines on the Stockton Plateau to an ocean outfall. The proposal is to develop a 24MW hydro scheme. The scheme will restore water quality in the Ngakawau River, reduce the costs of rehabilitating the mine and provide water management facilities for future mines.

The project will cost around \$165 million for constructing diversions, hydroelectric generation facilities and for rehabilitation over four years.



Significant further work is required to develop the project for investment, including geotechnical drilling and surface mapping, completion of the land exchange and concession, engineering design studies (e.g., design of the various dams, canals and the power stations) and building consents.

The scheme proponents have sought Crown funding from the indemnities the Crown has provided for rehabilitation of Stockton mine. It is not clear whether the proposal will be commercially viable even with this support.

What are the specific opportunities to improve the energy network in the region?

We did not identify any particular demands that necessitate further investment in the electricity network in the region beyond what is already planned on a commercial basis. Although they are commercial projects, additional investment in local generation will have broader economic benefits, including new jobs and potentially reduced electricity charges to customers. As such, it may be useful for representatives from DWC or a new economic development organisation to work with the companies involved in the projects to determine how the broader benefits can best be captured by the region (for example, identifying potential workers from the local labour force).

In addition, a proposal has emerged that has several objectives related not only to energy generation, but also environmental management and innovation.

Proposed waste-to-energy facility

This proposal involves establishing a waste-to-energy facility in Buller. It is intended that the facility would initially use 300,000 tonnes of waste annually to generate 60MW of power (potentially doubling in scale in phase 2 after a few years). The facility would take a combination of local feedstocks (e.g., solid municipal waste and waste coal) and import solid waste (e.g., tyres, industrial and municipal waste) from the South Island. The proposed technology is being used in similar facilities in other countries.

A new company, Waste Energy (WC) Ltd, has been formed to manage the project and an advisory board has been formed involving BDC and Buller Electricity. Potential investors and a site have been identified.

The rationale for establishing the facility in Buller is to have ready access to the waste coal which will help to ensure minimum energy levels are generated. This will also keep transport costs down.

A feasibility assessment and business case is underway. Engineers have reviewed the potential feedstock and identified this as suitable. Sorting and shredding of waste from the East Coast of the South Island will need to be undertaken in a facility in Canterbury, which will then be transported by rail to Buller, while sorting and shredding of West Coast waste will be done in Buller. The transport of waste from Canterbury will involve back-loading the coal wagons that travel from the West Coast.

It has been estimated that construction of the facility will cost around \$415 million.



Our initial assessment of the proposal

If the facility only made a limited use of local feedstock, we would question the rationale for establishing it on the West Coast rather than being closer to the major sources of waste. However, the use of waste coal means the location makes more sense.

A key risk we see for the project is whether sufficient quantities of waste can actually be sourced from other locations. In addition, the owners of Waste Energy Ltd do not have direct experience in establishing these types of facilities, although they have partnered with companies that do have this experience. Production costs still need to be validated.

The potential benefits are significant. Construction of the facility will provide an estimated 1,000 jobs over 12–18 months (once consented) and operating the facility will initially require around 65 to 70 jobs. There will also be opportunities to undertake associated R&D projects on the potential to use other waste streams.

The facility would enable Buller to reduce its reliance on transmission from the national grid and potentially reduce prices to local consumers and improve security of supply. The scheme will leverage existing waste resources and is also consistent with government priorities to improve energy efficiency and use of renewable energy to raise productivity, reduce carbon emissions and promote consumer choice (see for example the New Zealand Energy Strategy 2011–2021).

Relevant central government initiatives
<ul style="list-style-type: none"> • Review of Transmission Pricing Methodology. • New Zealand Energy Strategy 2011–2021.

As noted, a feasibility assessment and business case for the project is being prepared. The assessment and case should be finalised so that the viability of the project can be determined, including key risks and how they might be managed, the full range of costs and benefits, as well as whether there is any role for local or central government in facilitating the project.

Table 19 summarises our assessment of the proposal. Overall the proposal currently rates moderately on our criteria. Although the potential impacts are significant, there are still key questions about its validity and practicality to be answered. Most of the benefits will accrue to Buller rather than the broader region. There is limited existing expertise in the region or New Zealand to develop the facility.

Table 47. Assessment of the Waste to Energy proposal

Criteria	Assessment
Validity	Low
Potential impact	High
Practicality	Low-Medium
Regionally significant	Low-Medium
International orientation	Low
Ability to leverage local/regional work and investment	Low-Medium
Consistency with national priorities	Medium
Overall assessment	Low-Medium



What other opportunities are relevant?

A key opportunity that is relevant to the waste-to-energy facility is the proposal to develop a research centre in the region, which could potentially assist in undertaking research on alternative waste streams for the facility.

The proposed single window for permits, concessions and consents could also be applied to major infrastructure projects such as hydro schemes, in addition to mineral projects.

Investing in road resilience will also support the transport of materials to the facility.

What do stakeholders need to do to support the opportunity?

Industry and investors	<ul style="list-style-type: none">• Complete the feasibility assessment and business case for the waste-to-energy facility.• Co-invest in R&D on waste to energy if the facility proceeds.• Continue to invest in network improvements and new generation projects as appropriate.
Local Government	<ul style="list-style-type: none">• Assess and make decisions on consents for the waste-to-energy facility in a timely manner if it proceeds.• Provide access to municipal waste as a feedstock for the waste to energy facility.• Work with central government to implement the single window for dealing with permits, resource consents and land access arrangements.
Central Government	<ul style="list-style-type: none">• Consider potential R&D support for the waste to energy facility if it proceeds.• Finalise decisions on the concession application for the Waitaha scheme.• Work with local government to implement the single window for dealing with permits, resource consents and land access arrangements.



SKILLS AND TALENT

Overview

The West Coast has a relatively high level of early childhood, industry and adult education and training, but relatively low attainment of formal qualifications.

The proportion of the West Coast's children who participate in early childhood education before starting school is high, relative to the New Zealand average and most comparator regions. Participation across the West Coast has increased over time.

The proportion of the West Coast population undertaking industry training and apprenticeships is higher than the New Zealand average. Industry trainee and apprenticeship enrolments are broadly aligned with sectors of strength in the region. For example, high numbers were enrolled in agriculture, food and hospitality, building, marketing and engineering in 2014. There is also a better than average proportion of the population participating in adult and community education.

However, the population of the West Coast underperforms on several key indicators of educational achievement and participation, although there is variation between districts. In particular, the region has a lower proportion of people with a bachelors degree or higher, and a higher proportion of people without a qualification, than nationally. Lower proportions of school students in the region achieved 'at' or 'above' the national standards for reading, writing and mathematics than across New Zealand as a whole.

There was consistent feedback from sector representatives that it can be difficult to hire management and technical skills in the region (e.g., in wood processing, health services, manufacturing, construction, fisheries). This is due to a combination of factors, including the smaller working-age population in the region, difficulties in attracting staff from other regions due to a perceived lack of education opportunities for children and job opportunities for partners, and perceived lack of career opportunities. Workers that have lost jobs in the minerals sector have often not been regarded as suitable for other sectors (i.e., they have different skills) or are not attracted to jobs in other sectors, which tend to pay less than they were getting. Some sectors (e.g., wood processing, fisheries) also face problems in attracting and retaining lower-level skills due to attitudinal issues such as aversion to hard work or long hours, and drug-related problems.

There were also comments from several businesses that it is difficult to access R&D expertise in the region, due to the lack of research institutes and tertiary organisations.



Opportunity

Despite the challenges, no specific interventions were suggested by sector representatives or education and training organisations to improve business access to skills to fill job opportunities. There is already a range of education and training programmes offered in the region, not only through schools and TPP, but also through WestREAP, BullerREAP, MSD, the West Coast Trades Academy and others. These include initiatives to help youth and the unemployed connect with job and training opportunities. As noted in the section on the *Education sector*, it seems timely to review whether the overall mix and resourcing of education and training in the West Coast is appropriate to the region's circumstances.

There is a proposal to develop an applied research centre in the region to improve business access to R&D expertise. This would involve researchers, students and other experts working with key industries (e.g., minerals, dairy, tourism, ICT, horticulture) in the West Coast to assist them in dealing with real-world problems and opportunities. For example, this could involve experts working with farmers on how they can comply with health and safety requirements in practical ways or working with minerals companies to improve the gold recovery process. Such a concept would be best developed in partnership with other institutions from outside the region to leverage additional resources and to bring expertise into the region in areas where TPP has existing gaps. The first step would be to test the potential demand for such a centre and possible projects through workshops with relevant sector representatives.

What is the level of skills attainment in the region?

Formal education and skills levels and language and problem solving abilities are an important determinant of future economic development potential as they are critical to improving productivity.

The West Coast's formal education qualification levels are currently below national levels on most indicators (Table 48).



Table 48. Key educational attainment indicators

Indicator	West Coast	New Zealand	District differences	
Proportion of people aged 15 years or over who have a bachelor's degree or higher	10.07% (2013)	20.04% (2013)	Buller	9.02%
			Grey	9.49%
			Westland	12.30%
Percentage of people aged 15 years of over who do not have a qualification	30.45% (2013)	20.94% (2013)	Buller	32.45%
			Grey	31.08%
			Westland	27.06%
Percentage of school-leavers who do not attain at least NCEA Level 2	25.00% (2014)	22.87% (2014)	Buller	26.73%
			Grey	26.42%
			Westland	18.75%
Youth not in employment, education or training (NEET)	11.2% (2015) ⁴⁸	11.3 % (2015)	Buller	NA
			Grey	NA
			Westland	NA
Percentage of employment in low-skilled occupations	42.80% (2015)	38.5% (2015)	Buller	43.9%
			Grey	42.3%
			Westland	42.3%

Source: Statistics New Zealand, Census 2013, Household Labour Force Survey. Infometrics and MoE, Educationcounts.govt.nz.

Note: Green cells are better than the national average; red cells are below the national average.

The most effective route to lifting skill levels is to ensure that the region's young people are equipped and motivated to successfully participate in education.

⁴⁸ Combined region: Tasman, Nelson, Marlborough, West Coast



Early childhood education

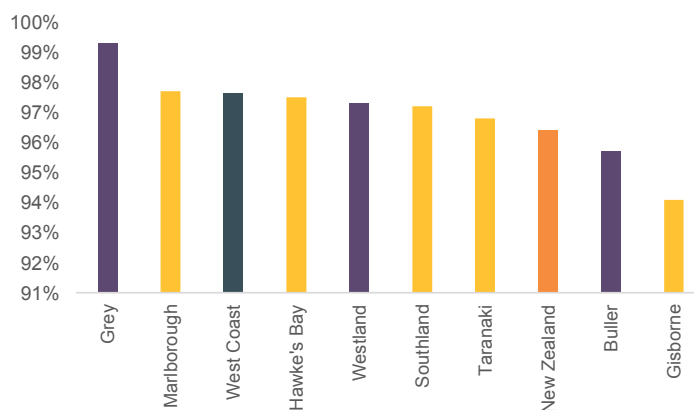
Participation in high-quality early childhood education (ECE) has significant benefits for children and their future learning ability, and better social outcomes (Ministry of Education, 2012). The proportion of the West Coast's children who participate in ECE prior to starting school is high, relative to the New Zealand average and most comparator regions (Figure 148).

Grey has performed particularly well, above the government Better Public Service goal of 98 percent. However, Buller performs below the national average.

Encouragingly, participation across New Zealand and the West Coast has increased over time (Figure 149).

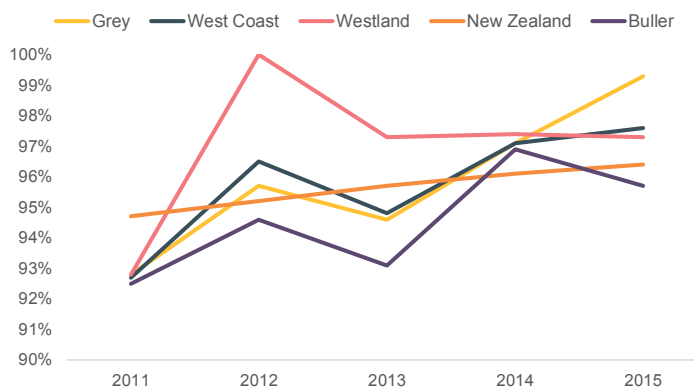
The growth in ECE participation in the region may well be due to the investment that is made in ECE initiatives in the region, for example through WestREAP and BullerREAP (discussed later).

Figure 148. Prior participation in early childhood education of children starting school, 2015



Source: MoE, Education Counts

Figure 149. Prior participation in early childhood education of children starting school, West Coast districts and New Zealand, 2011–2015



Source: MoE, Education Counts
Note: December Years



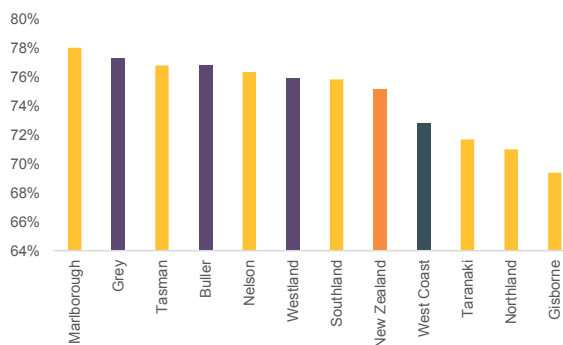
National standards achievement

West Coast students are achieving at lower rates than their peers in all National Standards areas.

The proportion of the West Coast's school students that are achieving 'at' or 'above' the standard in mathematics (Figure 150), writing (Figure 151) and reading (Figure 152) is below the New Zealand average.

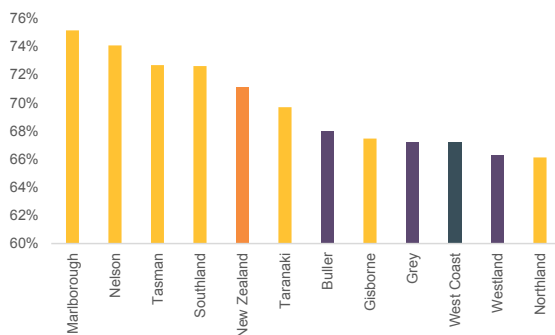
At the district level, National Standards achievement varies. For example, Westland exceeds the national average in mathematics, but is below the national and regional average in reading.

Figure 150. Percentage of students achieving 'At' or 'Above' the standard for mathematics by selected area, 2014



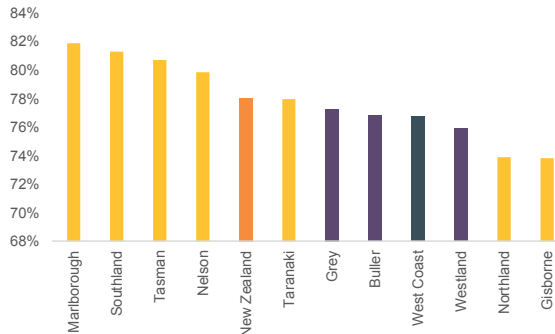
Source: MoE, Education Counts

Figure 151. Percentage of students achieving 'At' or 'Above' the standard for writing by selected area, 2014



Source: MoE, Education Counts

Figure 152. Percentage of students achieving 'At' or 'Above' the standard for reading by selected area, 2014



Source: MoE, Education Counts

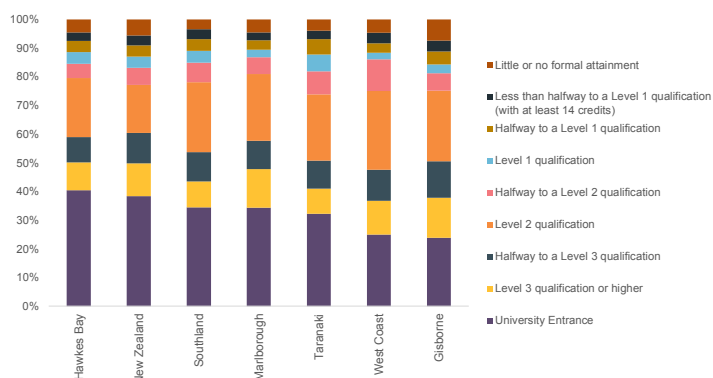


Secondary education attainment

Twenty-five percent of the West Coast's school-leavers (compared to 38 percent nationally) achieved University Entrance in 2014.

The West Coast had the highest proportion of school-leavers with Level 2 qualifications (27 percent) compared to comparator regions (Figure 153).

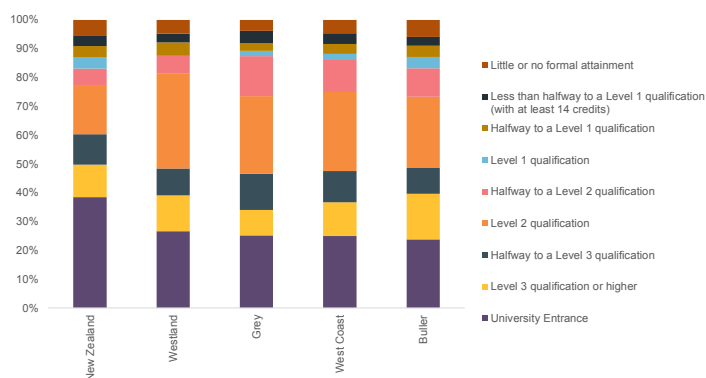
Figure 153. School-leavers by highest attainment and region, 2014



Source: MoE, Education Counts

At the district level, Westland and Grey school-leavers tended to leave with higher qualifications than school-leavers from Buller (Figure 154).

Figure 154. School-leavers by highest attainment, West Coast 2014

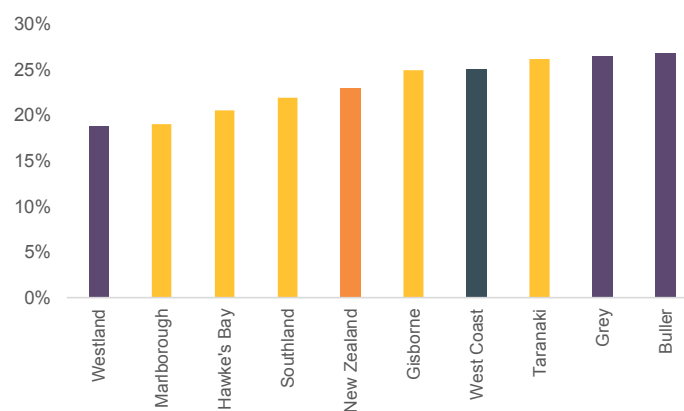


Source: MoE, Education Counts

Of concern is that a relatively large proportion of the West Coast's school-leavers are leaving school without at least NCEA Level 2 qualifications (25 percent, compared to the national proportion of 22.9 percent).

Breaking this down by district, Westland performs well (18.8 percent), with a much lower proportion of school-leavers without at least NCEA level 2 than Grey and Buller (Figure 155).

Figure 155. Proportion of school-leavers without at least NCEA Level 2, 2014



Source: MoE, Education Counts



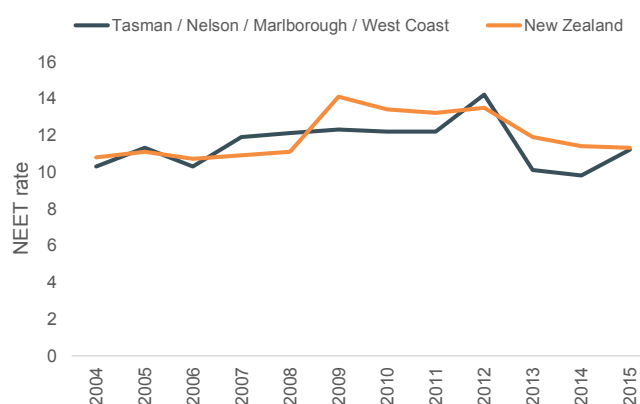
Youth not in education and employment

Youth exclusion, disengagement, and overall underutilisation in the labour market has costs both to the individual, and the economy or society at large (Pacheco & Dye, 2013). The youth not in employment, education and training rate (NEET) is commonly used internationally to measure non-utilised youth labour potential and young people who are at risk of becoming disadvantaged or marginalised in the future. Youth are defined as being between 15 and 24 years old. Long-term NEET spells of at least 6-months at a time are particularly associated with labour market scarring.

In recent years, the combined Tasman/Nelson/Marlborough/West Coast region has had a lower NEET rate than the national rate, other than in 2012 (14.2 percent).

The combined region's youth NEET peaked in 2012, and is now at 11.2 percent.

Figure 156. Tasman/Nelson/Marlborough/West Coast's NEET rate compared to New Zealand, 2004–2015

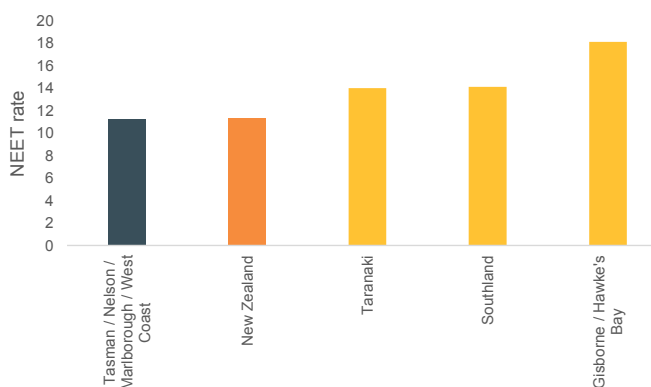


Source: Statistics New Zealand, Household Labour Force Survey
Note: December Year

Of comparator regions, the combined Tasman/ Nelson/ Marlborough/ West Coast region had the lowest proportion of youth not in employment, education or training in 2015 (Figure 157).

Unfortunately, the data does not separate out the West Coast, so it is possible that the NEET rate is higher in the region.

Figure 157. NEET rates, selected regions, 2015



Source: Statistics New Zealand, Household Labour Force Survey
Note: December Year



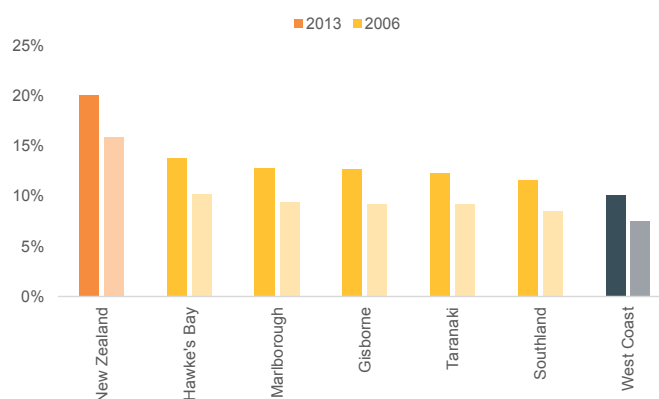
Tertiary qualification attainment

In 2013, 10.1 percent of the West Coast population had a Bachelors degree or higher as their highest qualification.

This is the lowest of all comparator regions and below the New Zealand average of 20 percent (Figure 158).

There was a slight improvement since 2006, when the proportion was 8 percent.

Figure 158. Proportion of the usually resident population aged 15 years and over whose highest qualification is a Bachelors degree or higher, 2006 and 2013



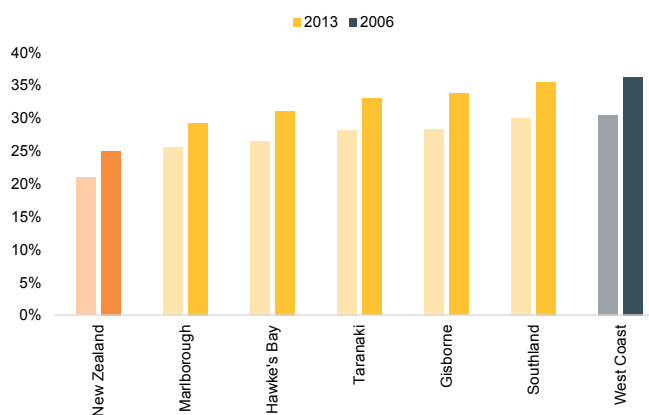
Source: Statistics New Zealand, Census

The West Coast also has the highest proportion of people with no qualifications (Figure 159).

In 2013, 30.5 percent of the population had no qualifications, compared to 21 percent of the New Zealand population.

The proportion has decreased since 2006, when it was around 36 percent.

Figure 159. Proportion of the usually resident population aged 15 years and over with no qualifications, 2006 and 2013



Source: Statistics New Zealand, Census

Research and feedback from education organisations suggests that the lower levels of secondary and tertiary qualification attainment in the region may be due to a combination of factors (see for example, Westland Community of Learning, 2015). These factors include:

- low employment expectations and limited visibility of careers in the region
- assumptions that qualifications are less necessary to get good jobs in the dominant dairy and minerals sectors
- limited resources available for schools



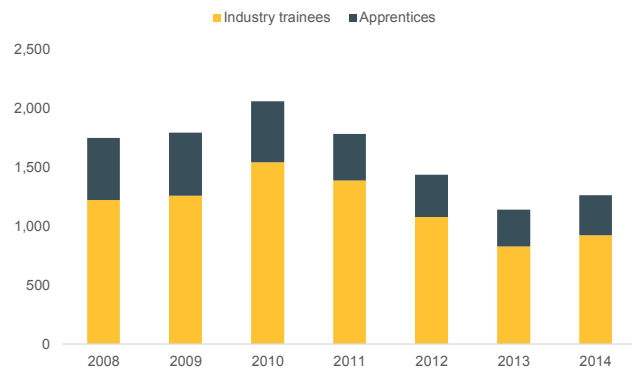
- limited tertiary opportunities in the region.

Industry and ongoing training

Industry training organisation trainees and apprenticeships in the region have declined from a high of 2,055 in 2010 to 1,260 in 2014 (Figure 160).

This is consistent with participation nationally, reflecting the impact of the financial crisis and contractions across sectors.

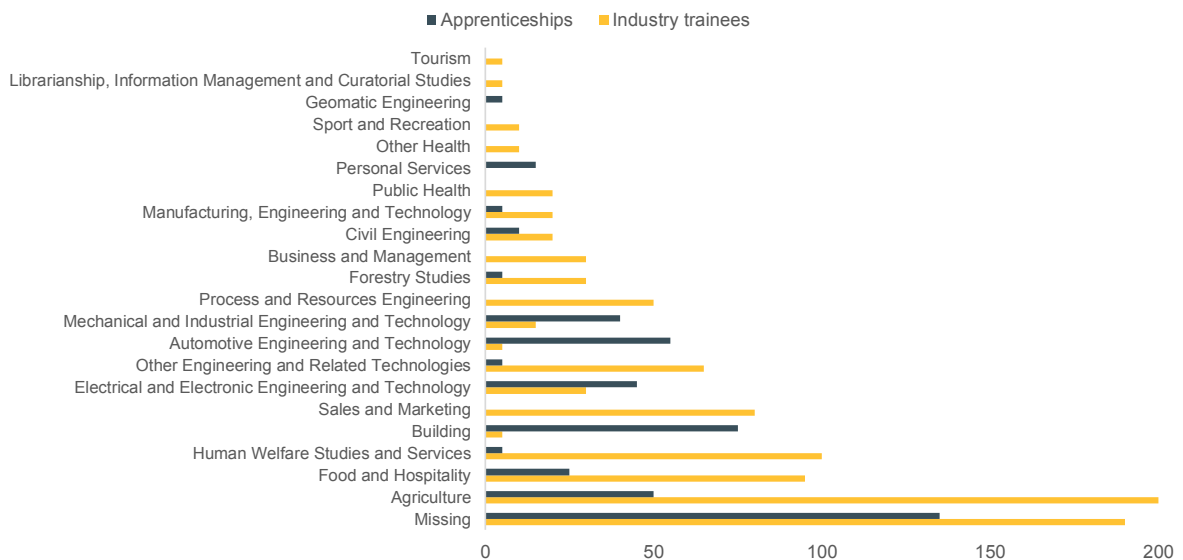
Figure 160. Industry trainees and apprentices on the West Coast, 2008–2014



Source: MoE, Education Counts

Trainee and apprenticeship enrolments in the region were broadly aligned with industry strengths in 2014 (Figure 161).

Figure 161. Combined industry apprentices and trainees by field of study on the West Coast, 2014



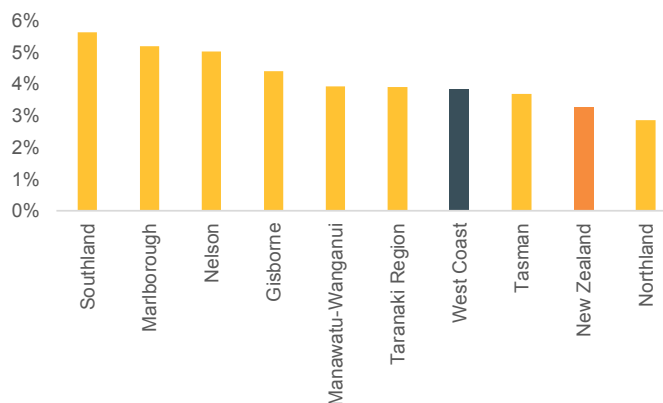
Source: MoE, Education Counts



Agriculture, food and hospitality, human welfare services, building and sales and marketing had relatively high numbers of enrolments in 2014. Engineering and other engineering-related technologies also had high numbers of trainees and apprentices. However, there were low enrolments in tourism.

In 2014, the region's participation in industry training as a proportion of the population, at 3.8 percent, was higher than the New Zealand average but lower than several comparable regions.

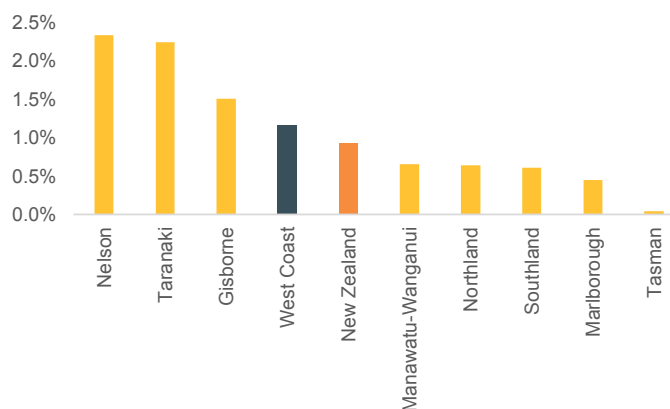
Figure 162. Industry trainees and apprentices as a proportion of the population, 2014



Source: MoE, Education Counts and Statistics New Zealand, Subnational population projections

Another indicator of ongoing learning is participation in adult and community education (ACE). In 2014, a slightly greater proportion of the West Coast population (380 people, 1.16 percent) undertook ACE than the national population (0.92 percent) (Figure 163).

Figure 163. Domestic students in adult and community education, as a proportion of the population, 2014



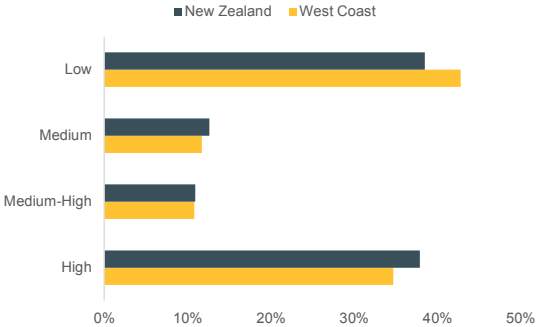
Source: Ministry of Education, Customised dataset



What is the current pool of skills in the region?

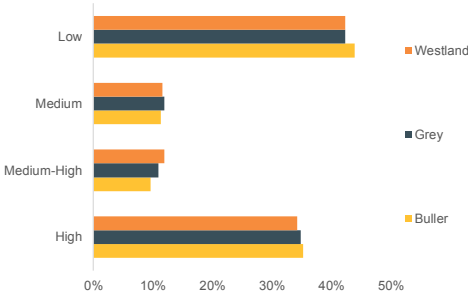
As shown in Figure 164, compared to New Zealand, the West Coast has a higher proportion of low-skill level⁴⁹ occupations (42.8 percent of all jobs compared to 38.5 percent nationally), and a lower proportion of high-skill level occupations (31.7 percent of all jobs compared to 37.9 percent nationally). Interestingly, Buller has slightly higher proportions of low- and high-skilled jobs, compared to the other West Coast districts (Figure 165).

Figure 164. Employment by broad skill level, 2015



Source: Infometrics regional database

Figure 165. Employment by broad skill level by West Coast district, 2015



Source: Infometrics regional database

The West Coast’s skill structure reflects the dominance of its mining, primary, and tourism sectors. For example, 14.5 percent of West Coast employees are in labourer occupations, compared to 10.7 percent nationally. Labourers are particularly concentrated in Westland (Figure 166).

Although the West Coast region has a slightly higher proportion of managers than New Zealand as a whole (21.0 percent compared to 18.6 percent), there are fewer professionals (18.2 percent of employment compared to 23.1 percent nationally). As shown in Figure 167, most of the region’s professionals are in Grey, while machinery operators and drivers are mainly employed in Buller (likely to be related to the mining and construction sectors).

⁴⁹ *Highly-skilled* occupations typically require a bachelor degree or higher qualification and include professionals such as accountants, teachers, and engineers, as well as most managers such as chief executives. This category is consistent with skill level one of the Australia New Zealand Standard Classification of Occupations (ANZSCO).

Medium-high skilled occupations typically require an NZ Register Diploma, an Associate Degree or Advanced Diploma. The category includes some managers (such as retail managers) and technicians (such as architectural draftspersons, ICT support technicians and dental hygienists). This category is consistent with skill level two of the ANZSCO classification.

Medium-skilled occupations typically require an NZ Register Level 4 qualification. The category includes tradespersons (such as motor mechanics), skilled service workers (such as firefighters), as well as skilled clerical and sales workers (such as legal secretaries and estate agents). This category is consistent with skill level three of the ANZSCO classification.

Low-skilled occupations typically require an NZ Register Level 3 qualification or lower. It includes a range of lower skilled occupations from general clerks, caregivers, and sales assistants, through to cleaners and labourers. This category is consistent with skill level three and four of the ANZSCO classification.



Figure 166. Employment by occupation, 2015



Source: Infometrics, Statistics New Zealand

Figure 167. Employment by occupation by West Coast district, 2015



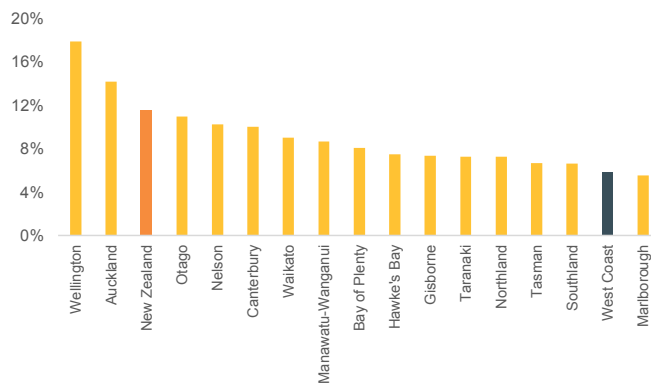
Source: Infometrics, Statistics New Zealand

The level of innovation and productivity in the region is also dependent on the availability of researchers, scientists and engineers and the proportion of ‘knowledge workers’.

The region’s core human resources in science and technology (RS&T) activities⁵⁰, is low internationally and within New Zealand.

The proportion of RS&T human resources in the West Coast was 6 percent compared to the New Zealand level of 12 percent when last measured, lower than every other region except for Marlborough.

Figure 168. Core Human Resources in Science and Technology, 2006



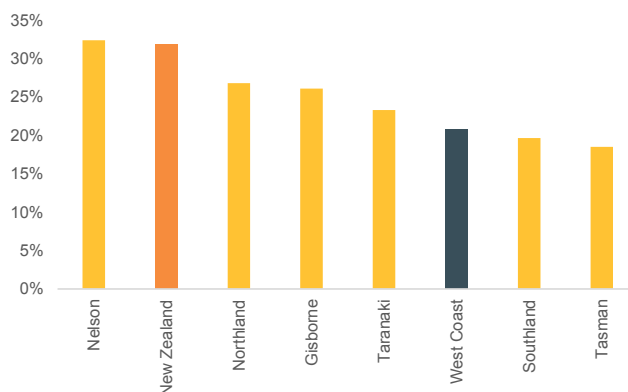
Source: Statistics NZ and customised data request

⁵⁰ Defined as individuals who have successfully completed a university education and who are employed in a science and technology occupation as a professional, technician or associate professional



The West Coast also has a relatively low proportion of knowledge intensive employment⁵¹. In 2015, the West Coast had 21 percent of employment in knowledge intensive sectors compared with the national rate of close to 32 percent. The proportion has declined from 2010 when it was 22 percent. The West Coast's proportion is higher than Tasman and Southland but lower than Nelson, Gisborne, Taranaki and Northland.

Figure 169. Proportion of employment in knowledge intensive industries, 2015



Source: Based on data from Infometrics regional database

Where are there skill demands and constraints?

Given the relatively low level of educational attainment and moderate level of industry training, it could be expected that employers in the region would point to difficulties in obtaining people with the right skills.

However, based on the interviews and workshops for this study, challenges in obtaining people with the right skills are not widespread. This is probably due to recent declines in minerals and dairy, where large numbers have had to leave the workforce in the minerals sector and are looking for work or have left the region, and that several sectors are currently not growing strongly.

But several business representatives did tell us they face challenges in accessing some skills:

- A few businesses noted that it is difficult to access R&D expertise in the region, due to the lack of research institutes and tertiary organisations.
- Many businesses said they were struggling to attract managerial or technical staff. Feedback suggested that this was due to a combination of the smaller labour pool in the region and an aging workforce, difficulties in attracting staff from other regions due to a perceived lack of education opportunities for children and job opportunities for partners, and a perceived lack of career opportunities.
- Some sector representatives also noted difficulties in attracting and retaining labouring staff, and this was regarded as related to drug/alcohol use and/or the hard work involved.

For example, problems were noted in:

⁵¹ Knowledge-intensive industries are industries that satisfy two basic criteria: At least 25 per cent of the workforce must be qualified to degree level and at least 30 per cent of the workforce must be employed in professional, managerial, as well as scientific and technical occupations.



- forestry and wood processing – where management level staff are nearing retirement age and it was difficult to find replacement staff with the same experience. There were also retention problems with operational workers, due to the use of drugs. Representatives indicated that ex-mining workers are not interested in positions in the sector because of the lower pay.
- dairy – where young people may be reluctant to enter the industry because of the long hours, hard work, isolation of farming and perceived lack of career opportunities.
- fishing – where, in one case, a large proportion of new staff employed for processing dropped out due to the early starts and hard work involved.
- health services – where it is difficult to recruit specialists to the region because they cannot be fully employed in their specialty area and because they perceive a lack of opportunities for partners.
- construction – where it can be difficult to find management and senior technical staff to replace staff that are aging, and it is difficult to attract people into jobs in remote locations. Again, representatives from this sector indicated that ex-mining staff are not interested in construction jobs due to the lower pay.

Businesses were implementing a range of initiatives to overcome these challenges, including internships, drug-testing, in-house training, work-experience initiatives, and advertising jobs in several regions.

One way in which firms can meet employment demands is to recruit migrants. Occupations in which migrants are recruited can point to areas of skill gaps.

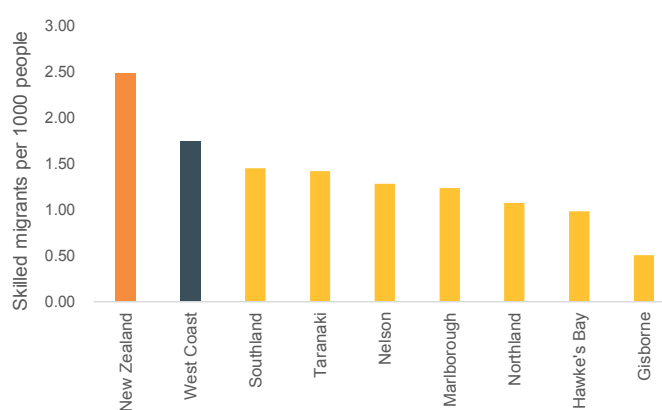
Skilled migrants in the West Coast

Between 2010/11 and 2015/16, 305 applications were approved in the West Coast under the Skilled Migrant Category (SMC).

In 2014/15, 57 applications were approved in the West Coast. This represented almost two SMC workers (1.74) for every 1,000 people (Figure 170). Although this was lower than New Zealand as a whole (2.48) it was higher than comparator regions.

This suggests that the West Coast has relied on migrants to greater extent than several regions in order to meet skill demands.

Figure 170. Skilled Migrant Category workers by comparator regions, 2014/15



Source: Immigration New Zealand



Almost half the people who enter the region under the SMC visa are employed as professionals. Other major occupations are technicians and trades workers and managers (Table 49). This is consistent with the feedback we heard about the difficulty in obtaining technical and management skills locally or from other New Zealand regions.

Table 49. Occupational groups for Skilled Migrant Category visas in the West Coast region, 2012/13, 2013/14 and 2014/15

Occupation	2012/13	2013/14	2014/15	Total over 3 years	Percentage
Clerical and Administrative Workers	0	1	1	2	1.44%
Community & Personal Service Workers	0	4	1	5	3.60%
Labourers	0	0	0	0	0.00%
Machinery Operators & Drivers	0	0	1	1	0.72%
Managers	5	11	11	27	19.42%
Professionals	17	22	29	68	48.92%
Sales Workers	0	0	0	0	0.00%
Technicians & Trades Workers	8	13	14	35	25.18%
(Not recorded)	1	0	0	1	0.72%

Source: Immigration New Zealand

Within the technicians and trades workers' occupation group, 48 percent were food trade workers. Within the professionals' occupation group, 66 percent were health professionals. Within the managers' occupation group, 46 percent were hospitality, retail and service managers.

This highlights that there are certain occupations and sectors that are having difficulty finding skills in the region and where migrant workers are being found instead. Recruitment and retention of health professionals, and securing skilled and semi-skilled workers for food and hospitality services appear to be key issues.

What investment is being undertaken to improve skill levels and access to skills?

There is a significant range of programmes in the region aimed at improving early childhood education, secondary school attainment, youth participation in education and training, and adult learning. Many of these are delivered by the Rural Education Activities Programme providers in the region, BullerREAP and WestREAP (with programmes funded by MoE, TEC and MSD), in partnership with education providers. For example, they deliver:

- Early childhood initiatives, including SPACE (Supporting Parents Alongside Children's Education), Club 4 (transition to school initiative), Parenting Support Groups, Nutrition workshops, play days, Te Reo/Tikanga programme, and the Incredible Years Parenting Programme.



- Youth initiatives, including mentoring, leadership camps, a rangātahi Māori leadership development programme, a tertiary pathways roadshow, a youth support service (which aims to find the best education, training or work-based option for youth NEETs to build their skills and find a job), youth development group and the Dream Journeys programme (similar to the Co.Starters programme but for youth).
- Adult and community initiatives, including Computers in Homes, digital literacy classes, the digital on road access initiative (a mobile digital classroom), financial literacy programmes, Pathways Awarua (an online literacy and numeracy programme), CV development support, and aged support.

A key initiative to encourage young people into trades is the West Coast Trades Academy (WCTA), which locally delivers a government programme. Greymouth High School coordinates the Academy, and TPP is the tertiary partner. It provides opportunities for youth to develop their knowledge and skills through trades and technology programmes that are jointly provided by schools and tertiary education organisations. WCTA is open to all year 11, 12 and 13 students at partner schools, and there are no fees.

There are also communities of learning in Buller, Greymouth and Westland that work together to raise achievement levels by sharing expertise in teaching and learning.

To attract skills from outside the region, Grey district developed a talent attraction campaign as part of its community economic development strategy, including showcasing talent that has already come to the district.

The Government and DWC have also co-funded a programme to provide wage subsidies to up to 20 people who have recently lost their job in Buller to help get new jobs. Funding of \$15,000 per year for two years is available for each new job created.

Other relevant government initiatives that are delivered locally or that influence investment in education and access to skills are listed below.

Relevant current Central Government initiatives

- The Education (Update) Amendment Bill, including the proposal to establish Communities of Online Learning.
- The Tertiary Education Strategy 2014–2019 seeks improvements in the delivery of skills for industry, getting at-risk young people into a career, boosting the achievement of Māori and Pasifika, improving adult literacy and numeracy, strengthening research-led institutions and growing international linkages.
- Youth Guarantee, Vocational Pathways, Trades Academies, STAR and Gateway programmes.
- Careers information, such as the Occupational Outlook report.
- MSD Industry Partnerships, Youth Transition Service.
- New Zealand Apprenticeships.
- The Māori Education Strategy: Ka Hikitea 2013–2017.
- Callaghan Innovation Student Grants.
- Immigration New Zealand Skills Shortage Lists and Essential Skills programme.
- The Learning Progressions Framework.



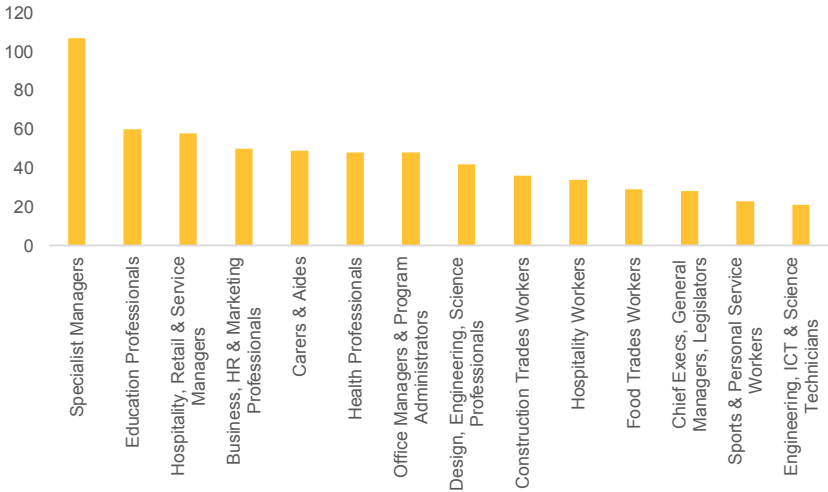
What are the potential future skill pressure points?

Even if most firms and sectors are currently not facing major problems in obtaining skills, there may be challenges ahead given the aging population and assuming the economy recovers and grows more strongly.

Based on Statistics New Zealand’s medium population projections for the region, the West Coast will lose 480 people of working age (15 to 65) over the 10 years to 2023 or an average of 48 people each year. At the same time, Infometrics forecasts estimate that, under a business-as-usual scenario, the West Coast economy will grow by 0.9 percent per year over 2016 to 2020, or by around 150 jobs per year.

Infometrics forecasting estimates that the largest number of new jobs in the region are expected to be for specialist managers, education professionals, hospitality managers, carers and aides, health professionals, engineers and technicians, and trades workers (Figure 171). Hence ongoing demand is expected for management and technical staff, particularly in the health, hospitality and education sectors.

Figure 171. Forecast number of new jobs in main occupations, 2016–2020



Source: Infometrics regional database

These pressures will have to be filled through the unemployed or underemployed, people not in the workforce, or attracting people from outside the region. Alternatively, sectors will have to look at approaches or technology that reduce labour intensity.



What specific opportunities are there to improve the availability of skills in the region?

Despite the challenges, no specific interventions were suggested by sector representatives or education and training organisations to improve skills and educational attainment in the region (other than a desire to see funding increases for several existing initiatives). Generally it was thought that there were already sufficient (private and public) initiatives underway to address the challenges. We also consider that this reflects the fact that the economy has been in a downturn and there have not been significant labour demand pressures.

The situation will undoubtedly change in future as the economy recovers and may result in demand for new interventions at a later stage. As noted in the section on the *Education Sector*, it would seem timely to review whether the overall mix and resourcing of education and training in the West Coast is appropriate to the region's circumstances.

However, some organisations did believe there was a more fundamental gap in helping businesses in the region access R&D and technical expertise.

An applied research centre to improve business access to R&D expertise

To address this gap, TPP have proposed creating an applied research centre, focused on research and knowledge transfer into areas that will produce a step change in value added on the West Coast. The concept would provide a collaborative approach to problem solving to meet local sector needs.

The centre would involve researchers, technical experts and students:

- working closely alongside businesses, industry groups, local and central government to identify real-world, commercially-focused sector problems or opportunities that require technical expertise and R&D
- applying their research to these problems or opportunities for the benefit of businesses in key sectors, such as minerals, dairy, fishing and aquaculture, wood processing, tourism
- working alongside experts from partner organisations (e.g., research institutes, universities) to provide a comprehensive range of expertise to meet the needs of businesses
- working with industry groups, local agencies (e.g., DWC) and central government agencies to provide complementary support.

For example, areas of research that such a centre could work on include:

- improving gold recovery processes, for example by analysing samples from various gold fields to establish gold particle size, shape, level of oxidation and surface characteristics, to provide solid data on the gold particle characteristics within those fields. This would then be used to provide advice to companies on how recovery processes could be refined and matched to the gold fields in which they are operating to increase recovery rates.



- improving health and safety compliance in primary sectors, for example, by conducting whole farm and business systems analysis to determine compliance with the health and safety act, identifying gaps and developing e-learning tools to improve and share practices across organisations.
- improving mine rehabilitation, for example, researching the effectiveness of practices such as vegetation transfer and managing acid mine drainage, in order to develop graduates who can apply lessons learned on sites on the West Coast to other areas of New Zealand (and worldwide).

It is proposed that the concept be pilot-tested on specific opportunities to determine how it would work in practice and to assess its effectiveness before committing to a full model. Workshops with sector representatives would be held to confirm 2-3 trial projects.

Our assessment of the proposal

As noted above, businesses on the West Coast do have more limited access to research and technical expertise than in many other regions. Consultation undertaken as part of this study included firms with R&D projects and ambitions that were not proceeding due to a lack of available expertise or limited time to devote to projects that fell outside of normal business. However, the overall demand or need for an applied research centre is not clear, although this will be revealed through the proposed trial.

There would be a range of potential benefits from implementing such a concept, including:

- improving the region's knowledge base and R&D, which is a key contributor to innovation and hence productivity growth
- new export opportunities from commercialised R&D
- broader benefits to businesses beyond those directly involved in projects, as lessons learned from the projects are more widely applied
- inspiring and developing students by encouraging participation in collaborative projects with industry
- improving the relevance of research.

The idea is consistent with Central Government's objective to grow business expenditure on R&D. It is also complementary to the Government's recent programme to establish regional research institutes.

We note that firms can obtain financial support to employ research students or experts through Callaghan Innovation (e.g., Project Grants, Student Grants), although the threshold for meeting the criteria for some of this support can be quite high. However, the design of the concept should factor in this potential support. It should also consider the potential role of DWC funding support.

It may be difficult to develop such a centre given the existing resource constraints of TPP. A staged approach, trialling 2-3 projects to test the concept, would make it more manageable and would also provide time to find additional resources. We also think that partnering with institutions in other regions would be a good idea in order to bring additional resources and expertise into the concept, particularly where there are local gaps.



This proposal rates moderately on our criteria as the demand for the centre has yet to be proven and it will take time for such a concept to develop and have a significant impact. As noted, it is consistent with government priorities to grow R&D. Some initial work has been done on potential projects which could form the basis of the trial.

Table 50. Assessment of the applied research centre proposal

Criteria	Assessment
Validity	Medium
Potential impact	Medium
Practicality	Medium
Regionally significant	Medium
International orientation	Medium
Ability to leverage local/regional work and investment	Medium
Consistency with national priorities	High
Overall assessment	Medium

What other opportunities are relevant?

The proposed research centre could benefit several of the key sectors and add value to several of the other proposals noted in this report. For example, in addition to the examples given above, research projects could be undertaken:

- with businesses in the tourism sector to determine how to enhance existing tourism products or develop new products
- with ICT and creative companies that are being developed through EPIC's services
- on the potential of different types of aquaculture farming in the region
- on the potential expansion of horticulture, food and beverage niches in the region.

What would stakeholders need to do to support this opportunity?

Industry	<ul style="list-style-type: none"> • Co-invest in relevant R&D projects. • Participate in the workshops and trials to develop the centre concept.
Research/education organisations	<ul style="list-style-type: none"> • Lead the workshops with industry to determine promising projects for trial. • Undertake and evaluate the trial. • Identify expertise across research/education organisations of relevance to West Coast businesses and sectors.
Māori/iwi/hapū	<ul style="list-style-type: none"> • Co-invest in relevant R&D projects. • Participate in the workshops and trials to develop the centre concept.
Local economic development organisations	<ul style="list-style-type: none"> • Participate in the workshops to develop the centre concept. • Consider potential support to trial the concept.
Central Government	<ul style="list-style-type: none"> • Continue to provide co-funding support for R&D projects and expertise through Callaghan Innovation. • Participate in the workshops to develop the centre concept. • Consider potential support to trial the concept.



ECONOMIC DEVELOPMENT ARRANGEMENTS

Overview

Effective economic development arrangements can support businesses and sectors in a region to more productively and effectively access resources and respond to opportunities. The set of economic development functions on the West Coast is currently spread across a number of agents, including councils, DWC, TWC, town promotional agencies, community organisations and a regional economic development manager.

The region is unique in having economic development functions distributed across so many agencies. The West Coast is also unique in that it has DWC, providing the community with access to potentially significant funding support for businesses and economic development projects. The region has also lacked a clear regional economic strategy or set of economic development priorities for some time.

Overall, economic development functions on the West Coast are fragmented and have evolved in a rather ad hoc way. It is not readily apparent that the current set of arrangements (both governance and delivery) is the most appropriate or cost effective, provides for an appropriate level of oversight and accountability, or aligns with clear economic development priorities.

In addition, almost all industry representatives and stakeholders consulted with as part of this study had questions or concerns about DWC's investment and funding role. These included questions about the scope of investment that was possible or not possible through DWC; whether DWC had a clear investment strategy or was reacting to opportunities; whether 'business as usual' activities were being funded in some cases; and about the length of time it can take to make decisions on applications for funding (with some examples taking more than 12 months).

Opportunity

To ensure that the region has appropriate arrangements in place to support economic development and the implementation of the growth study and action plan, it is timely to review current arrangements (across TWC, DWC and councils) with a view to implementing an improved approach. The review would identify: the range of functions that should be delivered; strengths and weaknesses of the current model; opportunities to improve the model; the benefits and costs of alternative options; appropriate funding arrangements to deliver the preferred model; and a clear set of output and outcome indicators to monitor performance.

Concurrently with this review, it is also timely to review the way that DWC's objectives are being interpreted and the investment approach of DWC. The aim would be to develop an investment strategy, which set out the rationales for DWC's investment and the general priorities for that investment. The priorities would be informed by the outcomes of this growth study and the subsequent action plan. DWC's investment processes should also be assessed and clearer guidelines adopted for decision-making timeframes.



What are the existing economic development arrangements in the region?

In its broadest sense, economic development is the combination of policies, investments and actions which improve the ability of organisations and people in a community of interest (in this case, the West Coast region) to more productively and effectively access resources and to respond to opportunities. All councils in the region deliver a significant range of measures that impact on the ability of people and organisations to respond to opportunities. This includes providing leadership and direction (e.g., through strategy development and planning), co-investing in infrastructure and assets, the provision of core services (e.g., water, waste management), and regulation.

However, in this study we are interested in a narrower set of economic development activities that focus on improving the capability of businesses and industries to grow (either by improving their access to resources or the demand for their products and services). These activities include:

- business development support (e.g., facilitating business access to grants)
- visitor marketing and promotion, including visitor information centres and events support
- skills support (e.g., training programmes)
- promotion of innovation (e.g., co-investment in local innovation centres)
- investment attraction and promotion
- sector development and facilitation (e.g., the development of sector action plans)
- district and town improvement support
- economic strategy development and monitoring.

The West Coast does not have a single agency that delivers these activities. Economic development functions have been dispersed across councils (GDC and BDC have staff who provide advice on economic development projects and issues, amongst broader roles), DWC, TWC, town promotional agencies, community organisations and a regional economic development manager⁵².

- Business development support is largely provided through DWC, which is the regional partner of NZTE and Callaghan Innovation. As well as facilitating access to this central government support, DWC provides commercial finance, organises networking events and coordinates Business Mentors New Zealand's services.
- As was discussed in the section on *Tourism*, visitor promotion and marketing is delivered through a combination of TWC and a variety of area promotional agencies, and has recently been supported by the regional economic development manager.
- Skills support in the form of some training programmes (e.g., a leadership and governance programme, facilitated access to courses and business coaching) has also been provided by DWC.

⁵² Following the development of the regional economic plan by the West Coast Councils and recognising a gap at the regional level, the Councils collectively employed a regional economic development manager.



- Investment attraction and promotion activities have been relatively limited on the West Coast, although a BDC official and the regional economic development manager have been working with organisations on a small number of investment opportunities. DWC tends not to get actively involved in investment projects because of the potential for conflicts of interest with its investment role.
- There has been limited promotion of innovation in the region other than Callaghan Innovation support facilitated through DWC, although GDC officials are working on a Discovery Centre – Innovation Hub⁵³ in Greymouth.
- Sector development activities have been supported by DWC, which has part-funded activities delivered through Minerals West Coast and the Construction Alliance. In the past DWC has also co-funded feasibility studies on the potential of different sectors on the West Coast.
- District and town promotion activities have been delivered through a variety of local promotion organisations such as Enterprise Hokitika, Grey District Business Promotions Association, Reefton Inc, Punakaiki Promotions, Haast Promotions, Glacier Country Promotions and Lakes District Promotions, partly funded by councils.
- Economic monitoring information is provided via councils and DWC. The councils in the region have signed up to an economic development action plan, which is focused on coordinating regulatory, planning and promotional activities between them, and GDC has developed a Community Economic Development Strategy. The region last developed a regional economic development strategy in 2008.

How do the West Coast's arrangements compare to other regions?

All regions of New Zealand support the provision of economic development services and activities. There are around 20 economic development agencies (EDAs) across New Zealand and 30 regional tourism organisations (RTOs). Some EDAs and RTOs are the same entity.

The West Coast is relatively unique compared to most other regions in having economic development functions distributed across so many agencies. There are a few other examples of regions with distributed functions such as in Marlborough and Hawkes Bay but these are also unusual. In several regions, such as Wellington, Nelson-Tasman and Manawatu, economic development functions and tourism promotion functions are now being combined into single agencies to improve overall effectiveness and efficiency. This reflects the experience of what are typically regarded as effective single entity economic development arrangements in Southland, Taranaki and Auckland.

Another unique feature of the West Coast's economic development landscape compared to other regions is DWC, which was established in 2001 to administer \$92 million to assist the economy to

⁵³ The innovation hub idea is for a business development hub for clustering new and existing businesses on the West Coast. It will leverage UFB in Greymouth and increase the opportunity for businesses that have a focus on the digital economy. The innovation hub is part of a broader Discovery Centre, which will focus on showcasing the West Coast to visitors and businesses. It is envisaged that the Centre will also be a key part of the urban regeneration of the Greymouth CBD as well as demonstrate and encourage the potential and capability of the region in relation to R&D, creative and digital innovation and technology in enterprise. GDC is working with Māwhera as the potential lead investor. They have identified physical location options and are looking at possible operating models and supporting programmes.



adjust to the end of logging of indigenous forest. It now has assets of around \$127 million. This provides the West Coast community with access to potentially significant funding support for community, business and economic development projects.

Table 51 shows the arrangements and services of some regions compared to the West Coast.



Table 51. Selection of economic development activities offered across comparable regions

Marlborough	Nelson-Tasman	Hawke's Bay	Northland	Western Bay of Plenty	Taranaki	West Coast
Main organisations						
Destination Marlborough, Marlborough District Council, Marlborough Business Trust, Marlborough Research Centre.	Nelson Regional Economic Development Agency (NRDA) which resulted from the recent merger of the EDA with the RTO, Uniquely Nelson supports town promotion separately.	Business Hawke's Bay, Hawkes Bay Tourism, Hawkes Bay Regional Council (Callaghan Innovation Partner, economic monitoring), Napier City Council (economic intelligence, strategy development, i-SITE).	Northland Inc, Northland Regional Council (investment fund).	Priority One, Tourism Bay of Plenty. The sub-region also works with Bay of Plenty Connections on regional projects.	Venture Taranaki Trust. New Plymouth District Council also has a role in event promotion.	Development West Coast, Tourism West Coast, Buller District Council, Grey District Council, various local promotional groups.
Services						
Visitor promotion and events attraction						
Visitor promotion and destination marketing, events promotion (including a commercial events fund), Only Marlborough brand and i-SITES in Blenheim and Picton.	Marketing and promotion of the region as a visitor destination domestically and internationally. Includes media and trade hosting and promotion, event promotion, conference marketing, tradeshows, development of collateral etc. and implementation of the Nelson events strategy. Nelson i-Site provides a shop-front for tourism activities and providers.	Promotion and marketing of the region, including events attraction, cruise ship attraction, visitor information.	Promotion and destination marketing of the region, including the development of a Northland twin coast tourism strategy, i-SITES in several locations.	Promotion and marketing of the region, including events attraction, promotional campaigns, cruise ship attraction, trade show participation.	Promotion and marketing of the region, including promotional campaigns, collaborative initiatives with Tourism NZ, visitor information, i-SITES in Puke Ariki, Stratford.	Visitor promotion and destination marketing, branding, i-SITES, development of collateral, collaborative initiatives with other regions.



Marlborough	Nelson-Tasman	Hawke's Bay	Northland	Western Bay of Plenty	Taranaki	West Coast
Business development						
Business development support in term of mentoring and start up advice through the Marlborough Business Trust. Access to Callaghan Innovation funding facilitated by NRDA. Access to NZTE capability funding is facilitated by NRDA who sub-contract delivery to the Marlborough Chamber of Commerce.	Facilitated business access to capability and R&D grants from NZTE and Callaghan Innovation. General business information. Mentoring and small business advice.	Mentoring, incubation, and facilitation of NZTE and Callaghan Innovation support. Supports high performance workplace productivity initiatives.	Facilitated business access to capability and R&D grants from NZTE and Callaghan Innovation. General business information.	Business development support through Ignition co-working space and support for Enterprise Angels	Business assessments, mentoring and facilitation of NZTE and Callaghan Innovation support.	Facilitated business access to capability and R&D grants from NZTE and Callaghan Innovation. Commercial finance. Mentoring support.
Industry development and facilitation						
Support for a wood sector group, wood sector development strategy, the food and beverage innovation cluster and strategy, and visitor economy group.	Economic assessments and facilitation of major industry projects. Cluster facilitation for aviation, engineering and design/build industries.	Facilitation of food and beverage sector and Food Hawke's Bay Strategy. Has been doing research on the potential of nutritional powders for the goat and sheep industry.	Facilitation of forest industry advisory group and marine industry group. Co-investment in feasibility studies for major projects.	Facilitation of an ICT cluster and Kiwifruit post-harvest working group	A visitor industry advisory group, oil and gas industry cluster, engineering consortium, and industry impact assessments.	Funding support for Minerals West Coast; facilitation support for Construction Alliance



Marlborough	Nelson-Tasman	Hawke's Bay	Northland	Western Bay of Plenty	Taranaki	West Coast
Investment attraction						
	Investment attraction by providing information to businesses interested in locating in Nelson and promotes the region to businesses - not a major focus.	Investment attraction, including tailored support for business relocation, a current study to identify investment opportunities and an investment profile.	Investment attraction, including supporting feasibility studies for major investment opportunities.	Investment attraction through the Tauranga Business Case profile.	Investment attraction, including facilitating introductions, investment profiling (e.g., oil and gas industry).	Facilitation of specific project opportunities.
Skills support						
	Skills support including support for the Young Enterprise Scheme and workforce development initiatives.		Is considering developing skill investment programmes with key industry.	Skills support through the Bay of Plenty Tertiary intentions strategy, tertiary education advocacy and the 'wish you were working here' website.	Skills support including targeting of skilled migrants, employer missions offshore and a jobs website.	Some training programmes offered by DWC, such as a leadership and governance course.
Innovation support						
Innovation support through the Marlborough Research Centre.	Facilitated access to Callaghan Innovation support. Feasibility support for the local aquaculture research centre.	Facilitated access to Callaghan Innovation support.	Is investigating the potential for an agricultural innovation centre to be based in the region. Facilitated access to Callaghan Innovation support.	Innovation support through the Innovation Forum, Bay of Plenty Tertiary Partnership, Bay of Plenty Clinical School and Coastal Marine Field Station and WNT Ventures.	Facilitated access to Callaghan Innovation support.	Facilitated access to Callaghan Innovation support. Grey District Council is investigating the potential for an innovation hub.



Marlborough	Nelson-Tasman	Hawke's Bay	Northland	Western Bay of Plenty	Taranaki	West Coast
City and town promotion and improvement initiatives						
Town development through the Picton and Havelock community development groups (set up as part of the Smart and Connected strategy).	Town and city improvement and promotion through Uniquely Nelson and a range of town business associations (supported by Council) such as the Richmond Business Association.	CBD promotion and marketing through Inner City Napier, Hastings Business Association.	Town promotion and marketing through a range of business associations and incorporated societies (e.g., Doubtless Bay Promotions Inc, Kaikohe Business Association, Kaitaia Business Association, Business Paihia, Russell Business Association).	City and town promotion and marketing through separate organisations, e.g., Katch Katikati, Te Puke EDG, Waihi Beach Events and Promotion Association, Downtown Tauranga.	Not a major focus, although several business associations exist.	Town promotion and marketing through a large range of business associations and incorporated societies, e.g., Enterprise Hokitika, Greymouth Business Promotions Association, Haast Promotions, Punakaiki Promotions etc. Grey District Council undertaking a place shaping and urban regeneration project.
Strategy and economic intelligence						
Strategy development and economic monitoring. Strategies include Smart and Connected, the Visitor Economy Strategy, the Major Events Strategy and the Wood Sector Development Strategy.	Regional Prosperity is the regional economic development strategy. Visitor strategy being completed. Economic monitoring includes the six-monthly Tracking the Economy report.	Provides economic monitoring information. A new economic development strategy is being developed.	Economic profiling. Regional growth study completed this year. Economic development action plan is to be updated this year. Visitor strategy is being developed.	Provides economic monitoring information. Smart Economy strategy is the economic development strategy.	Has a New Plymouth economic development strategy, a Taranaki economic development strategy (being refreshed) and an event and visitor strategy. Provides a range of economic and industry information.	Does not have a recent economic development strategy although Councils jointly agreed an operational economic action plan. Grey has a community economic development strategy. DWC produces an annual economic monitoring report.



Marlborough	Nelson-Tasman	Hawke's Bay	Northland	Western Bay of Plenty	Taranaki	West Coast
Comment						
NRDA delivers Callaghan Innovation support in the Marlborough region.	Regional economic strategy influences prioritisation of most activities (but does not influence visitor promotion activities).	Not a major focus on sector facilitation other than for food and beverage.	Has an emphasis on visitor promotion and sector facilitation.	Has been a significant emphasis on increasing education offerings and improving skills provision.	Not a major focus on city/town promotion, but otherwise provides a balance of activities.	Not a major focus on investment attraction and promotion until recently. Not a major focus on skills or innovation support.
The Marlborough District Council has recently considered new economic arrangements.	Not a focus on investment attraction.	Has started a process of identifying investment attraction priorities.	Prioritisation was supported through the outcomes of the MBIE/MPI/Northland Regional Growth Study and Action Plan.	Regional strategy influences prioritisation of activities.	Regional and city economic strategies influences prioritisation.	No current strategy.
Uses a differential rate to help fund destination marketing activity.		No current regional economic development strategy, although there is one being developed.				

Source: MartinJenkins



Activities that have been under-emphasised on the West Coast relative to these and several other regions are investment attraction, skills facilitation and innovation support. This is most likely because, until recently, the region found it relatively easy to attract investment and skills when the minerals industry was growing strongly.

The region has also lacked a clear regional economic strategy or set of priorities for some time, which this study will help to rectify. Most regions in New Zealand determine their priorities for economic development on the basis of a regional economic development strategy or plan.

Overall, our view is that economic development functions in the West Coast are fragmented across several organisations and individuals, and have evolved in a rather ad hoc way. It is not readily apparent that the current set of arrangements (both governance and delivery) is the most appropriate or cost effective, provides for an appropriate level of oversight and accountability, or aligns with clear economic development priorities.

Economic development funding

The total amount of local funding support going into these economic development activities is not completely clear (for example, it is difficult to account for council officials' time or the full range of DWC support that may be considered economic development activities), although we do know that in 2015:

- around \$735,000 of council and DWC funding supported visitor promotion and marketing and district and town promotion activities
- DWC funding of business development activities was around \$650,000
- DWC committed \$5 million for a business and industry stimulus fund, \$3 million for a district economic stimulus fund (to be used by councils) and \$1 million for the digital enablement project.

Based on work undertaken on economic development and tourism operating models (MacIntyre, 2015), we have estimated that council funding of economic development activities in the region was around \$1.15 million. This may be slightly conservative. Based on this, Figure 172 shows how the West Coast compared to other regions on its proportional spending on economic development (including tourism) activities.⁵⁴

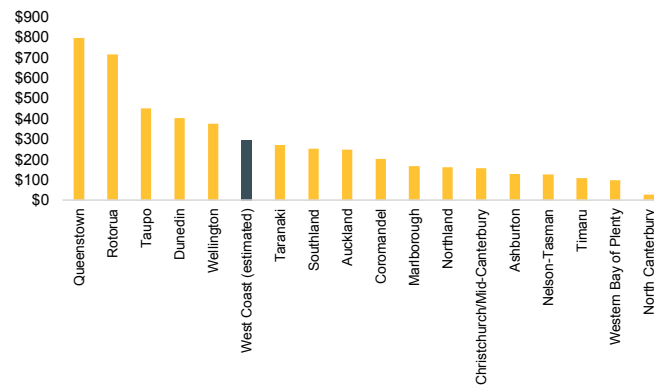
⁵⁴ Every attempt has been made to ensure comparability; however, in some cases i-site and event funding may be underestimated from the figures if the funding is provided through a combination of Councils and Council organisations.



The West Coast's estimated local government investment in economic development on a per business basis is in the upper half of the selected regions at around \$295 per business.

This is less than some of the urban centres and major tourism destinations but is higher than comparable, small-scale and distant regions.

Figure 172. Council investment in economic development per business, selected regions and districts, 2014

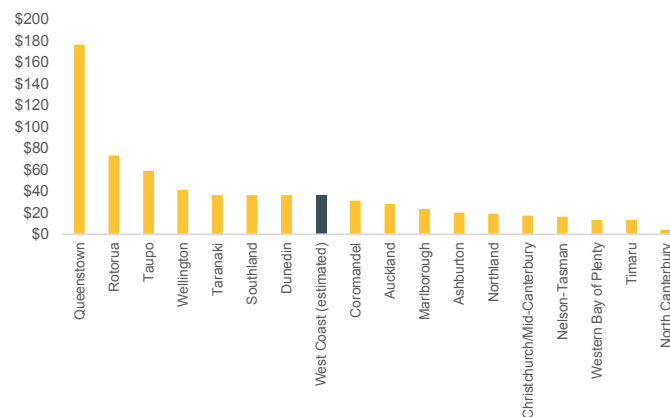


Source: MartinJenkins calculations based on EDA, RTO and council annual reports, and business demography estimates.

The region's estimated local government investment in economic development activities on a per capita basis is in the middle of selected regions at around \$35 per person (Figure 173). This is the same as Taranaki and Southland, but higher than other comparable regions such as Northland and Nelson-Tasman.

If DWC business development and tourism funding is included, the West Coast is at the upper end of regions, at \$500 of economic development spend per business and \$65 per capita.

Figure 173. Council investment in economic development per capita, selected regions and districts, 2014



Source: MartinJenkins calculations based on EDA, RTO and council annual reports, and business demography estimates.

Hence the region has a reasonable level of resourcing going into economic development activities.



What is the reach and impact of this economic development support?

Most of the economic development support in the region is being delivered by TWC and DWC. For example, over the last 2 years and amongst other activities, TWC has (Tourism West Coast, 2015):

- hosted many familiarisation visits to the West Coast
- supported a series of “China Ready” workshops through the region
- distributed tens of thousands of visitor guides
- partnered with the councils to market the cycle trails
- partnered with Tourism New Zealand, Christchurch Airport and others on a joint venture campaign in Australia promoting South Island road trips
- developed a domestic campaign, including a magazine/insert into national papers
- supported the promotion of major events, such as the Hokitika Wild Foods Festival
- helped develop a new brand for the West Coast.

The extent to which all of this activity has reached potential visitors and impacted on visitor numbers and expenditure is not known as evaluation of marketing and promotion activities in the region has been limited. In some cases, the number of people using visitor websites and being referred to tourism operators in the region are tracked during and following campaigns. For example, the joint venture campaign in Australia in 2015 saw a 23 percent increase in visits to the West Coast section of the Tourism NZ website and an 85 percent increase in referrals to West Coast operators. The impact of the Hokitika Wild Foods Festival has also been assessed (BERL, 2012) and it was found that this attracted a very high proportion of visitors from outside the region (90 percent) and resulted in additional direct expenditure of \$5 million.

As noted in the section on *Tourism*, there was common feedback from stakeholders interviewed as part of this Study that they considered visitor marketing and promotion was not as effective as it could be, with too much focus in the past on international visitors and the major iconic attractions and not enough coordination across the promotional organisations.

A lack of clear evidence about the impact of marketing and promotion is common across many regional tourism organisations as evaluation can be complex and requires capability and resources which are often not available in regions.⁵⁵ However, our observation is that there are better ways to consistently track and report on the reach of marketing and promotion activities in the region than we have observed in available reports.

In terms of other economic development activities, a range of support has been delivered by DWC to a range of organisations. Over the last 2-3 years, DWC has:⁵⁶

⁵⁵ In order to judge effectiveness, visitor numbers and expenditure need to be measured during and after marketing initiatives and the results compared to similar time periods when there haven't been such initiatives.

⁵⁶ Based on DWC Group Annual Reports for 2014, 2015 and 2016.



- funded (directly or indirectly via councils) a range of organisations to assist them to grow employment in the region, including EPIC Westport, West Trak and Pūtake Honey
- supported infrastructure and connectivity in the region, including funding for the Inchbonnie Hydro scheme, Hokitika Gorge upgrade and Sounds Air
- coordinated business mentoring services in the region. In 2015/16 it helped 17 businesses receive mentoring support
- helped deliver Regional Business Partner Network services in the region. In 2015/16 DWC helped over 140 businesses access these services, including \$31,000 of capability building funding
- supported the development of cycle trails in the region.

NZTE and Callaghan Innovation undertake quarterly client satisfaction surveys on their regional partners. In the mid-year 2015 survey, DWC rated reasonably well but was below other region partners (Gravitas, 2015). For example, over 80 percent of respondents said that DWC was at least good and agreed that their relationship with DWC was of value.

Business Mentors NZ also surveys client satisfaction with its partners' facilitation of mentoring services. In 2014/15, 82 percent of business mentor recipients surveyed that had been facilitated by organisations in the combined West Coast, Canterbury and Timaru regions said that the service was excellent or good, which was around average for all business mentor partner organisations (Business Mentors NZ, 2015).

Although DWC has received positive feedback about its business support role, almost all industry representatives and stakeholders we talked to had questions or concerns about its investment and funding role (commercial finance and district stimulus funding). Several of these organisations had actually received funding through DWC. The most common points were that:

- there was a lack of understanding about the role of DWC and the scope of investment that was possible/not possible through DWC. For example, there were several concerns raised that DWC has not supported feasibility studies or business cases for industry projects for some time.
- there were concerns that there was not a clear investment strategy and that DWC reacted to opportunities
- questions were raised about the rationale for providing individual companies with loans or finance (directly or via councils) and there were views that in some cases 'business as usual' activities were being funded
- there were concerns about the length of time it took to make decisions on applications for funding (we were told in several cases that this can be more than 12 months).

In relation to the first three points, DWC operates under a Trust Deed and can provide grants to activities that meet the following objectives under the Deed, provided that any private benefit conferred is incidental to these objectives:

- promote sustainable employment opportunities in the region
- generate sustainable economic benefits for the region



- support projects which are not in the ordinary day-to-day running, maintenance and upgrade of infrastructure that is normally the responsibility of local authorities or central government.

In our view this provides significant scope for DWC to fund a large range of projects⁵⁷, including business cases for major investment projects (that will generate jobs, R&D etc.), funding for some types of infrastructure, support for industry strategies etc. Hence any limitations that are placed on scope may be more to do with DWC's interpretation of the objectives than a real constraint. Furthermore, despite many comments that DWC is too limited in scope, it is apparent that DWC has funded a large range of activities over the years, so concerns about the scope of their investment may also be about perceptions rather than reality.

Funds which DWC invests in an entity (e.g., via a loan) are not required to further DWC's objectives so do not have to meet the above objectives. However, our observation is that the rationales for funding decisions are not clearly communicated. It is not apparent that funding support for businesses is incentivising organisations to put forward projects that are truly additional or creating wider economic benefits.

In addition, in our view the current investment approach appears somewhat scatter-gun (which is likely reinforced by funding decisions going through a combination of councils and DWC). Funding support for businesses or economic development projects does not appear to be geared towards a set of agreed economic development priorities, which would support growth and critical mass in particular sectors or areas of the economy.

What are the specific opportunities for improving economic development arrangements?

As noted, although there is a reasonable level of resourcing going into economic development and the region has the added bonus of a funding vehicle through DWC, the region is unusual in having such a fragmented set of economic development arrangements and services. There is also an opportunity now to ensure that these are better aligned with agreed economic development priorities and the outcomes of this study and the action plan.

1. Review and implement a new approach to regional economic development services and functions

In order to ensure that the region has appropriate arrangements in place to support economic development and the implementation of the growth study and action plan, it is timely to review current arrangements (across TWC, DWC and councils) and implement a new approach. The review should identify:

⁵⁷ DWC has also adopted investment objectives that its investment fund needs to achieve a level of income to meet its distribution requirements in any 1 year and to preserve the real value of the Fund (i.e., achieve a return of at least 3 percent per year on average). This will limit the amount of distributions it will make in any year.



- the range of activities that should be delivered, based on an assessment of clear and well-evidenced problems and opportunities facing the region, a clear rationale for local government and others in supporting the activities, and identified gaps and areas for improvement
- strengths and weaknesses in the current model in delivering these activities, including services and reporting and accountability mechanisms
- opportunities to improve the model, including governance, prioritisation and delivery arrangements (e.g., options could include a stand-alone economic development agency, combined tourism and economic development agency, economic unit within a council etc.)
- the benefits and costs of the alternative options. This should include consideration of practicality (the ease in which change can be made and limit disruption to existing activities), costs of change, the potential for efficiencies, the ability to achieve alignment with regional priorities, the likely effectiveness of decision-making, the ability to attract appropriate expertise (at governance and staff levels), the ability to leverage the resources of others, and likely responsiveness to economic development needs and communities of interest
- appropriate funding arrangements to deliver the model and reflecting the range of activities and regional reach
- a clear set of output and outcome indicators for assessing the performance of economic development functions and activities.

Preliminary work on options for tourism and economic development arrangements has previously been commissioned by DWC (MacIntyre, 2015) and this work could be built on.

Our assessment of the proposal

There is a clear need for a change to the existing arrangements. It should be relatively straightforward to action such a review, although the assessment will be complicated by the fact that there are three dimensions – economic development, marketing and promotion, and the role of DWC – to consider. The outcome of the review will be regionally significant but the actual impact of any new model will depend on the resources available and the capability involved.

Assuming the review results in a new, well-resourced economic development and tourism agency or unit with clear priorities and performance measures, the potential benefits are:

- greater alignment of economic development and marketing priorities and outcomes
- greater alignment of economic development priorities across councils and the agency/unit and hence better opportunity to leverage the resources of all to achieve common goals
- improved measurement of economic development performance and impacts and subsequently a better ability to make appropriate changes to resource and investment decisions
- increased flexibility/agility by being able to make decisions about changes to activities through streamlined processes that may have previously necessitated a reliance on less timely and complex decision-making mechanisms
- the potential for a more effective partnership with central government



- reduced costs (e.g., reduced overheads, potentially reduced governance)
- potential ability to attract higher levels of expertise to a well-resourced agency with a greater scope of activities.

Key costs and risks associated with a review and potential new model include:

- transition costs
- council and agency time required to participate in the review and implement resulting changes. This may divert resources away from implementation during the review period
- the potential for one area of activity to dominate the other (e.g., mergers of economic development functions in other parts of New Zealand have sometimes resulted in tourism promotion dominating economic development or vice versa).

These costs and risks can be mitigated through a well-designed process.

2. Review the role and funding approach of DWC and develop a clear investment strategy

Given the extensive feedback from industry representatives and other stakeholders questioning the role of DWC and the lack of clarity about the rationales for DWC funding decisions (referring to DWC's grants, loans and distributions), we believe it is also timely to review the way that DWC's objectives are being interpreted and the investment approach of DWC.

We are not suggesting that DWC's objectives alter. As we noted, we believe the current objectives provide considerable scope for different types of investment. The aim would be to develop a clear investment strategy. This strategy would set out the rationales for DWC's investment and the general priorities for that investment. The priorities would be informed by the outcomes of this growth study and action plan. The strategy would provide guidance to DWC and clarity to industry and communities. It would not recommend particular projects for funding.

As part of this, DWC's investment processes should also be reviewed and clearer guidelines adopted for decision-making timeframes.

Our assessment of the proposal

This review should not be regarded as a standalone exercise and should take place alongside the broader review of economic development arrangements. As noted, DWC currently provides a range of economic development functions and a review of its role will need to consider whether it should continue to provide such functions or whether it would be better for those to be delivered by a dedicated economic development entity of some form (and hence DWC would focus on its role in managing and distributing the Trust Fund). Whether and how such functions could be transferred to a new entity will depend on the broader review.

Although a review of DWC's role and investment approach may not result in a significant economic impact on its own, if it results in an investment strategy that is clearly aligned with the region's economic development priorities than it is more likely that those priorities will be supported in future.



The impact of providing clarity to industry and the broader community about the rationales for DWC’s investment approach and its broad priorities should also not be underestimated. There may be time and resource savings to both the proponents of projects and to DWC if this prevents what would have been inappropriate applications from being put forward due to greater clarity about the processes and priorities.

Table 19 summarises our assessment of these two related proposals. Overall, the proposals rate relatively highly on our assessment based on the above analysis. As noted, they rate well on validity, practicality, and regional significance. However, the impact is dependent on the execution.

The Governance Group rated these proposals highly and as a priority.

Table 52. Assessment of the review of economic development arrangements and the role and investment approach of DWC

Criteria	Assessment
Validity	High
Potential impact	Medium
Practicality	Medium-High
Regionally significant	High
International orientation	Low
Ability to leverage local/regional work and investment	Medium
Consistency with national priorities	Medium
Overall assessment	Medium-High

What other opportunities are relevant?

One of the components of the proposed tourism strategy and plan is to determine the appropriate structure for tourism promotion and marketing across the region. The structure would be determined through this review of economic development arrangements. This also includes the mix of regional and district promotional groups and the mix of funding mechanisms for tourism marketing and development.

As noted below, there is a range of central government initiatives that will need to be considered in the review of economic development arrangements and the mix of activities that should be delivered in the region.

Relevant current Central Government initiatives
<ul style="list-style-type: none"> • Regional Business Partner Network support including: <ul style="list-style-type: none"> – NZTE Capability Development Vouchers – Facilitated access to Callaghan Innovation Business R&D Funding (R&D Growth Grants, R&D Project Grants, R&D Student Grants) and access to experts. • Better by Lean, Better by Design, Better by Capital, Better by Strategy and Better by Digital programmes. • Callaghan Innovation skills programmes, such as The Build for Speed software development programme, the High Performance Work Initiative and the IMProve (evaluation of business innovation management and performance) initiative. • NZTE international development assistance, including export ‘how to’ guides, market research, co-funding, access to beachhead advisors. • NZTE investment attraction and facilitation support.



What do stakeholders need to do to support the opportunities?

Industry	<ul style="list-style-type: none"> • Participate in the review process and provide feedback on business and industry needs and opportunities for improving economic development functions and arrangements.
Māori/iwi/hapū	<ul style="list-style-type: none"> • Participate in the review process and provide advice on how economic development arrangements could support Māori/iwi economic ambitions.
Local economic development organisations	<ul style="list-style-type: none"> • Provide advice on the reach and impact of different economic development activities. • Provide advice on the operational and practical implications of options for economic development arrangements.
Local Government	<ul style="list-style-type: none"> • Assist in the development of a terms of reference for the review of economic development arrangements and DWC's role and investment approach. • Commission the review in partnership with central government. • Assess councils' roles in funding and providing economic development support.
Central Government	<ul style="list-style-type: none"> • Assist in the development of a terms of reference for the review of economic development arrangements and DWC's role and investment approach. • Commission the review in partnership with local government. • Continue to provide economic development support at the local and regional level, for example, through NZTE and Callaghan Innovation. • Provide advice on potential outcome indicators and monitoring and evaluation approaches.



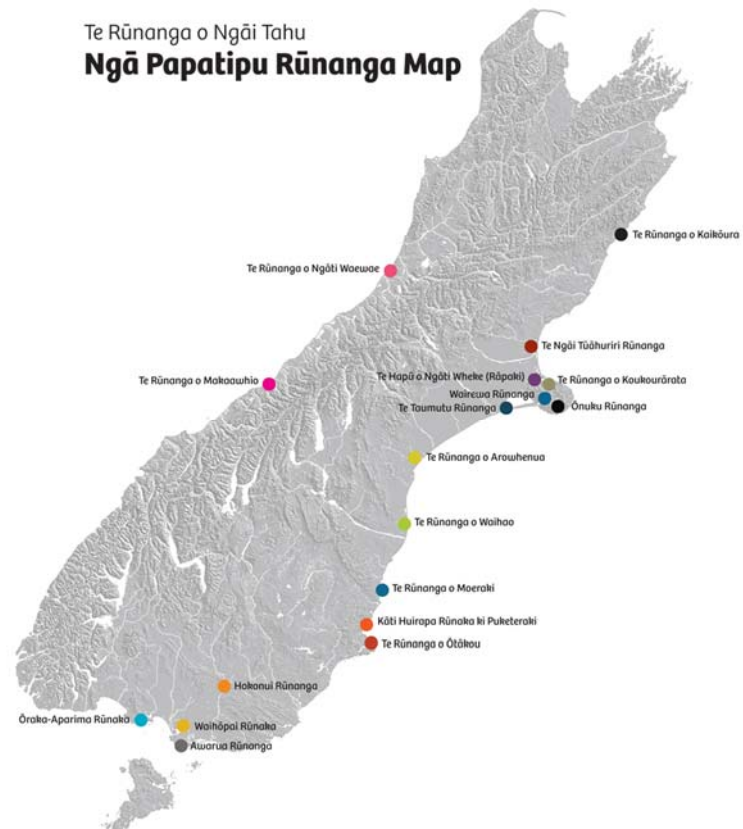
TAI POUTINI MĀORI

While accounting for a relatively small proportion of the population, Māori are playing an increasing role in the West Coast economy.

As tangata whenua on the West Coast, Māori have an important role in the kaitiaki of the large conservation estate as well as their own lands.

Ngāi Tahu Holdings has several commercial interests and is a key player in tourism and forestry in the region. Māwhera Incorporation has strategic commercial assets in Greymouth and is actively looking at investing in the region.

Te Rūnanga o Ngāi Tahu has a number of social and regional development projects that it is engaged with throughout the South Island that can be leveraged on the West Coast.



Who are Tai Poutini Māori?

The majority of Māori in the region are of Ngāi Tahu descent. The Ngāi Tahu takiwā (tribal area) embraces most of the South Island (Te Waipounamu) except for its northern tips. Te Rūnanga o Ngāi Tahu is made up of 18 Papatipu Rūnanga.

Ngāi Tahu has close to 55,000 members and is a major investor in the New Zealand and Te Waipounamu economy. Its commercial arm, Ngāi Tahu Holdings Limited, is a leading investor in New Zealand and has an active, inter-generational focus. The holding company had assets of \$1.35 billion and generated revenues of close to \$400 million in 2015.⁵⁸

⁵⁸ Ngāi Tahu Annual Report 2015.



The two Ngāi Tahu Papatipu Rūnanga on the West Coast – Ngāti Waewae and Makaawhio are engaged in social development projects and are important investors in the region, with significant landholdings in Greymouth and Westport, and interests in forestry, dairy, resources (e.g., rivers and pounamu), property, and tourism.

Papatipu Rūnanga

Ngāti Waewae

Te Rūnanga o Ngāti Waewae are based at Arahura Marae near Hokitika. Ngāti Waewae has a membership in excess of 600 people, of which most live on the West Coast. Te Rūnanga o Ngāti Waewae is a major landowner and has significant interests on the West Coast including:

- multiple commercial properties and tenants in Hokitika
- forestry and land assets (Blue Spur)
- a multi-million dollar marae complex
- joint owners with Makaawhio of *Poutini Waiora* the region's Māori health provider
- mining permits
- commercial pounamu manufacturing
- retail outlets
- marae-based tourism
- event management and function facilities
- education contracts and kōhanga reo facility
- rural land and building assets

Te Rūnanga o Ngāti Waewae has an asset base of \$8.3 million, and controls all pounamu cultural and commercial activity within their Takiwā through the Te Rūnanga o Ngāi Tahu and Te Rūnanga o Ngāti Waewae Pounamu Management plans.

Makaawhio

Makaawhio has a membership of 1,200 plus people and over half of these live on the West Coast. Makaawhio's marae, Te Tauraka Waka a Maui, is in Bruce Bay, south of Hokitika. The rūnanga has significant interests on the West Coast including:

- joint owners with Ngati Waewae of *Poutini Waiora*, the region's Māori health provider
- shareholder in Franz Josef Glacier Guides
- a carving studio operating out of the Jacob's River school, which Makaawhio have purchased
- two dry stock farms, one owned and one leased
- mining licenses



- over 200 tonne of recovered pounamu stock and pounamu resource on the Cascade Plateau
- a retail outlet in Haast
- a consulting service
- contributing to a Ngāi Tahu honey venture.

Makaawhio also have several projects in development including:

- Internet service provision, providing Wi-Fi services in South Westland from Fox to Bruce Bay.
- A cultural tourism venture out of the carving studio, including Helicopter ventures out of Haast to the Cascade Plateau.
- A retail venture in Hokitika, which aligns with the Jacob's River carving studio tours and pounamu stocks.

Māori Incorporations

Māwhera Incorporation

Māwhera Incorporation came into existence from land being transferred from the Māori Trustee in accordance with the Māori Reserved Land Act 1955. The beneficial owners of the land were allocated shares in 1976. The shareholding has changed over the generations but the ownership is still predominately in the original blood line.

Māwhera Incorporation is controlled by more than 1,500 shareholders most of whom are descendants of Poutini Ngāi Tahu Māori, who were the original land owners of the West Coast region. The majority of shares are currently owned by Māori living on the West Coast.

Māwhera owns land from Karamea to Bruce Bay including commercial lands in the Greymouth central business district (CBD) and large rural holdings in the Arahura Valley in the form of dairy farms. The Arahura river bed and the management of Waitaiki Historic Reserve was vested in the Māwhera Incorporation. These areas have been a main source of pounamu since Māori settled Te Waipounamu more than seven centuries ago.

Māwhera has an asset base of over \$130 million, is debt free and has a strong interest in the growth of the region. Māwhera is interested in investing in long-term, intergenerational assets. It is currently engaged on a number of projects in the region including:

- the revitalisation of the CBD in Greymouth with GDC
- construction in the Greymouth CBD
- developing tourism opportunities with national and international organisations along the West Coast
- converting unproductive land into dairy and general farm lands
- mining in the Arahura Valley
- freehold land in Greymouth



- acquisition of dairy lands.

Ngāi Tahu Holdings

Ngāi Tahu Holdings is the commercial arm of Te Rūnanga o Ngāi Tahu. has five subsidiary groups – capital, property, tourism, seafood and farming. Three of these groups currently have interests on the West Coast.

Ngāi Tahu Tourism

Ngāi Tahu Tourism (NTT) is a major player in the New Zealand visitor industry with key attractions in visitor centres across New Zealand including Queenstown, Rotorua and Taupō.

NTT runs two major attractions on the West Coast – Glacier Guides and Glacier Hot Pools in Franz Josef. It is also involved in pounamu through Waewae Pounamu.

The organisation recently purchased Glacier Southern Lakes Helicopters, which will allow NTT to connect customers from Queenstown and Glenorchy with Franz Josef.

Ngāi Tahu Forest Estates

Ngāi Tahu Forest Estates (NTFE) is an iwi based forestry company operation in the South Island. On the West Coast, NTFE owns 46,000 hectares of land of which 20,000 hectares are planted in radiata and 5,000 hectares are planted in other species.

Harvesting about 230,000 cubic metres annually, NTFE is the largest forestry company on the West Coast, accounting for about 90 percent of the exotic logs harvested in the region. About half of the harvest is processed on the West Coast. The other half is transported off the West Coast. Half of this is sold to other processors in the South Island with the remaining half (25 percent of total harvest) exported as logs.

NTFE expects to continue to harvest at around 250,000 cubic metres each year over the next few years. Ngāi Tahu is committed to replanting and maintaining a productive area in the order of 22,000 hectares. However, it is not actively looking at new plantings on the West Coast.

Ngāi Tahu Seafoods

Ngāi Tahu Seafood (NTS) was established in 1992 to manage the fishing quota received by Ngāi Tahu following settlement with the Crown. NTS is a niche supplier to international and domestic markets, under its TAHU brand. Key species are *kōura* (rock lobster), *pāua* (abalone), *rāwaru* (blue cod), *tio* (Bluff oysters) and *kūtai* (New Zealand Greenshell mussels). NTS also holds substantial fishing quotas in other species.

NTS is headquartered in Christchurch, where it coordinates an integrated fishing, processing and distribution chain including company-owned facilities in Bluff, Christchurch, Kaikōura and Picton.

Most seafood offered by Ngāi Tahu Seafood is caught against Ngāi Tahu quota by Ngāi Tahu fishers. There are also important commercial relationships with a number of other New Zealand fishers and processors.



NTS currently has limited activity on the West Coast. Some lobster and wetfish is caught and landed on the West Coast by third-party fishers. Lobster is transported to Christchurch for export to China, while wetfish is landed in Greymouth and Westport for processing there or in Nelson.

Honey

Ngāi Tahu Holdings recently bought a 50 percent share in Watson & Son, one of the largest mānuka honey businesses in New Zealand with a turnover of about \$30 million. They also purchased 50 percent of ManukaMed, which is focused on the medical applications of mānuka honey in advanced wound care. To supply the venture, Ngāi Tahu is looking at the land it owns and whether it is suitable for locating hives. This could include forestry land owned by Ngāi Tahu on the West Coast.

Opportunities

Māori are working hard to provide better opportunities and achieve better outcomes for their people. These outcomes are broader than just economic and include social, cultural and environmental.

With strong leadership and institutions, a strong asset base and a young and growing population, Māori can make a solid contribution to regional growth opportunities on the West Coast.

Effecting true partnership

As a treaty partner, and as kaitiaki for Te Waipounamu, Ngāi Tahu seeks to be a true partner in the sustainable development and growth of the West Coast region. This will result in more effective engagement and better and more streamlined outcomes. Ngāi Tahu are already engaged across a wide range of processes associated with development in the opportunity areas recommended by this study.

In practice, true partnership means engaging Māori in policy settings and development of proposals through to decision and review processes.

This is likely to require a change in the way issues are progressed and policy/strategy is developed. It will require clear rules of engagement and increased awareness and understanding within government and agencies of the importance of a Treaty partnership approach. It will also require increased capability and resourcing within Ngāi Tahu.

There are Treaty partnership models established in other parts of the country that can inform the Tai Poutini West Coast approach.

While Te Rūnanga o Ngāi Tahu is looking to devolve responsibility to Papatipu Rūnanga to make decisions and operationalise activity, Te Rūnanga o Ngāi Tahu will continue to provide capability and resourcing required to support that devolution.

The DoC estate is a critical part of the visitor experience and other opportunities exist such as in mining, forestry and food and beverages. As such, engagement with DoC is also critical to the success of the region. Iwi seek a constructive working relationship with DoC to ensure that the right environment is in place that ensures sustainability, is culturally sensitive, and encourages increased economic activity.



Currently, Māwhera Inc have title to the bed of the Arahura River and the management of the Waitaiki Historic Reserve. There are other ready examples of where real partnerships would add value, such as discussions about the future of Franz Josef.

Sector opportunities

Looking at the existing and potential role of Ngāi Tahu in regional development, there are growth opportunities across most sectors and cross-cutting opportunities. Involvement may be through Ngāi Tahu Holdings Limited, Papatipu Rūnanga and associated businesses or initiatives, or through whānau development and involvement in local business.

As noted, the two rūnanga, Ngāti Waewae and Makaawhio have several investments that they are developing, some of these with the support of Ngāi Tahu. Māwhera Inc has commercial and rural land-holdings that it is looking to develop further.

NTT, NTFE and Ngāi Tahu Seafoods all have investments on the West Coast. These companies operate nationally. However, they whakapapa to the South Island and are always seeking out opportunities to invest in their rohe. As such, they will continue to look favourably on opportunities on the West Coast that can grow their investments in a sustainable fashion.

The opportunity is to understand the investment focus of Ngāi Tahu subsidiaries, Māwhera and Papatipu Rūnanga, and identify and encourage relevant investment opportunities on the West Coast. Some of these are outlined below.

Tourism

Māori have several investments in the visitor industry. They have the potential to increase investment into the sector, and can also contribute to the visitor offering in the region through providing a cultural lens and story.

Engagement in the tourism strategy and action plan

NTT's ventures in the region are currently focused on international visitors to Westland with glacier tours, accommodation/spa experience and pounamu. With broader national offerings, NTT also provides strong linkages and insights to other visitor regions, particularly Queenstown, that could be leveraged to encourage visitors to the West Coast. It is in the region's interests to work with NTT to build the international visitor base and build on the visitor experience.

Developing and linking the Māori story to the visitor experience

Poutini Rūnanga are currently engaged with the visitor sector through pounamu, from tours to retail sales. As noted earlier, there is an opportunity to leverage and add value to the Māori component of tourism. This should be scoped and developed as part of the broader tourist strategy and action plan.



Forestry and related processing

NTFE is the largest forest owner on the West Coast, and accounts for over 90 percent of the logs harvested in the region. In addition to the proposal noted earlier to develop a sustainable management plan for indigenous forests, NTFE are interested in three other opportunities related to the forestry and related processing sector:

- **Rationalise NTFE land holdings** – There is an opportunity for NTFE to work with DoC to rationalise their land holdings. This involves identifying NTFE land that is regenerated back to native forest in exchange for conservation land that is suitable for afforestation. This opportunity was reviewed in 2000, however, the timing was not considered favourable.
- **Review the application of carbon credits** – as was noted earlier, the ineligibility of pre-1990 forests to earn carbon credits means there is no incentive to re-plant pre 1990 forests when they are harvested.
- **Identify how to add value to native timber stockpiles** – Ngāti Waewae has a stockpile of native timbers. The opportunity is to explore the potential to add value to wood and generate employment, e.g., through training and wood products such as cabinetry. This is a venture that could be supported through a social enterprise initiative.

Minerals and related processing

Poutini Ngāi Tahu engage with the mining sector on a regular basis, through direct relationships with companies, governance agencies and industry organisations, as well as being resource-owners and developers.

Rūnanga have a history of supporting mining activities that have effective measures in place for regeneration/remediation, taking an intergenerational view to development.

As kaitiaki, Poutini Ngāi Tahu need to be engaged early in the evolution of the three proposals noted in the section on the *Minerals and related processing sector*, to enable efficient and effective progress through all stages of development.

Food and beverage cultivation and processing

Māori in the region have large rural land-holdings that can be used in a more productive way, including food cultivation. Apiculture and harakeke opportunities were noted earlier in the report.



Education

Statistically, Māori on the West Coast are not achieving education outcomes on a par with the rest of New Zealand. Te Rūnanga o Ngāti Waewae is working to address this by continuing to build positive relationships with educational institutions across all levels.

As noted earlier, Te Rūnanga o Ngāti Waewae as well as Ngāi Tahu whānui have a number of tribal and hapū initiatives that work towards improving the educational outcome of all Māori in the area. Existing relationships and lessons through current activity can be shared and applied on the West Coast.

Infrastructure

With significant commercial land holdings in the main towns, Māori have a clear role in supporting projects to improve the urban amenity in the region.

Engage iwi and Māori incorporations in CBD planning

Māwhera Inc. has a vested interest in sustained economic growth in the West Coast region. Its commercial assets include parts of the Greymouth CBD and it is currently a key stakeholder and investor in the urban regeneration efforts being led by GDC. Māwhera Inc is supportive of an approach that ensures that its investments, particularly in the Grey town centre, can support and enable the growth of, and liveability in, the region. Aligned to their ownership and development interests, Māwhera should be a partner in other projects that relate to the development of the town centre, such as transport logistics and other infrastructure developments.

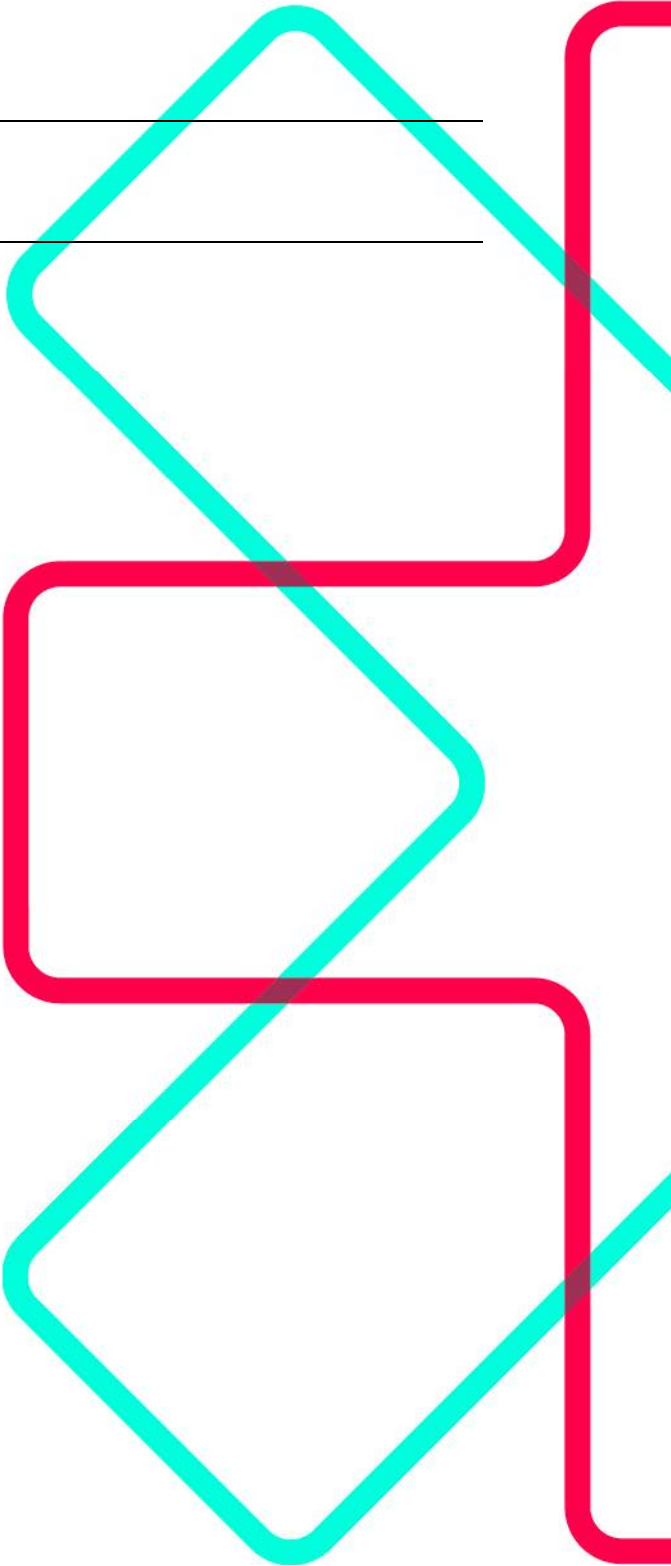
Similarly, Ngāti Waewae and Makaawhio have commercial properties and other interests in town centres on the West Coast including in Hokitika and Fox. As such, they have a contribution to make in ensuring that their investments support and contribute to urban regeneration.

Ngāi Tahu has a strong commercial property business and can potentially provide technical advice and support if and when needed.



SECTION 6:

Next Steps



ACTION PLAN

The second stage of the project is to develop an Action Plan for the West Coast. The Action Plan will specify how priority opportunities will be achieved by articulating key actions, milestones and timeframes, identify lead organisation(s) and partners involved, the resources required, and how progress will be measured and overseen.

The goal is to agree and deliver a final Action Plan by February 2017. Delivering the Action Plan will involve the following steps.

Step 1: Prioritising the short-list of opportunities

Although this study report has identified a short-list of validated opportunities and actions, there are still a number of other feasible opportunities identified that need to be prioritised.

Step 2: Action project planning and outcome/monitoring framework

Action project planning

This phase involves identifying project leads who would work with small teams of relevant agencies and stakeholders to develop a short ('mini') project plan for each prioritised action.

Developing an outcome and monitoring framework

In this phase we will develop a set of output and outcome indicators for measuring progress on the actions. We will identify possible measures concurrently with the project plans as they are developed. Each action will have an associated set of measures related to outputs (e.g., the timing and completion of tasks/activities), short-term outcomes (impacts that are directly attributable to the actions such as better access to certain resources), and medium/long-term outcomes (e.g., increases in investment).

Step 3: Identifying implementation, governance and delivery

The Action Plan will also specify how the implementation of the plan will be overseen and managed in future. Having an oversight or governance group for implementation will help to ensure that there is ongoing pressure and accountability for delivery (rather than the Growth Study and Action Plan 'sitting on a shelf'). This should be a somewhat different group to the Governance Group for the Growth Study and Action Plan as the focus is on delivery rather than advice and input.



Step 4: Drafting the Action Plan

The Action Plan content will include:

- a summary of the background to, and key elements of, the Action Plan
- sections on each major opportunity area, which specify the key actions associated with that opportunity and, for each action, tabulates the key milestones, measures, lead agency responsible, partner agencies involved and timing for completion
- a section on how the Action Plan will be monitored, reported on and reviewed
- a section on responsibilities for overall implementation governance and local delivery.



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