Jobs for the Future in Regional Areas

Keeping our regions thriving

Background

This document is prepared in response to a Senate enquiry into Jobs for the Future in Regional Areas. On 31 July 2019, a Select Committee was established to consider:

a. new industries and employment opportunities that can be created in the regions;
b. the number of existing jobs in regional areas in clean energy technology and ecological services and their future significance;
c. lessons learned from structural adjustments in the automotive, manufacturing and forestry industries and energy privatisation and their impact on labour markets and local economies;
d. the importance of long-term planning to support the diversification of supply chain industries and local economies;
e. measures to guide the transition into new industries and employment, including:
    a. community infrastructure to attract investment and job creation;
    b. the need for a public authority to manage the transition;
    c. meaningful community consultation to guide the transition; and
    d. the role of vocational education providers, including TAFE, in enabling reskilling and retraining;
f. the use of renewable resources in Northern Australia to build a clean energy export industry to export into Asia; and
g. any related matters.

Cradle Coast Authority

The Cradle Coast Authority (CCA) is a joint authority established under the *Local Government Act* by the nine Councils of North West Tasmania to achieve regional outcomes and maintain strong local government, by working together. The Member Council's cover the full range of regional communities, from regional cities — Burnie, Devonport — to regional agricultural communities, to remote communities such as King Island and the West Coast. During 2018, CCA facilitated the development of the Cradle Coast Regional Futures Plan (the Futures Plan), on behalf of Member Councils and the broader Cradle Coast region. The Futures Plan was endorsed by Member Councils in late 2018 and forms the basis of a collaborative approach to economic development activities in the North West and West Coast of Tasmania.

The Futures Plan is being positioned and publicly perceived as:

a) The primary and overarching regional economic development framework for the region;
b) Unifying all nine councils and other key stakeholders on regional economic development matters; and
c) Being managed on behalf of the region by the CCA, through a new Regional Economic Development Steering Group.

Summary

The Cradle Coast region of Tasmania has significant social challenges though it is in a period of growth and prosperity. Renewable energy is a new industry sector that could be a significant diversification of the economy and provide numerous local jobs and investment in the region. The combined effect of economic multipliers for the renewable energy sector in the Cradle Coast region and the wider Australian economy is estimated to be an addition of 1,158 jobs. Significant business investments are being made in aquaculture, forestry, dairy and renewable energy sectors. Investment by government in Project Marinus, which involves the construction of a 1200MW undersea cable that connects the Tasmanian power network to Victoria, will enable the Cradle Coast region to advance the renewable energy sector. The recently announced Blue Economy CRC demonstrates that Northern Tasmania is leading the way in aquaculture and renewable energy research and these skills and experience based in Launceston need extension to Cradle Coast region and direct interaction with industries there. The benefits of research need extension to industry and engagement with our high schools and TAFE systems to ensure that we have the best trained workforce ready to take on new offshore industries.

Government policy can be enhanced by recognising the opportunities and jobs available in regional areas, promoting regional population opportunities and elevating migration strategies for regional Australia. Cradle Coast region has a declining population especially its working age population. We need to fund an engagement strategy with the community to discuss the opportunities in the regions, create a welcoming approach to new settlers and a commitment to supporting people to stay and establish families in the region. Benefits of an increased population to existing residents include an increase in students at schools, more volunteers in community organisations, an increase in doctors and health services available, and a greater variety of social activities that can be supported in a community.

CRADLE COAST AUTHORITY
Stronger Councils, Stronger Region

A. New industries and employment opportunities that can be created in the regions

Renewable energy projects proposed for the Cradle Coast region

There are several renewable energy projects proposed for implementation in our region as part of the Battery of the Nation initiative. These include:

- Whaleback Ridge Windfarm, Energy Park and Research Centre, (West Coast Renewables), up to 1500Mw + extra 100Mw wave energy, $3.1B, 4,500 construction jobs and 325 ongoing jobs[^], under development
- Robins Island/Jim's Plains Windfarm and Energy Park, (UPC Renewables), 600-1000Mw $1.6B, 335 construction jobs and 15 ongoing jobs[*], under development
- Western Plains Windfarm, (Euphron), 46Mw, under development
- Hellyer Windfarm, (Euphron), up to 150Mw, feasibility stage
- Guilford Windfarm, (Euphron), up to 300Mw, feasibility stage
- Wesley Vale Solar Farm, (Euphron), 12.5Mw, under construction
- Pumped Hydro projects at Lake Cethana 600Mw 12 hrs storage, Lake Rowellan 600Mw 24 hrs storage and Tribute Power Station 500Mw, 31 hrs storage West Coast, (Hydro Tasmania)[#], feasibility stage
- Granville Harbour Wind Farm, (Palisade Investments), 112Mw, $280M ($59M Aust Gov Funded), 150 construction jobs and 10 ongoing jobs[^^], under construction
- Small scale Hydro projects increasing the capacity of existing Hydropower schemes, such as storage increase and enlarging catchment areas (Tas Renewable Energy).

Renewable energy sources can provide power to remote businesses where until now, access and connectivity has been a limiting factor. Industrial parks located next to renewable energy sources can provide power for a range of large-scale energy using businesses such as shore-based aquaculture, hydroponic greenhouses, hydrogen production and export facilities. They can also support the large power needs of mineral processing which could increase the jobs provided from mines. These parks would also house energy storage capabilities. Remotely located energy parks provide an opportunity for urban renewal and population growth in the West Coast and Circular Head municipalities. This would be a significant economic stimulus for the Cradle Coast region that would broaden the current economic base of the region.

In addition to the current focus on wind and hydro renewable power there is also a large wave resource, particularly in the far North West and West Coast of Tasmania, there is the potential for wave energy generation to add to the renewable energy mix in this region.

[^]Project Renewable Future, A pathway to a West Coast Tasmania Renewable Energy Future July 2019, West Coast Renewables
[*]https://robbinsislandwindfarm.com/
[#]https://www.hydro.com.au/clean-energy/battery-of-the-nation/pumped-hydro
[^^]https://granvilleharbourwindfarm.com.au/

Offshore Aquaculture in Bass Strait

The farmed salmon industry in Tasmania has seen the recent creation of an estimated 5,200 jobs (including related industries and flow-on impacts) that are largely in regional areas and become an industry that generates sales revenue of $726 million.[^] In 2009 the salmon industry set a target to double to a $1 billion a year industry by 2030, which has been supported by government. It is now widely recognised that this target is conservative as the industry has been tracking well ahead of the growth required to achieve it. The Tasmanian Government has been working with stakeholders and industry to develop a sustainable industry growth plan and has also changed the environmental regulatory framework around farming of salmon in Tasmania to ensure it keeps pace with industry growth.[*] Over the next decade and beyond, the industry expects to see an increasing use of recirculating aquaculture systems to grow bigger fish on land, prior to their transfer into seawater. However, to achieve its sustainable growth potential, the industry will also need additional oceanic farming sites for its marine phase, the final grow out stage of the salmon life cycle. Permits have been issued for the three main salmon farming companies to undertake preliminary work to establish whether there are suitable locations within the permit areas for the possible marine farming of salmon

Full planning and approvals set out in legislation will still apply. In the far north-west of Tasmania a permit has been issued to Petuna Aquaculture Pty Ltd. A permit has been issued to Tassal Operations Pty Ltd for an area of State waters, on the east coast of King Island.

Both government and industry are continuing with a range of initiatives to underpin responsible, environmentally sustainable industry growth with a focus on biosecurity and further transparency.
[^]Sustainable Industry Growth Plan, DPIPWE 2018
[*]Tasmanian Department of Primary Industry Parks, Water and the Environment

Agriculture, particularly Dairy

The dairy industry makes an important contribution to the Australian economy. In 2017–18, it accounted for around 7 per cent ($4.4 billion) of the gross value of agricultural production (ABS 2019) and around 7 per cent ($3.5 billion) of agricultural export income. It's a growing industry in Tasmania – Tasmanian milk production increased by around 37 per cent over the past 10 years, while total Australian milk production faced a decline before recovering to 2006-2007 levels.[^]

Global demand for dairy increased 3.2 per cent in the 12 months to February 2019. [*]

Between 2012 and 2014, processing capability in Tasmania grew by 300 million litres due to investment in new factories by Lion in Burnie and the Murray Goulburn Co-operative in Smithton. Over the next 10 years, milk production has the potential to grow from 883 million litres per year in 2015–16 to around 1.5 billion litres per year, dependent on continued investment in additional processing capacity and farm conversion.[#]

Tasmania is now the country's second biggest producer of organic dairy as demand continues to grow. An increase in the number of certified dairy farms means 12 per cent of the country's organic dairy producers call Tasmania home, second only to Victoria.[^^] Overall

the number of certified organic operations in Tasmania jumped by 19 per cent in 2018 and there are now 157 certified organic producers across the state.

Tasmania has environmental advantages for agriculture including a comparative natural water advantage, irrigation investments, absence of major animal diseases and an ideal climate for pasture-based dairy production. Tasmania has traditionally had lower land prices than comparable dairy areas in Victoria and New Zealand. Tasmania has 12 per cent of Australia's total water resource on less than one per cent of Australia's total land area, and its average annual water run-off is almost twice that of the Murray Darling Basin in South Eastern Australia. An ongoing priority in Tasmania is the completion of major irrigation schemes, with the potential to double the water available for irrigation and maximising water availability over summer. Tasmanian Irrigation has several irrigation projects in development for our region. Delivery of Irrigation projects in Tranche 3 will enable the conversion of forestry, cattle and sheep farmland to high value dairy, horticulture and cropping[**] Tranche 3 Irrigation projects in the North West include Don (under development), Flowerdale 3000ML, Harcus 14,000ML, areas and enhancement of the Sassafras and Wesley Vale scheme 1800ML (in feasibility stage and currently not funded). The primary aim of the schemes developed by Tasmanian Irrigation is to grow the wealth of Tasmania by developing and enhancing the productive capacity of the State's agricultural industries.

[^]Dairy Australia – Australian Dairy Industry In Focus 2016.
*Dairy Australia Situation and Outlook June 2019
[#]The Dairy Industry in Tasmania, A guide for Investors, July 2017
[^^]The Australian Organic Market Report
[**]https://www.tasmanianirrigation.com.au/future-irrigation

Forestry

The forestry industry in Tasmania is rebounding and the plantation forestry industry is growing. In 2016-17, Tasmanian forests produced a total of 5.330 million cubic metres of wood fibre. This was a 21 per cent increase from 2015-16. The private forest estate contributed almost three quarters of the total wood production in Tasmania in 2016-17. 4.01 million tonnes of wood products were exported from Tasmania in 2016-17. [^] The 2016 census reported that there were 2441 people working directly in the forest industry in Tasmania.

The recent Private Forests Tasmania (PFT) Annual Report 2017 - 18 stated "In 2017-18, the total private forest harvest rose for the sixth consecutive year eclipsing last year's record high, increasing a further 9% on last year to supply 4.25 million tonnes of logs to the market. This is the first time the private forest estate has delivered over 4 million tonnes of logs to market and is nearly four times larger than the low of 2011-12 (1.11 million tonnes)." The dominance of the plantation-based sector continued with logs supplied from plantations comprising 97% (4.11 million tonnes) of the total Tasmanian private forest harvest, the highest proportion recorded to date. [*]

Government actions to diversify the forestry industry have been positively accepted into the region and are establishing in the community. A total of up to $1.25 million has been made available through the State Government's Wood and Fibre Processing Innovation Program, to support initiatives to better utilise wood and agricultural residues in Tasmania. 13 applicants were successful, involving projects with a combined value of more than $7 million. There has been an increase in alternative avenues for wood production sales to increase the diversity of the sector and mitigate future global price disruptions on the industry.

In the North West, the Hermal Group timber processing facility is under construction. This may require upgrades and changes to the transport infrastructure particularly at Burnie port to accommodate different product types being exported.

[^]Forestry Tasmania; Private Forests Tasmania
*Forico Sustainability Snapshot 2018

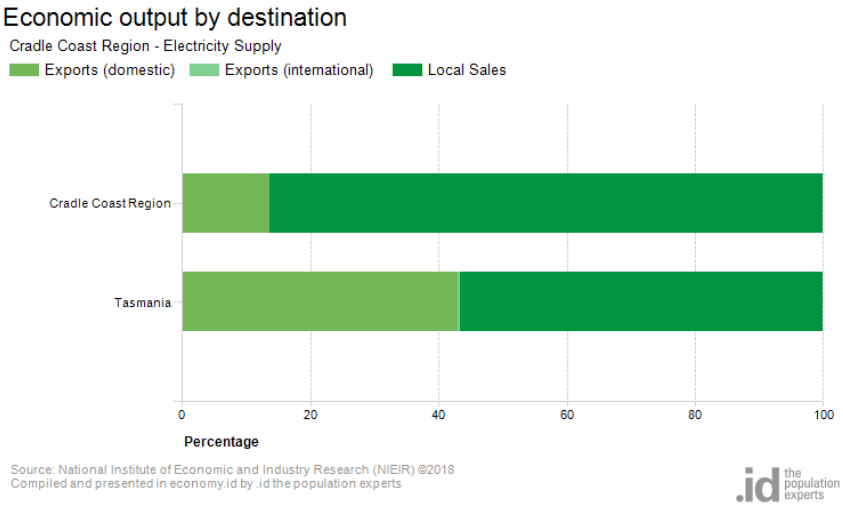
B. The number of existing jobs in regional areas in clean energy technology and ecological services and their future significance;

Clean energy technology is the backbone of electricity generation in Tasmania. Currently the jobs in the sector in the Cradle Coast region and total sales are dropping. This is also reflected in the economy of Tasmania, which is losing market share within Australia. Tasmania is now producing 2% of the output of the electricity supply sector compared to 3% in 2012/13. There is significant opportunity for Tasmania to increase the exported supply of electricity to mainland Australia.

Cradle Coast Region - Industry Sector Analysis

Electricity Supply - Constant prices	2017/18	2012/13	**Change**
Economic measure	**Cradle Coast Region**		**2012/13 to 2017/18**
Employment (FTE)	174	207	-32.6
Output/Total Sales ($m)	133	275	-141.3
Source: National Institute of Economic and Industry Research (NIEIR) ©2018. Compiled and presented in economy.id by .id , the population experts.			

There is an opportunity for the Cradle Coast Region to increase its export of power to Victoria and the Australian mainland. The region lags behind the export of electricity compared to the rest of Tasmania, due to lack of connectivity to the mainland from our region.



Impact of Renewable Energy Industry Growth

The economic impact of adding 250 ongoing jobs into the Cradle Coast region by the renewable energy sector are great. An additional $480.35M is added to Australia's economic output and there is a multiplier effect which creates 1,158 jobs Australia wide. This is calculated by using an input-output model which is derived from the local economy microsimulation model by National Economics (NIEIR). The combined effect of economic multipliers in the Cradle Coast region and the wider Australian economy is estimated to be $480.35m added to Australia's output.

The combination of all direct, industrial and consumption effects would result in a total estimated increase of 539 jobs located in the Cradle Coast region. The combined effect of economic multipliers in the Cradle Coast region and the wider Australian economy is estimated to be an addition of 1,158 jobs.

C. Lessons learned from structural adjustments in the automotive, manufacturing and forestry industries and energy privatisation and their impact on labour markets and local economies;

Forestry Industry in the Cradle Coast

The implosion of the forestry industry in Tasmania has resulted in a decrease in FTE employment in the sector of 32 jobs since 2012/13. This impact has affected the Cradle Coast region of Tasmania less than other areas of Tasmania, with the

overall output in total sales and exports growing by $10.6M over that time period. As a percentage of forestry in Tasmania the Cradle Coast has increased in its share of the industry from 25% to 29%.^

Manufacturing Industry in the Cradle Coast

Jobs are being lost from the manufacturing industry in Cradle Coast region of Tasmania, with 723 full time jobs lost in the last 5 years. This is consistent with the loss of manufacturing jobs in the whole of Tasmania and a shift in the economy away from this sector. Total sales from this sector has dropped by $315M since 2012/13.^

^National Institute of Economic and Industry Research (NIEIR) ©2018. Compiled and presented in economy.id by .id , the population experts.

D. The importance of long-term planning to support the diversification of supply chain industries and local economies;

The mining industry is rapidly moving to embrace technology and the types of jobs and the skills required, in mining today are very different to those of the past. There is a real risk of employment displacement in these industries as those currently employed do not have the skills to support future operations. There is an increasing need for robotics and sensor expertise, as wells as expertise in electronics and automation. This is true in mining, aquaculture and agriculture. There needs to be long-term planning to ensure that current workforces are supported in training to survive these transitions and local people have opportunity to access enhanced education and take advantage of the increasingly skilled jobs in regional areas.

While mining is a major contributor to the region's economy, other key export sectors such as manufacturing and processing, dairy and agriculture are also susceptible to major shocks, so it is important that we have a diverse local economy and supporting supply chains.

Through the Regional Futures Plan, Cradle Coast Authority identified the need for new, agile and adaptive approach to economic development that focuses on supporting people in regional communities to take more responsibility for their own problems and to adjust to their own changing social and economic circumstances. The Futures Plan highlighted that these approaches will work if they:

- Are led by communities, in partnership with government
- Build on the region's specific strengths
- Are delivered at effective functional rather administrative scales
- Include investment in developing the capability of people in communities to deal with transition and adaptation
- Include a system of governance, collective leadership and backbone support.

CCA is a unique form of regional governance in Australia and is well placed to help strengthen the development potential of our communities, businesses and places in the region. It can achieve this by providing the regional leadership, shared understanding, governance and facilitation to support solutions that are best tackled through collective action.

Renewable energy industry, alternative hardwood products and organic dairy farms are key diversifications of the economy in the Cradle Coast region. A workforce plan is underway for Agriculture and will be prepared by Skills Tasmania. Additional workforce plans are needed for renewable energy and the whole region, in order to understand and plan for the changes that will take place. Large scale renewable energy projects will likely require additional temporary housing, supplies and resources for construction to commence and with the scale and number of projects being proposed an awareness of the timings and inputs needs to be undertaken. The is particularly important considering the shortage of construction workers in the region. The renewable energy projects are large construction projects with small numbers of ongoing jobs and high export value, care needs to be taken to ensure that they give back to the community in which they reside.

E. Measures to guide the transition into new industries and employment, including:

1. community infrastructure to attract investment and job creation;

Attracting further Renewable Energy Industry Investment

In contrast to other states, Tasmania's ability to generate electricity is constrained by the availability of water, rather than the capacity of its power stations. The yield from Tasmania's water catchments and storages is affected by climate, leading to significant variability and unpredictability in Tasmania's available generation. Based on long-term average inflows, however, Tasmania has a deficit of on-island generation compared to consumption of approximately 700 GWh to 1,000 GWh per annum (approximately 7 per cent to 10 per cent). Therefore, Tasmania imports a small portion of its electricity from Victoria via Basslink to meet its energy needs. During 2015–16, Tasmania experienced one of the most significant energy security challenges in its history. The combined impact of two rare events – record low rainfall during spring following already low storage levels, and the Basslink interconnector unexpectedly being out of service for an extended period – resulted in Hydro Tasmania's water storage levels falling to historically low levels. Increased interconnection

capacity between Tasmania the other National Energy Market has the potential to realise a net economic benefit through the increased sale of power to Victoria.

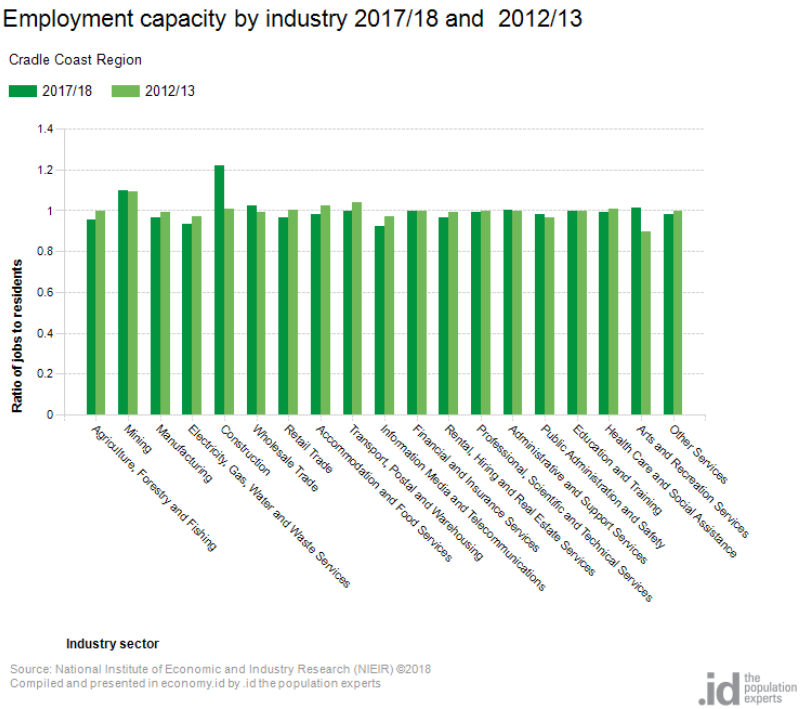
Project Marinus ($2.7B) involves the construction of a 1200MW undersea cable that connects the Tasmanian power network to Victoria.^ Proposed sites for exit are in the NW. This is a key initiative being considered as part of the Australian Government Battery of the Nation strategy. Proposed by the State Government to Infrastructure Tasmania as one of their top 5 projects of state significance, this project will delivery growth opportunities in the energy industry, including renewables and hydro power.

^Project Marinus Initial Feasibility Report, 2018 Australian Renewable Energy Agency https://projectmarinus.tasnetworks.com.au/initial-feasibility-report/

Promoting Tasmania's workforce growth at the National level

Overall the NW Coast of Tasmania is going through a period of economic growth and prosperity, the economic fundamentals of the region are strong. Current projections suggest a potential net increase in jobs through to 2022, over and above current trends.^ The jobs to residents ratio for the Cradle Coast Region in 2017/18 was 1.01, meaning that there were more jobs than resident workers. Like the rest of Tasmania, there is a demand for construction workers and health care workers that is being unmet. Many employers are struggling to find workers, 36% of employers in West and North West Tasmania were having difficulty recruiting up from 29% two years ago.^ (Survey of Employers recruitment experience 2018 and 2017)

^Data provided by Ivan Neville (labour market research and analysis Department of Jobs and Small Business).



Supporting Liveability

In Mining, Aquaculture and Renewable Energy, improving technology and internet connectivity is driving the use of remote workforces. For example, the mining industry can now use remote drivers to operate underground machinery. There are many aquaculture feed pens located around the State, including places as remote as Macquarie Harbour, that are operated from Hobart. Renewable energy, such as Hydropower stations are also monitored centrally. This is in addition to the long-established drive-in, drive-out workforce that is used in mining. Technology improvements are reducing the cost of using workers outside of regional areas, reducing the economic impact of the new jobs the Cradle Coast region. In the creation of jobs, it is important to realise that some jobs or working configurations may have negative impacts on the local community. To counter this trend there needs to be more work to ensure that remote and regional communities are considered liveable, that these communities can attract workers so that employers do not need to seek remote solutions. There also needs to be an emphasis on supporting investment in new industry and projects that create ongoing jobs where people live and work in regional areas. Supporting an investment where the jobs are remote, or drive-in, drive-out may be counter-productive. There needs to be increasing support to provide community infrastructure in remote and regional areas.

There is a long-term economic concern with remote or drive-in, drive-out workforces in that while larger projects and companies can afford the costs associated with them, smaller projects cannot, if our remote and regional communities become unviable due to the extent of these practices there is a risk that many of the smaller mining and renewable energy projects many not occur.

2. the need for a public authority to manage the transition;

Public Authority Management of the transition

The Cradle Coast Authority (CCA) is a joint authority established under the *Local Government Act* by the nine Councils of North West Tasmania to facilitate the sustainable development of the region, resolve regional issues and coordinate regional-scale activity. The CCA Board is made up of a combination of independent and local government directors and is appointed by the CCA Representatives. The CCA Representatives consists of two representatives of each member council, usually the Mayor and General Manager. The Board operates in a legislative and public policy environment that provides frameworks for accountability, governance, management, policy development and service delivery.

A Regional Economic Development Steering Group (REDSG) has been established to provide overall systems leadership and guide the implementation and review of the Futures Plan, and to provide advice to the CCA Board (and Tasmanian and Australian Governments when requested) on related regional economic development matters, including prioritising regional investment opportunities.

The Cradle Coast Authority has a history of delivery, with strong ties to region and links to local councils and the community.

3. meaningful community consultation to guide the transition; and

Social Challenges in NW Tasmania

There are some deeply embedded systems, structural challenges that need to be overcome to ensure that the workforce is well-placed to provide the skills and capabilities to take on the jobs that are coming. The problems identified in the Regional Futures Plan^ are:

- Low educational attainment levels and incompatible skills are leading to higher unemployment rates
- An older and aging workforce, static population growth and out-migration particularly of young people is resulting in a shrinking working age population
- Significant labour demands due to health care sector and construction industry growth
- Our size and remoteness requires increased strength in our key industries and businesses

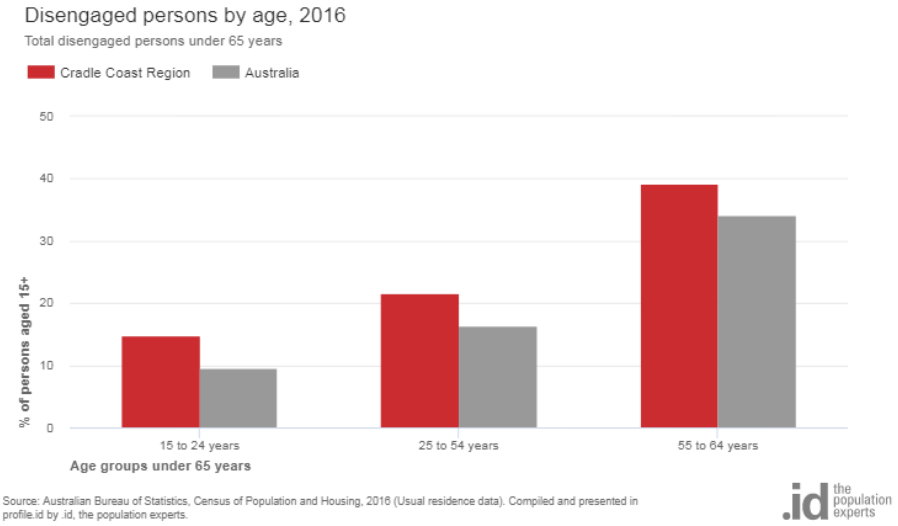
^Cradle Coast Regional Futures Plan 2019 - 2022, Cradle Coast Authority Nov 2018

Population decline

NW Tasmania's population has declined by 1800 people over the last 5 years, even though jobs and industries are growing.(ABS Resident population 2017) Young people are leaving the region, 29% of 17-18 year olds left the West and North West in the 5 years to 2016 (ABS Census of Population and Housing 2016).

Disengagement of Youth

Youth unemployment is up 12.8% (May 2018) and disengagement of our community is higher than the national average. In 2016, 14.8% of 15 to 24 year olds in the Cradle Coast Region were disengaged with employment and education, compared to 10.4% in Greater Hobart.



Socio-economic Disadvantage

Socio-economic advantage and disadvantage can be defined as people's access to material and social resources, and their ability to participate in society. The Cradle Coast region has higher socio-economic disadvantage than Regional Tasmania and Tasmania^, predominately affected by our remote communities in Circular Head, West Coast and King Island. Location can influence the range of opportunities, goods and services available to satisfy an individual's needs and lifestyle for them and their family. This doesn't necessarily mean that all people living in rural areas are disadvantaged, only that their lifestyle and living arrangements are different to those living in a city.

^Australian Bureau of Statistics, Census of Population and Housing 2016. Compiled and presented in profile.id.

Community Engagement

There is a resistance to change in every community in Australia. Population increase is associated with increased congestion on roads, increased waiting times for health services and recreation facilities. It can create a negative conversation about the region and the opportunities that are available for work and lifestyle. We can prepare the community for change. The jobs are coming, new industries are beginning, and established industries are expanding and adapting. We need a local engagement strategy tackling local issues and a national conversation about regional Australia and its opportunities.

We can understand the advantages that increased population migration will have on maintaining services in the face of a declining natural population. We need to fund an engagement strategy with the community to discuss the opportunities in the regions, create a welcoming approach to new settlers and a commitment to supporting people to stay and establish families in the region. Benefits of an increased population to existing residents include an increase in students at schools, more volunteers in community organisations, an increase in doctors and health services available, and a greater variety of social activities that can be supported in a community.

4. the role of vocational education providers, including TAFE, in enabling reskilling and retraining;

TAS TAFE, research and regional skills training

A key method identified in the Futures Plan to improve the disadvantage of our residents was to improve training and qualifications in the region. TAFE and vocational education providers are essential to engage locals so that we can meet the needs of emerging businesses and industries in the region.

Dairy Industry

The Tasmanian State Government has committed to work through TasTAFE to further develop the role of Freer Research Farm at Burnie in delivering agricultural education, skills and training.^ Freer Farm will become a North-West training hub where students can study agriculture at various tertiary levels. The site will become an Agriculture Centre of Excellence and a contemporary learning centre. It will include TasTAFE course delivery, plus extended delivery through partnerships with Agritas and the University of Tasmania. Outreach training will also be a key component of delivery provided on farms throughout Tasmania.

^White Paper Growing Tasmanian Agriculture – Research, Development and Extension for 2050, DPIPWE

Renewables Industry

Building from the experience of the Dairy sector, there is a need to establish a coordinated approach to providing training in Tasmania so that Cradle Coast students both young and old can benefit from the expansion of the Blue Economy in the region. In April 2019, the federal government committed to the Blue Economy CRC: a $329M research project is a 10-year collaboration between 45 national and international partners from industry, research and government, underpinned by a $70 million cash investment from the Federal Government. The University of Tasmania will lead the project which will be based in Launceston and would build on Tasmania's and the University's distinctive strengths in aquaculture and marine ecology, offshore engineering and marine renewable energy. The Blue Economy CRC will support a research community of 50 PhD students and 50 postdoctoral research fellows throughout Tasmania and with partner organisations nationally and internationally. It will bring together aquaculture, renewable energy and offshore engineering. Australia has the world's third largest exclusive economic zone and is positioned adjacent to the largest markets for seafood and energy. Industries must be enabled to move from the coast zone into more exposed operating environments before we can secure this major opportunity for the nation. The CRC is expected to generate more than $4 billion for the national economy.[^]

Blue Economy CRC demonstrates that Northern Tasmania is leading the way in aquaculture and renewable energy research and these skills and experience based in Launceston need extension to Cradle Coast region and direct interaction with industries there. The benefits of research need extension to industry and engagement with our high schools and TAFE systems to ensure that we have the best trained workforce ready to take on new offshore industries.

A Renewable Energy Centre of Excellence is proposed for the Cradle Coast. It will combine UTAS and TAFE education and training, Tasmanian energy resource based renewable energy research and collaboration across CSIRO, UTAS, TAFE and Industry on early commercialisation of initiatives developed. The centre would be designed to expand to meet the future education, training and R&D needs across multiple industry sectors and designed to provide students with a clear education and training pathway from Year 10 to PhD level. Research would be focused on wind, wave, pumped hydro, hydrogen, solar and transport and storage options. This could also be expanded to include aquaculture and other blue economy research as they are particularly relevant for the region. This project needs government support and collaboration to ensure the connectivity of our urban centres to our regions and to maximise the benefit to Tasmanian residents.

[^]Blue Economy Cooperative Research Centre Bid Prospectus https://blueeconomycrc.qwilr.com/Rx6V8opvQShK

Increasing Cradle Coast's population migration

Population in Australia despite the decline in population in the Cradle Coast region, is expected to rise. The Regional Australia Institute notes that Australia is on track for substantial population growth in the coming decades, with the Australian Bureau of Statistics (ABS) forecasting growth of up to 19 million additional people by 2056 – a 75 per cent increase.[1]

"If we continue with current geographic patterns of settlement, most of our future population will reside in our major capital cities, while **regional areas will experience only modest levels of growth**. These patterns reflect global trends towards increasing urbanisation and employment growth in city-based service industries. Rapid urban population growth creates challenges that are already clear to residents in the outer suburbs of our major cities. High house prices paid by average wages and rising congestion have already emerged as key points of debate as we consider the population growth to come. **Australia has alternatives**."

Currently, public debate and planning have paid limited attention to the role regional Australia can play in accommodating additional population and in fact regional Australia needs more people to fill the jobs that are available. The modelling undertaken by the University of South Australia and presented in the report,[1] suggests that dispersing population growth can increase incomes in regional cities while having a limited impact on outer suburban areas of Melbourne, Sydney, Brisbane and Perth. Employment data also shows that a worker in a regional centre has just as much likelihood of being employed as those in the outer suburbs.

The Regional Australia Institute recommends that to better balance the national population we seek:
1. The establishment of a national awareness campaign to promote regional population opportunities.
2. The development of regional settlement strategies for each major city and surrounding regions.
3. The elevation of migration strategies for regional Australia.

[1] Archer J., Houghton K., and Vonthethoff B. (2019). *Regional Population Growth – Are We Ready? The economics of alternative Australian settlement patterns,* Regional Australia Institute: Canberra.

F. the use of renewable resources in Northern Australia to build a clean energy export industry to export into Asia; and

No comment.

G. any related matters.

Cradle Coast Authority welcomes any opportunity to engage further with the enquiry, through our Renewable Energy and other working groups or the Regional Economic Steering Group (REDSG).

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