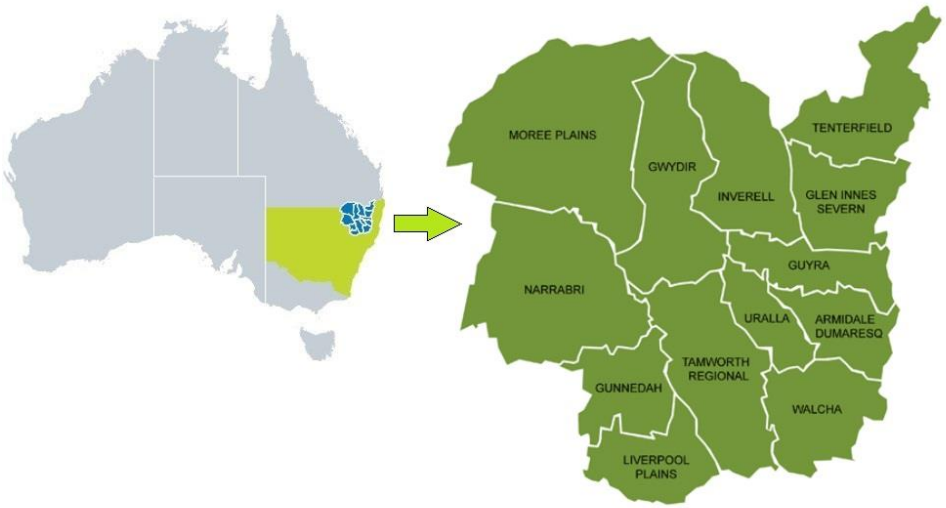
**Annexure 1**

## Regional Profile – Northern Inland NSW

The Northern Inland Region is defined by the Local Government Areas (LGAs) of:

- Armidale Dumaresq
- Glen Innes Severn
- Gunnedah
- Gwydir
- Guyra
- Inverell
- Liverpool Plains
- Moree
- Narrabri
- Tamworth Regional
- Tenterfield
- Uralla
- Walcha




Original region artwork kindly provided by Regional Arts NSW.

The Northern Inland region is dominated by resource-based agricultural activity, including a high dependence on irrigated agriculture in some locations. When flow-on effects are included, agriculture accounts for 40-50% of economic activity in some localities. Much of the services sector is geared to support agricultural production, though in the larger cities such as Tamworth and Armidale, the economies are more diverse, with services geared toward the needs of household consumption. Expanded mining activity is also a key feature of some local economies including Gunnedah, Narrabri and Werris Creek.

Environmental issues are largely focused around land and water management, though with the advent of the carbon economy, waste disposal and energy use now feature strongly in the sustainability plans of local government. Land-use conflict between mining (especially coal-seam gas mining) and agriculture has emerged as a key issue. The focus is mostly on the environmental effects of mining on the extensive groundwater which supports irrigated agriculture on the Liverpool Plains, a highly productive agricultural region surrounding Narrabri, Gunnedah, Tamworth and Quirindi.

Key social and cultural features include a strong connection to the land, a large indigenous population (9% indigenous compared to the state and national average of 2.5%, ABS Census 2011), social events often based around small localities, strong representation of Australian and

English ancestry (ABS Census 2011) and very high proportion of households (92.7%) where English is the only language spoken (ABS Census 2011). The region contains three distinct geographic areas, the Northern Tablelands, the North West Slopes and the North West Plains.

### The Northern Tablelands

These are the largest highland area in Australia covering 34,500 square kilometres. The eastern escarpment has spectacular gorges, rainforests and waterfalls, protected in 25 National Parks, three listed as World Heritage Areas by UNESCO and part of the Gondwana Rainforests of Australia.

The Northern Tablelands is a high summer rainfall region with averages from 650 mm on the western slopes to over 1,200 mm on the east of the range. Major towns include Armidale, Glen Innes, Tenterfield, Walcha, Uralla and Guyra.

### The North West Slopes

Situated on tributaries to the Darling River that rise in the Great Dividing Range including the Barwon, Gwydir, and Namoi Rivers, the NW Slopes covers 29,500 sq. km.

The NW Slopes are traversed by the New England, Newell, Kamilaroi, Oxley and Gwydir Highways and by railways linking to Sydney with connections to the Port of Newcastle. The largest regional centre is Tamworth. Other urban centres include Quirindi, Gunnedah, Manilla, Barraba, Bingara, Warialda and Inverell.

### The North West Plains

An extensive pastoral area covering over 32,000 sq. km west of the NW Slopes, featuring prime agricultural land drained by the Namoi and Gwydir Rivers and its tributaries, the Mooki, Mehi and Peel Rivers. Major Towns include Moree and Narrabri. For the purposes of the RDANI Regional Plan analysis of themes, issues and priorities, regional towns of 500 or more residents have been grouped as follows:

| Population Cluster Description | Size | Towns & Cities |
|---|---|---|
| Small Rural Towns (CLUSTER A) | 500-1000 | TINGHA, CURLEWIS, WALLABADAH, BOGGABILLA, ASHFORD, MUNGINDI, DELUNGRA, DRAKE, EMMAVILLE, BELLATA, BELLATA, DEEPWATER, WOOLOMIN, BUNDARRA, CARROLL, SPRING RIDGE. |
| Small Regional Towns (CLUSTER B) | 1000-3000 | URALLA, MANILLA, GUYRA, WALCHA, WEE WAA, WERRIS CREEK, KOOTINGAL, WARIALDA, BARRABA, BINGARA, BOGGABRI |
| Medium Regional Towns (CLUSTER C) | 3000-7000 | GLEN INNES, TENTERFIELD, QUIRINDI |
| Large Regional Towns (CLUSTER D) | 7000-10000 | INVERELL, MOREE, GUNNEDAH, NARRABRI |
| Small Regional Cities (CLUSTER E) | 10000-20000 | ARMIDALE |
| Large Regional Cities (CLUSTER F) | >40000 | TAMWORTH |

**Table 1. Northern Inland NSW population clusters** *Source: RDANI (2010)*

## 1. Human Capital

The 2013-14 Department of Education, Employment and Workplace Relations (DEEWR) have conducted a comprehensive environmental scan and community consultation to identify the key education, skills and jobs challenges for the region (DEEWR 2013 Regional Education, Skills and Job Plan – RESJ Plan). They identify the challenges for the Northern Inland as:

- the provision of and access to early childhood / child care services and the promotion of networked communications and support;
- identifying and delivering effective education and training strategies, programs and work experience opportunities for all students, including those disengaged;
- the promotion of regionally specific careers advice, guidance and pathways;
- difficulties identifying and measuring regional skills needs and shortages, combined with a need to capitalise on opportunities in the emerging industries while addressing industries in apparent decline;
- Closing the Gap in all areas for Indigenous Australians.

The key goals of the RESJ Plan are to:

- develop a cohesive region-wide focus on the provision of early childhood and child care services under the National Quality Framework (NQF) and move towards a strong network of communication and support throughout the region;
- promote and support an effective range of programs across the early stages of student development;
- ensure a broad range of opportunities are made available to all secondary students across the region, including existing programs to raise retention and Year 12 or equivalent attainment levels;
- ensure the provision of unique and effective alternatives to mainstream education leading to attainment of recognised qualifications;
- ensure a regional awareness of tertiary opportunities, increase the uptake of courses, and conduct continuous review of course relevance to regional needs;
- raise students' and parents' awareness and knowledge of the full range of regionally specific careers, training and further education opportunities and pathways within the Northern Inland region;
- use partnerships to identify present and future regional workforce needs and shortages, leading to the development of skills and employment strategies and projects;
- maximise opportunities through emerging industries, whilst supporting those upon which the region has been founded;
- improve access and participation for Indigenous Australians across all levels of education, skills development and employment within the region.

Table 2 highlights a particular human capital issue in our region, the high rate of indigenous unemployment. It is fair to say that decades of government developed programs have failed to

generate a significant improvement in this situation, but gains are now being made through innovative local programs such as 'Backtrack' (see http://backtrack.org.au/) which allows young indigenous (and non-indigenous) people to reconnect with education and training.

**Table 2. Rates of unemployment in the Northern Inland region (%)**

| Local Government Area | Overall unemployment rate (%) by LGA – September 2012 | Indigenous unemployment rate (%) by ABS Indigenous Location - 2011 |
|---|---|---|
| Armidale Dumaresq | 5.7 | 21.9 |
| Glen Innes Severn | 8.1 | 25.0 |
| Gunnedah | 6.5 | 25.8 |
| Guyra | 8.1 | 26.5 |
| Gwydir | 4.5 | 25.9 |
| Inverell | 8.1 | 28.2 |
| Liverpool Plains | 6.5 | 17.1 |
| Moree Plains | 8.4 | 30.7 |
| Narrabri | 5.1 | 26.1 |
| Tamworth Regional | 6.2 | 21.1 |
| Tenterfield | 7.5 | 31.6 |
| Uralla | 5.1 | 12.0 |
| Walcha | 3.9 | 21.3 |
| NSW | 5.9 | 16.9 |

*Source: DEEWR (2013)*

## 1.1 Education Infrastructure

The Northern Inland has educational facilities equal to any metropolitan city, from pre-schools to university. The region hosts the University of New England, 11 TAFE Campuses, 17 Public High Schools, 89 Public Primary Schools, 13 Private High Schools, 32 Private Primary Schools, and 70 early learning/childcare facilities. Some 10% of employment in Northern Inland NSW is in the education sector.

The New England Institute of TAFE has a wide regional presence using modern technologies to deliver courses and training to match employer needs. However, centralisation of courses in larger centres (Tamworth, Armidale) and associated pressures on employers and students is an issue in smaller towns.

The University of New England (UNE) is the oldest regional university in Australia and has a reputation as a leader in higher learning and hosts a number of key research centres. UNE interacts with the region's industries and communities on its teaching and research. Courses are varied and cover many employment areas experiencing skills shortages. Major courses areas include Arts, Medicine and Health, Business, Information Technology, Education, Science, Agriculture and Law.

Recent developments at UNE have seen a shift of focus to external students, and a diminution of the national reputation of its once world-renowned agricultural courses. This is contributing to a shortage of skills in the agricultural sector, the sector which contributes most to the Northern Inland economy. This is an issue of considerable concern.

## 1.2 School education performance

### Primary

Across the Northern Inland RDA region, there are 80 public primary schools, nine independent primary schools and 20 Catholic primary schools.

The National Assessment Program – Literacy and Numeracy (NAPLAN) is an annual assessment completed by every student in Years 3, 5, 7 and 9 in four domains: reading, writing, language and numeracy. The minimum standard is the second lowest band. Any student at or above this level is considered to have achieved the basic skills required to fully participate in schooling.

According to the Department of Education and Communities (DEC), the 2010 NAPLAN results for Northern Inland RDA region schools indicated that Year 3 and Year 5 students achieved the second lowest numeracy and literacy results in New South Wales, though noting that there have been some very good results in individual schools or towns.

### Secondary

There are 37 secondary schools across the Northern Inland RDA region: 27 public, five independent and five Catholic schools. The number of students completing Year 12 at each school varies annually. In 2010, Northern Inland RDA compiled data indicating that over half of the 27 public high schools in the region reported a decrease in the number of students that completed Year 12.

As with the 2010 NAPLAN results for Year 3 and Year 5, Northern Inland students in Year 7 and Year 9 achieved the second lowest numeracy and literacy results in New South Wales.

## 1.3 Post-school education levels

Post-school education qualifications are recognised to contribute to individual well-being and to the economic (and socio-cultural) development of any region. A workforce with diverse skills and knowledge is vital for continued economic development. Northern Inland post-school qualifications levels in 2011are summarised in Table 3 below.

The Northern Inland was underperforming in 2011 relative to the State as a whole, in proportions of residents with postgraduate and bachelor degree qualifications but had higher proportions and growth of people with non-university, trade-type qualifications.

**Table 3. Post-School Qualifications NSW & Northern Inland 2001-11**

| | *2001 Census* | | *2006 Census* | | *2011 Census* | | *Growth 2001 - 2011 %* | |
|---|---|---|---|---|---|---|---|---|
| | *NSW* | *Persons NI* | *NSW* | *Persons NI* | *NSW* | *Persons NI* | *NSW* | *Persons NI* |
| Persons aged 15 years and over | 4,997,818 | 133,698 | 5,231,596 | 135,539 | 5,564,802 | 139,402 | 11% | 4% |
| | | | | | | | | |
| | | | | | | | | |
| Non-school qualifications(a): | | | | | | | | |
| Postgraduate Degree Level | 109,623 | 1,659 | 161,907 | 1,994 | 237,593 | 2,525 | 117% | 52% |
| Graduate Diploma and Graduate Certificate Level | 60,950 | 1,447 | 65,710 | 1,415 | 82,454 | 1,708 | 35% | 18% |
| Bachelor Degree Level | 506,806 | 8,364 | 632,835 | 9,770 | 784,869 | 11,392 | 55% | 36% |
| Advanced Diploma and Diploma Level | 312,187 | 6,277 | 386,316 | 7,433 | 460,520 | 8,539 | 48% | 36% |
| Certificate Level | 819,902 | 20,996 | 879,528 | 24,685 | 982,308 | 28,639 | 20% | 36% |

*Source: ABS Census (2011)*

## 1.4 Skills needs

It is a difficult task to determine an accurate Northern Inland regional skills needs assessment with no all-encompassing survey undertaken across industries, employer clusters, employment services, and other agencies.

Table 4 summarises employment change by industry in the region to provide an insight into where future skill shortages may appear.

**Table 4. Industry Employment Changes in the Northern Inland Region**

| Industries with increasing numbers | Industries with decreasing numbers |
|---|---|
| Administration and support services | Accommodation and food services |
| Arts and recreation services | Agriculture, forestry and fishing |
| Construction | Financial and insurance services |
| Education and training | Information media and telecommunications |
| Electricity, gas, water and waste | Manufacturing |
| Health care and social assistance | Rental, hiring and real estate services |
| Mining | Retail trade |
| Professional, scientific and technical services | Transport, postal and warehousing |
| Public administration and safety | |
| Wholesale trade | |

*Source: DEEWR (2013)*

There continues to be an emerging resources industry within the Northern Inland RDA region, and a number of sites proposed or developing will have a significant impact upon the region's labour situation. The coal mining and coal seam gas interests across the Namoi basin (Quirindi, Gunnedah, Boggabri and Narrabri) have expanded considerably with major projects still to

proceed. The Gunnedah Basin Coal Producers Group represents the major industry interests in this area as well as the Minerals and Energy Working Group that involves a variety of groups and agencies from across the region.

The mining sector has come in for criticism for attracting skilled workers away from existing industries in the region. This had occurred at a time when the Northern Inland RDA region has experienced difficulties in attracting and retaining skilled workers. Strategies to recruit and retain skilled workers, identify potential up-skilling or recognised prior learning programs and promote opportunities to encourage employers to undertake specific workforce development planning and analysis need to be considered. A recent economic development strategy study for Tamworth (SGS Economic and Planning 2010) indicated that a lack of interaction between industry and TAFE was contributing to skill shortage issues in the region, and delays in responding to new skills demands as they arise. Particular skills shortages in the Tamworth economy included transport operators and logistics and food processing, though shortages existed across most industries.

As pointed out in the State of the Regions (SoR 2013) report, Australia has largely failed to maximise the benefits to be gained from the mining boom and this is a lesson the Northern Inland region needs to heed well. Other countries (Norway for example) legislated for high levels of local content and implemented skills training programs specifically to allow local economies to capitalise upon the economic benefits of their resources boom. Nothing of this nature has been implemented in Northern Inland NSW.

## 1.5 Innovation

One element of human capital which can be critical to business development and hence regional economies, is the capacity for business operators to innovate. The Regional Australia Institute recently developed a measure of innovation as part of its Insight project (Table 5).

**Table 5. Innovation Ranking for Northern Inland NSW**

| **Overall Theme Score** | **13** |
|---|---|
| Human resources in science and technology | 33 |
| Research and development managers | 30 |
| Presence of research organisations | 13 |
| Expenditure on research and development | 1 |

*Source: RAI INsight (2013)*

Table 5 indicates that the region ranks quite strongly for the innovation theme (13th out of 55 RDA regions), largely as a result of a strong research and development expenditure and presence. This is not surprising given the presence of the UNE and several agricultural research agencies/facilities in the region.

## 2. Sustainable communities and population growth

## 2.1 Economic

### Employment by Industry Sector

Figure 2 provides a time-series profile of employment by industry sector across the 13 Northern Inland LGAs for the last four Census periods (1996-2011). Up until 2006, there was some growth in the overall number of jobs, rising to 72,760 at the 2006 Census. However the 2011 Census reveals a decline in job numbers to 66,784 which is below the 2006 level.

While agriculture continues to be the region's largest employer, the decline in agricultural employment continues, as farmers seek productivity gains by substituting capital for labour.

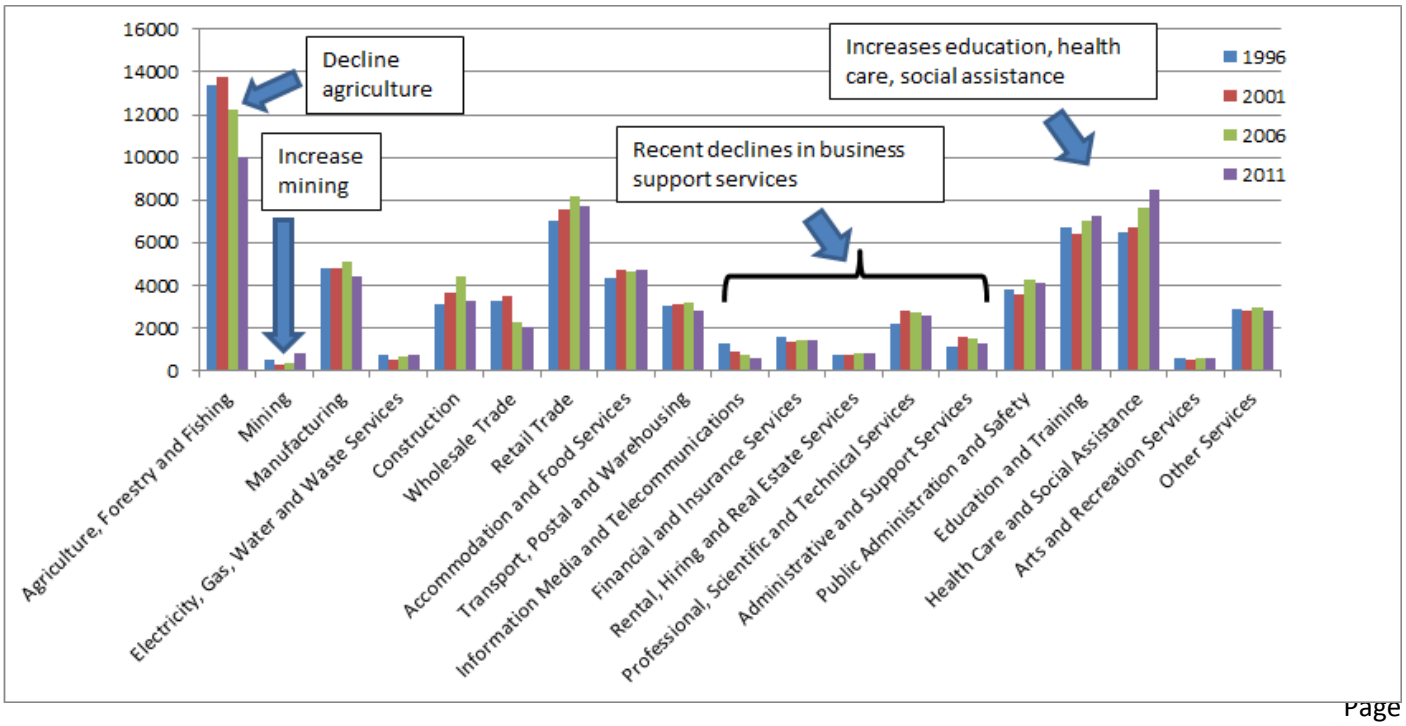
Other key features of regional employment include a notable spike in mining employment in 2011 as mining activity expanded on the Liverpool Plains, and increases in the social services sector (health, education, social assistance), much of which would be in the public sector. Services which support businesses have largely declined since 2001.

Increases in health care and social assistance are a consequence of an ageing population.

There have also been some recent declines in the sectors which service businesses (finance, technical, insurance etc.). This is typically one of the economic obstacles which regional areas will face in trying to grow their business sector, or attract businesses from metropolitan areas. Many businesses prefer to be located close to their supply and business support services.

Past employment gains in manufacturing, construction and retail trade appear to have been lost in 2011.

**Figure 2. Northern Inland Employment by Industry 1996-2011**



*Source: ABS Census (2011),*

### Employment, Unemployment and Incomes

One of the indicators produced by the Insight project is a ranking of key labour market measures for the 55 RDA regions in Australia. As shown in Table 6, the Northern Inland region scores quite poorly on this indicator, with an overall theme ranking of 39.

**Table 6. Labour Market Efficiency Ranking for Northern Inland NSW**

| | Measure | Ranking |
|---|---|---|
| **Overall Theme Score** | | **39** |
| Unemployment rate | 6.20% | 41 |
| Young unemployment | 13.40% | 39 |
| Participation rate | 73.60% | 33 |
| Skilled labour | 31.70% | 12 |
| Welfare dependence | 22.10% | 49 |

*Source: RAI INsight (2013)*

Table 7 contains several employment and income indicators from SoR (2013), along with the rankings (in brackets) out of 67 regions assessed. Number of hours worked is regarded as the best measure of a regions employment health (SoR 2013). This information reveals:

- The region ranks quite poorly in terms of the number of hours worked by the working population, a reflection of relatively poor employment opportunities;
- For those who do have a job, they work relatively long hours – a high ranking compared to other regions. This may be a reflection of high employment in agriculture;
- However, people in the region are not well renumerated for the hours they work, in fact in the 2013 quarter reported, Northern Inland NSW was the worst ranked region.

**Table 7. Employment and Income Measures for Northern Inland NSW**

| | 1993 | 1998 | 2003 | 2008 | 2013 |
|---|---|---|---|---|---|
| People Employed (No.) | 76,486 (41) | 79,181 (47) | 76,868 (47) | 84,276 (48) | 85,052 (49) |
| Hours worked ('000 hrs/qtr) | 35,379 (41) | 37,249 (45) | 35,439 (47) | 37,929 (48) | 40,221 (48) |
| Av. Weekly hours/employee | 35.6 (10) | 36.2 (4) | 35.5 (6) | 34.6 (15) | 36.4 (9) |
| Av. Hourly rate/employee* | 25.8 (52) | 31.5 (26) | 33.4 (30) | 30.6 (65) | 30.5 (67) |

*Source: SoR (2013)*
** This is measured in constant 2010-11 values*
*Numbers in brackets are the regions ranking out of 67 regions. The data is for selected quarters in each year.*

In information in Table 7 is supported by Table 8 which reveals:

- Average wages significantly below Australian and NSW levels;
- Average household incomes significantly below Australian and NSW levels;
- Wages and household incomes generally higher in key cotton production areas (Gunnedah, Narrabri, Moree) and the regional centres (Tamworth, Armidale);

- Unemployment higher than Australian and NSW levels, and particularly high in Moree which has a large indigenous population;
- Around 21% of the population using government support as the main source of income;
- A large variation in the ABS SEIFA rankings (a lower number means a poorer socio-economic situation). Armidale and Uralla (only 22kms from Armidale rank highest), but several LGAs (Glen Innes, Inverell, Liverpool Plains and Tenterfield) are in the bottom 100 ranked LGAs nationally.

In summary, on average the region is not a high performer on a state or national scale for employment or income measures, but there are parts of the region whose performance is lifted due to access to higher-income activities (e.g. cotton production, minerals, the UNE).

**Table 8. Selected Income, Employment and Socio-Economic Measures, Northern Inland NSW**

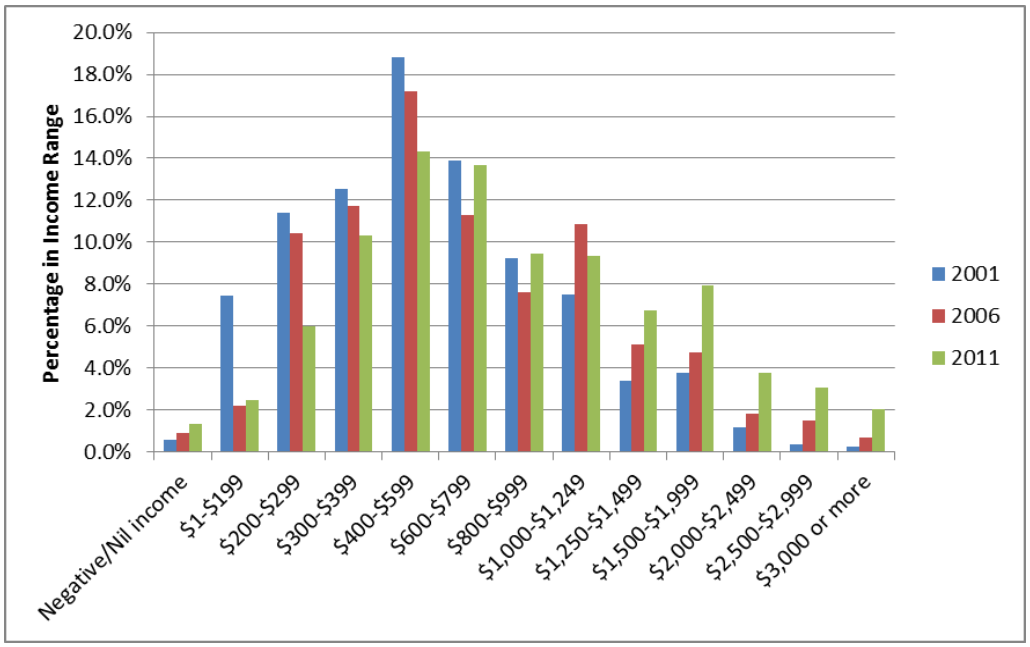
| | Average Wage & Salary Income ($ pa) | Household Income per ($ week) | Participation Rate (%) | Unemployment Rate (%) | Welfare Dependency (%) | Socio Economic Index for Areas (SEIFA) National Ranking out of 560 |
|---|---|---|---|---|---|---|
| Australia | 48911 | 1234 | 61.4 | 5.5 | | |
| New South Wales | 50954 | 1237 | 59.8 | 5.2 | | |
| Northern Inland | 39424 | 902 | 57.8 | 6.4 | 22.1 | |
| Armidale Dumaresq (A) | 40475 | 991 | 56.7 | 5.8 | 21.9 | 365 |
| Glen Innes Severn (A) | 34848 | 734 | 52.1 | 8.1 | 22.9 | 95 |
| Gunnedah (A) | 42467 | 937 | 59.1 | 6.5 | 21.8 | 163 |
| Guyra (A) | 35291 | 805 | 57.1 | 7.9 | 23.0 | 111 |
| Gwydir (A) | 35235 | 726 | 53.8 | 4.4 | 22.4 | 154 |
| Inverell (A) | 36211 | 792 | 54.7 | 7.8 | 22.4 | 92 |
| Liverpool Plains (A) | 38457 | 797 | 54.8 | 6.4 | 22.2 | 93 |
| Moree Plains (A) | 39979 | 1053 | 59.9 | 8.5 | 24.6 | 103 |
| Narrabri (A) | 40271 | 982 | 61.9 | 5.2 | 22.7 | 185 |
| Tamworth Regional (A) | 41141 | 958 | 59.4 | 6.2 | 21.3 | 228 |
| Tenterfield (A) | 34454 | 694 | 50.4 | 7.3 | 22.5 | 77 |
| Uralla (A) | 36861 | 933 | 61.5 | 5.1 | 21.4 | 318 |
| Walcha (A) | 33004 | 826 | 62.1 | 3.7 | 19.7 | 280 |

*Source: ABS Census (2011), RAI INsight (2013)*

In 2011 the available labour force in the Northern Inland region was estimated to be 105,919. There were 6,162 unemployed people (5.9% of the workforce—marginally down from 6.0% for the same period in 2010).

Over the three census periods from 2001, weekly incomes (Figure 3) have shifted such that there is a much smaller percentage of the population in the lower income brackets, and more people in the higher brackets. However, as these figures are raw numbers and not adjusted for inflation, this is to be expected as wages have increased over the past 10 years. What is interesting in Figure 3 is that the proportion of people with negative or nil income has increased, probably a reflection of an ageing population (more retirees), increased welfare dependency and perhaps some business losses.

**Figure 3. Income Patterns Northern Inland 2001-2011**




*Source: ABS Census (2011)*

## Population Change

Population is of vital concern to regional Australia. Most inland areas have been grappling with stagnant or declining population bases, including the 13 LGAs in Northern Inland NSW. The past decline in regional population growth has now been reversed, with the Northern Inland regional population growing by 1.73% between 2006 and 2011 (Table 9). Size and rate of population change has varied across the region. Growth has occurred in 10 Statistical Local Areas (SLAs), with Inverell, Tamworth and Uralla showing the largest percentage increase. Population decline occurred in 6 SLAs, with Gwydir and Walcha showing the largest percentage declines.

**Table 9. Total population change, Northern Statistical Division 1996-2011**

| Statistical Local Area | 2001 Total Population | 2006 Total Population | % Change 2001-2006 | 2011 Total Population | % Change 2006-2011 | % Change 2001-2011 |
|---|---|---|---|---|---|---|
| Armidale Dumaresq - City | 20,271 | 20,236 | -0.17% | 20,102 | -0.66% | -0.83% |
| Armidale Dumaresq - Bal | 3,863 | 3,861 | -0.05% | 4,002 | 3.65% | 3.60% |
| Glen Innes Severn | 8,374 | 8,766 | 4.68% | 8,656 | -1.25% | 3.37% |
| Gunnedah | 11,846 | 11,524 | -2.72% | 12,065 | 4.69% | 1.85% |
| Guyra | 4,204 | 4,207 | 0.07% | 4,397 | 4.52% | 4.59% |
| Gwydir | 5,634 | 5,371 | -4.67% | 4,965 | -7.56% | -11.87% |
| Inverell - Pt A | 4,394 | 4,532 | 3.14% | 4,797 | 5.85% | 9.17% |
| Inverell - Pt B | 10,647 | 11,058 | 3.86% | 11,276 | 1.97% | 5.91% |
| Liverpoool Plains | 7,353 | 7,311 | -0.57% | 7,480 | 2.31% | 1.73% |
| Moree Plains | 15,737 | 14,186 | -9.86% | 13,429 | -5.34% | -14.67% |
| Narrabri | 13,817 | 13,052 | -5.54% | 12,925 | -0.97% | -6.46% |
| Tamworth Regional - Pt A | 40,878 | 42,791 | 4.68% | 45,044 | 5.27% | 10.19% |
| Tamworth Regional - Pt B | 11,079 | 10,903 | -1.59% | 11,250 | 3.18% | 1.54% |
| Tenterfield | 6,531 | 6,574 | 0.66% | 6,811 | 3.61% | 4.29% |
| Uralla | 5,739 | 5,673 | -1.15% | 6,034 | 6.36% | 5.14% |
| Walcha | 3,115 | 3,211 | 3.08% | 3,021 | -5.92% | -3.02% |
| NORTHERN REGION | 173,483 | 173,256 | -0.13% | 176,254 | 1.73% | 1.60% |
| NEW SOUTH WALES | 6,371,745 | 6,585,732 | 3.36% | 6,917,658 | 5.04% | 8.57% |

*Source: ABS Census (2011)*

Within social catchment areas (local communities-of-interest e.g. for shopping, sporting teams and service organisations based around a single substantial town), rural dwelling populations have declined at a faster rate than town populations including through reduction of workers employed in agriculture. Exceptions to this drift are mostly related to the expansion of rural residential developments.

To assist with planning exercises, the Australian Bureau of Statistics produces population estimates based on projections of past fertility, mortality and migration trends at a local level. Table 10 shows the results of these estimates for Northern Inland NSW SLAs for the period 2006 to 2011. The overall Northern Inland region was expected to experience population growth, however the actual rate of growth has been more than double that predicted.

**Table 10. Projected population growth rates, Statistical Local Areas, 2006-2011**

| *Statistical Local Area* | *Projected % Change 2006-2011* | *Actual % Change 2006-2011* |
|---|---|---|
| Armidale Dumaresq - City | 1.1 | *-0.7%* |
| Armidale Dumaresq - Bal | 1.3 | *3.7%* |
| Glen Innes Severn | 0.3 | *-1.3%* |
| Gunnedah | 0.6 | *4.7%* |
| Guyra | 0.7 | *4.5%* |
| Gwydir | -0.5 | *-7.6%* |
| Inverell - Pt A | 1.0 | *5.8%* |
| Inverell - Pt B | 1.0 | *2.0%* |
| Liverpoool Plains | 0.3 | *2.3%* |
| Moree Plains | -0.3 | *-5.3%* |
| Narrabri | 0.1 | *-1.0%* |
| Tamworth Regional - Pt A | 1.7 | *5.3%* |
| Tamworth Regional - Pt B | 0.7 | *3.2%* |
| Tenterfield | 0.9 | *3.6%* |
| Uralla | 1.0 | *6.4%* |
| Walcha | -0.3 | *-5.9%* |
| NORTHERN REGION | 0.8 | *1.7%* |

*Source: ABS Census (2011)*

### Migration

Northern Inland NSW is a region of relatively high natural population increase (more births than deaths) but the level of natural increase can be offset by net out-migration, as there was up to 2001. For instance, Tamworth city area experienced a net loss of 1,928 people from 1991 to 1996, then a loss of 1,479 to 2001, and net growth of 1,077 to 2006. Narrabri lost 1,468 to 1996, then 919 to 2001, and a further 865 lost to 2006. For Inverell Pt A losses were 187, and then a gain of 257 to 2006. During 2001-2006, the region overturned a decade of, in some cases, heavy net migration losses. Most SLAs recorded gains, highest in eastern centres. When combined with births and deaths, this resulted in an overall population increase (as shown in Table 9).

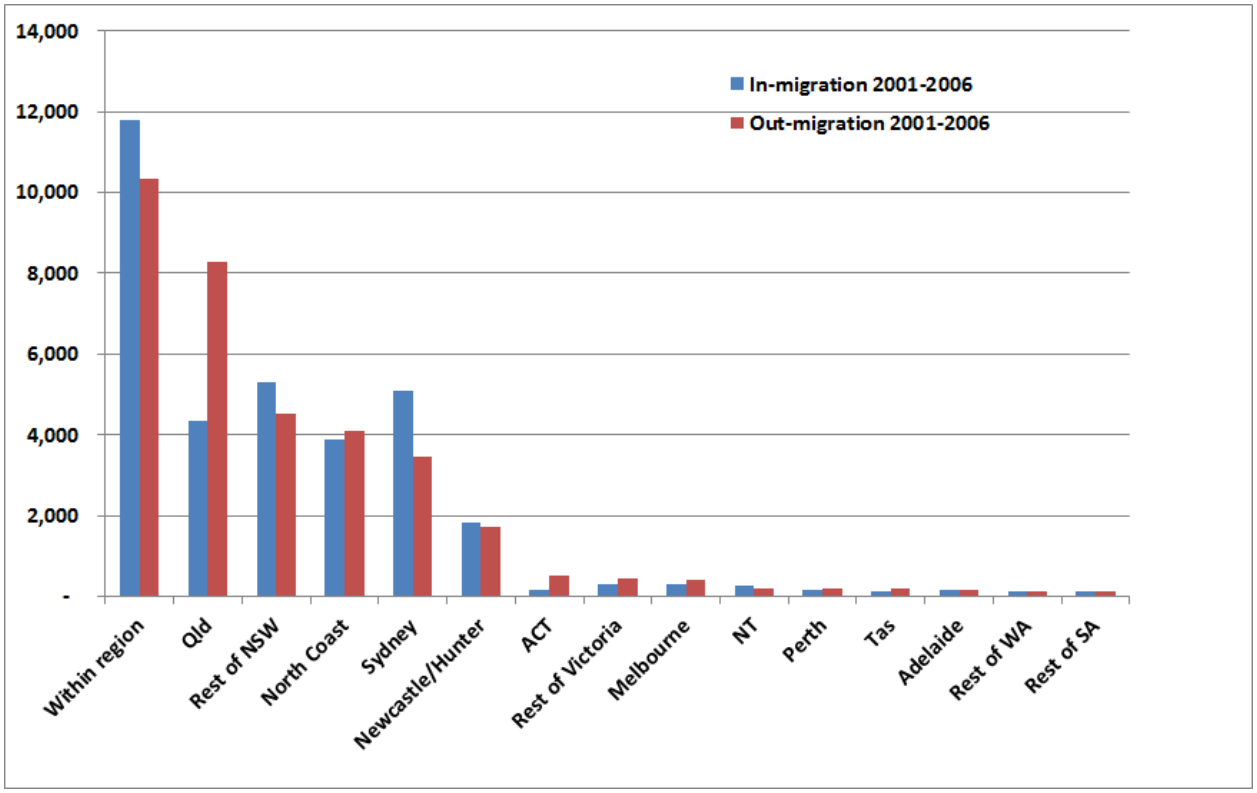
**Table 11. In, Out and Net Migration in Northern NSW SLAs 2001-2011**

| | In-migration 1996-2001 | Out-migration 1996-2001 | Net migration 1996-2001 | In-migration 2001-2006 | Out-migration 2001-2006 | Net migration 2001-2006 | In-migration 2006-2011 | Out-migration 2006-2011 | Net-migration 2006-2011 |
|---|---|---|---|---|---|---|---|---|---|
| Armidale (C) | 5,618 | 6,521 | -903 | 5,190 | 4,987 | 203 | 4,260 | 3,976 | 284 |
| Dumaresq (A) | 1,116 | 767 | 349 | 996 | 832 | 164 | 575 | 525 | 50 |
| Glen Innes Severn (A) | 1,663 | 2,275 | -612 | 1,550 | 1,536 | 14 | 1,201 | 1,402 | -201 |
| Gunnedah (A) | 1,656 | 2,632 | -976 | 1,836 | 2,261 | -425 | 1,633 | 1,900 | -267 |
| Guyra (A) | 718 | 1,054 | -336 | 736 | 802 | -66 | 709 | 662 | 47 |
| Gwydir (A) | 1,065 | 1,469 | -404 | 1,087 | 1,083 | 4 | 748 | 932 | -184 |
| Inverell (A) - Pt A | 1,079 | 1,266 | -187 | 1,331 | 1,074 | 257 | 705 | 662 | 43 |
| Inverell (A) - Pt B | 1,846 | 2,530 | -684 | 2,353 | 1,920 | 433 | 1,554 | 1,558 | -4 |
| Liverpool Plains (A) | 1,084 | 1,549 | -465 | 1,282 | 1,666 | -384 | 1,251 | 1,267 | -16 |
| Moree Plains (A) | 2,710 | 3,852 | -1,142 | 1,971 | 3,694 | -1,723 | 1,595 | 2,578 | -983 |
| Narrabri (A) | 2,108 | 3,027 | -919 | 1,705 | 2,570 | -865 | 1,593 | 1,985 | -392 |
| Tamworth Regional (A) - Pt A | 7,098 | 8,577 | -1,479 | 7,915 | 6,838 | 1,077 | 6,180 | 5,621 | 559 |
| Tamworth Regional (A) - Pt B | 4,846 | 4,827 | 19 | 2,741 | 2,489 | 252 | 1,562 | 1,360 | 202 |
| Tenterfield (A) | 1,355 | 1,650 | -295 | 1,372 | 1,209 | 163 | 1,191 | 1,105 | 86 |
| Uralla (A) | 1,105 | 1,436 | -331 | 1,327 | 1,277 | 50 | 1,173 | 1,214 | -41 |
| Walcha (A) | 541 | 902 | -361 | 541 | 548 | -7 | 372 | 517 | -145 |
| **Total** | **35,608** | **44,334** | **-8,726** | **33,933** | **34,786** | **-853** | **26,302** | **27,264** | **-962** |

*Source: ABS Census (2011)*

The other interesting feature of the in/out-migration story is the source and destination of the new arrivals and losses. Typically, regional areas have put in place resident attraction strategies aimed at convincing metropolitan residents to move to their regions. But the data for the Northern Inland suggests this may be flawed.

**Figure 4. Migration Sources/Destinations, Northern Inland 2001-2006**




*Source: ABS Census (2006)*

Figure 4 shows that most population movement occurs within the region, and most in-migrants come from (south-east) Qld, non-metropolitan NSW and the North Coast of NSW – though Sydney is still a sizeable source of new residents. This evidence suggests more effort should be made in marketing the region to non-Sydney areas and particularly into south-east Queensland.

Other research findings in migration and population issues include:

- In Northern Inland NSW, most in-migration within each LGA (35%) comes from within the Northern Statistical Division (i.e. people moving from one LGA to another).
- Only about 15-16% of in-migration is from metropolitan areas.
- Places like Armidale have a very high population turnover rate – we need jobs to hold people here.
- Amenity value (e.g. rural landscapes) is an increasingly important factor in attracting new residents.
- Net migration gain is higher in shires surrounding major regional centres. These areas have cheaper real-estate, more amenity value but still offer close access to key services.
- The media is the key source of information for most metropolitan dwellers on rural issues/perceptions.
- Lack of work/career opportunities are seen as a major negative in moving to a regional location.
- There is still a net loss of youth (ages 15-24) from the region.
- Since 2006/7, net population loss has reversed to become net population gain.

### Indigenous Population

Indigenous people add to the cultural value of the region. Northern Inland NSW has higher indigenous representation at 9 per cent than the State average of 2.5 per cent. This proportion is increasing at a greater rate than for NSW as a whole, although again with variation across Northern Inland SLAs (Table 12).

In 2011 only one SLA (Armidale Dumaresq – Rural) had a lower proportion than for the State as a whole. In most SLAs the Indigenous proportion of the population was well over double the NSW state average. In some areas increases have been substantial, in part reflecting growing numbers of people with Indigenous background identifying themselves as such, as well as higher fertility rates. Indigenous persons also appear less likely to migrate out of the region.

**Table 12. Trends in Indigenous population, Northern Statistical Division 2001-2011**

| Statistical Local Area | Indigenous Persons 2001 | Indigenous Persons 2006 | % Growth 2001-2006 | Indigenous Persons 2011 | % Growth 2006-2011 | % Growth 2001-2011 |
|---|---|---|---|---|---|---|
| Armidale Dumaresq - City | 1,064 | 1,184 | 11.3% | 1,454 | 22.8% | 36.7% |
| Armidale Dumaresq - Bal | 175 | 54 | -69.1% | 60 | 11.1% | -65.7% |
| Glen Innes Severn | 361 | 474 | 31.3% | 489 | 3.2% | 35.5% |
| Gunnedah | 1,063 | 1,181 | 11.1% | 1,360 | 15.2% | 27.9% |
| Guyra | 410 | 432 | 5.4% | 440 | 1.9% | 7.3% |
| Gwydir | 81 | 140 | 72.8% | 190 | 35.7% | 134.6% |
| Inverell - Pt A | 175 | 168 | -4.0% | 232 | 38.1% | 32.6% |
| Inverell - Pt B | 558 | 672 | 20.4% | 819 | 21.9% | 46.8% |
| Liverpoool Plains | 737 | 699 | -5.2% | 816 | 16.7% | 10.7% |
| Moree Plains | 2,807 | 2,637 | -6.1% | 2,791 | 5.8% | -0.6% |
| Narrabri | 1,084 | 1,220 | 12.5% | 1,389 | 13.9% | 28.1% |
| Tamworth Regional - Pt A | 2,389 | 3,229 | 35.2% | 4,063 | 25.8% | 70.1% |
| Tamworth Regional - Pt B | 389 | 511 | 31.4% | 661 | 29.4% | 69.9% |
| Tenterfield | 423 | 478 | 13.0% | 460 | -3.8% | 8.7% |
| Uralla | 293 | 328 | 11.9% | 355 | 8.2% | 21.2% |
| Walcha | 176 | 187 | 6.3% | 221 | 18.2% | 25.6% |
| NORTHERN REGION | 12,185 | 13,594 | 11.6% | 15,800 | 16.2% | 29.7% |

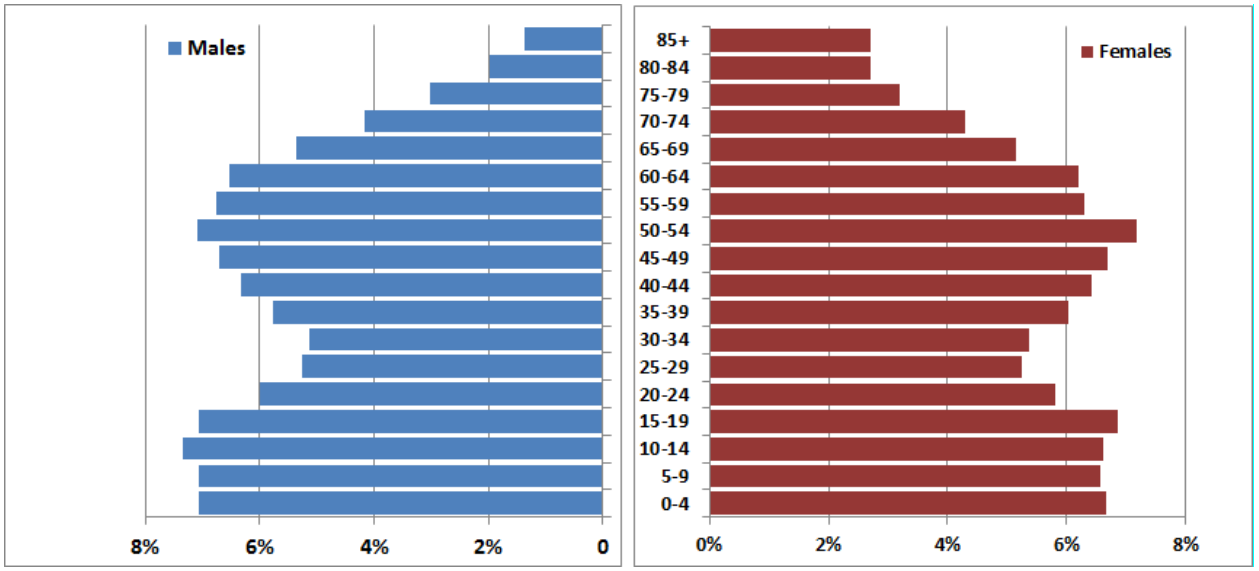
*Source: ABS Census (2011)*

The population of Indigenous residents in this region is forecast to grow markedly over the next 20 years (NSW State Government Plan 2010) .

### Age-Sex Composition

The age and sex structure of the population needs to be considered in planning. This affects estimates of a region's workforce, domestic demand for goods and services including health, education, retail and aged care, as well as population futures. The age/sex make-up of Northern Inland NSW has changed markedly since 1996 (Figure 5).

**Figure 5. Northern Inland NSW population age-sex structure at 2011 (ABS Census)**




*Source: ABS Census (2011)*

An increasing proportion of the population is aged over 50 years (a trend consistent with the general ageing of the Australian population). There has been significant growth in proportion of persons over 65 years, particularly females, with a decline in proportion of children under 15 years (also a national trend).

Fertility in rural areas is generally higher than the societal mean. Following a fall in the number of infants between 2001 and 2006, the number has now increased such that the number of 0-4 year olds in 2011 in our region is now higher than in 2001. Decline in numbers of both males and females aged between 20 and 30 years, in part from youth out-migration, was another concerning trend for future population growth prospects of the region between 2001 and 2006. However, the 2011 Census reveals a slight recovery in the numbers since 2006.

### Dependency Ratios

Dependents are persons aged 15 years or under and aged 65 years or older. Generally, they need to be supported by those working, bringing in incomes and paying taxes. The Northern Statistical Division currently has a dependency ratio of 0.61 dependents for each working-age person, up

from 0.59 in 2006. This ratio has steadily increased over the decade due to the ageing population. Gwydir, Inverell, and Glen Innes have higher dependency ratios; Armidale the lowest. Between 2006 and 2011, the only SLA to experience a decline in the dependence ratio was Gunnedah, likely as a consequence of expanded mining activity and jobs.

**Key points:**

- Population now increasing, though varying markedly across Northern Inland NSW.
- Most growth is in the towns.
- The number of children aged less than 15 years continues to decline, while the number of people aged over 65 years continues to increase (a 12% increase since 2006).
- There has been a small increase (0.8%) in the key working-age population (25-65)
- High and steadily increasing rates of care dependency across the region.
- Indigenous people comprise a greater proportion of the region's population than the State average and have increased by 16.2% between 2006 and 2011.
- Compared to all NSW, the Northern Inland has a high proportion of jobs in industry sectors that are declining and not enough in faster growing sectors.
- The region has low levels of University qualified residents, but high levels of trade qualified workers compared to the NSW average.
- The region has several of NSW's most socioeconomically disadvantaged areas.

## Challenges and opportunities

In summary, the economic overview of the region, combined with RDANI's local knowledge of the regional issues raises the following regional economic development challenges and opportunities:

- **Challenge** - A high economic dependence on commodities (agriculture, mining), which leaves the region exposed to climate, international circumstances, exchange rates.
- **Opportunity** – the need to diversify the economy, but with a focus on high skilled/payed jobs.
- **Opportunity** – put in place mechanisms to attract new businesses/assist existing businesses in other sectors (e.g. manufacturing)
- **Challenge** – a lack of support/expertise to assist business growth.
- **Opportunity** – develop a business growth/support/mentoring program.

- **Challenge** - issues relating to rapid mining expansion/labour competition, impacts on water table, accommodation shortages, strong dollar effects.

- **Opportunity** – find ways to maximise the benefits and minimise the costs of the mining boom.
- **Challenge** – Murray Darling Basin Plan: impacts unknown, depends where water buy-backs occur, stakeholders feel other water quality issues are just as important as water volume.
- **Opportunity** – work with local stakeholder groups to reveal the unknowns and minimise socio-economic impacts and maximise environmental benefit.
- **Challenge** - Rising energy costs
- **Opportunity** - to develop renewable energy industries with regional economic benefits (grid access is a problem).
- **Challenge** – lack of infrastructure investment (particularly roads).
- **Opportunity** – more local input into infrastructure projects which will have real economic benefits.
- **Challenge** - health service levels, ageing communities, mental health, indigenous health.
- **Challenge** - crime/anti-social behaviour in some locations.
- **Opportunity** - most in-migration is from SE Qld and North Coast, not from metropolitan areas. Use this information to re-focus resident attraction strategies.
- **Challenge** - affordable housing, high construction costs in our region compared to the coast.
- **Challenge** - youth retention.
- **Opportunity** – business growth programs to provide sufficient employment opportunities such that youth return to the region.

## 2.2 Environmental

Water availability is critical to the economic and social sustainability of Northern Inland NSW. From interactions with the community, there is general consensus that planning for water supply, infrastructure development and improvement is urgently required with commitments to implement actions to ensure future water availability for social, economic and environmental purposes.

Communities appear uncertain about Federal and State government intentions including interstate water sharing agreements. There were requests for the social impacts on regional communities and industries to be included in decisions about water availability both now and in the future under any changes proposed within the *National Plan for Water Security*. Communities are concerned governments are unaware of these potential impacts and requested full consultation and consideration of measures to minimise impacts.

Northern Inland NSW communities generally support managing vegetation and biodiversity to ensure the future security of the natural systems within a frame-work that provides certainty for rural industries and rural communities. There are views that rural land managers and communities are not adequately consulted on development and delivery of environmental policy, and that contribution by rural land managers to the protection of native flora and fauna are

under-recognised. Residents would like to see more support from the NSW Government to achieve sustainable land and environmental management outcomes in their communities.

The two key environmental issues in the region at present are the cumulative impacts of the proposed Murray Darling Basin Plan and mining.

### The Murray Darling Basin Plan

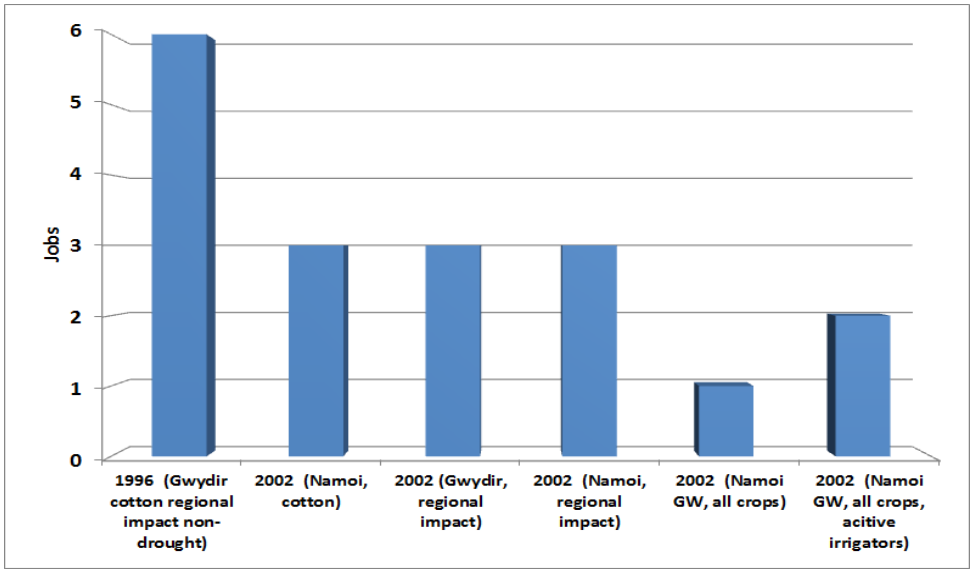
The Northern Inland region has a high dependency on irrigation water for irrigated crop production. Irrigated cotton typically generates 10 times the regional economic impacts (when flow-on effects are included) than dryland crops (CARE 1996).

According to the Murray Darling Basin Authority (2010), the three catchments in the Northern Inland Region (Namoi, Gwydir, Border Rivers NSW) have water course diversions (mostly used for irrigation) of 879 GL. In 2010, the Plan was seeking to return 107GL of these diversions to the environment (around 12%). At the time of writing in 2013, more than half of this water has already been recovered. Local stakeholders have expressed concern over the potential socio-economic impact of this environmental water recovery, and also the environmental gains which will be secured from the water.

Figure 6 provides a summary of the potential job loss impacts per GL of irrigation water lost from production derived from several past studies conducted in the Northern Inland region.The impacts vary widely depending on the crop in question. Impacts are highest for cotton crops, which in a good season are the most profitable irrigated crop in the region.

Estimating the economic impacts of the Plan is made more difficult by the fact that water surrendered for environmental use will be voluntary – it will some from willing sellers, and those sellers could come from any location in the Namoi and Border Rivers catchments (water recovery is now complete in the Gwydir). The concern is that most of the water may be lost from small, heavily water-dependent irrigation communities (e.g. Wee Waa, Mungindi), where local economic impacts would be large.

**Figure 6. Job Impacts From Loss of Irrigation Allocations, Northern Inland NSW**



In terms of estimating the environmental impacts, this is possibly more difficult than the economic story. Environmental water allocations are based on restoring key flow parameters (e.g. high flows, base flows, bench flows) at both local sites, and downstream in the Barwon-Darling system. However, the actual quantum of environmental improvement achieved from this additional water (e.g. improvement in native fish numbers or bird breeding events) can't be quantified in any detail.

Past work conducted by RDANI with community groups working on Plan issues has revealed a number of water-saving projects which could reduce the demand on irrigation allocations, and improve the efficiency of environmental watering.

### Water Supply and Wastewater Management

Drought has increased focus on potable water supply for many communities. Considerable effort has been made by the NSW Office of Water in conjunction with local water authorities (generally Councils) to address and ameliorate domestic water supply threats. Several communities remain on water restrictions, although recent widespread winter rainfall has eased conditions.

### Mining

Mining expansion on the Liverpool Plains (Werris Creek, Quirindi, Gunnedah and Narrabri) has raised environmental concerns which mostly relate to potential negative impacts on groundwater supply and quality.

While extensive hydrological studies have been conducted, there is still a high level of community suspicion in some quarters that the potential 'worst case' impacts have been missed.

### Renewable Energy

The Northern Inland region has significant potential for addressing the environmental concerns surrounding non-renewable fossil fuels with renewables. The region has already been identified as a suitable site for large-scale wind farms, and one community-based wind farm project to be located in the Glen Innes LGA is well developed.

There are also large volumes of resides (municipal waste, abattoir waste, crop residues, forestry waste), along with purpose-grown energy crops which could supply bioenergy facilities. Developments in this sphere would also help alleviate landfill problems in places like Armidale (current landfill almost fully utilised) and Tamworth (landfill emissions will generate a carbon-tax liability).

The abattoir in Inverell has already received Commonwealth Government funding to install a biodigester which would see it go off-grid and significantly increase its throughput and employment levels.

RDANI has conducted extensive economic research into the potential for bioenergy in the region. While it appears feasible in a 'closed-loop' arrangement (i.e. where all energy is used internally and no grid access is required), the concept appears to have good potential. However, once grid access is involved, the prohibitive costs of using the Essential Energy grid (around 13-17 cents/kWh) render the opportunity economically unviable.

### Energy Efficiency

There is considerable scope for businesses and households in the region to cut energy consumption and costs through efficiency measures.

RDANI is a member of the Northern Inland Sustainable Business Network (NISBN - http://www.nisbn.org.au/) which is working with about 50 local businesses to improve their sustainability.

RDANI also recently secured CEEP funding from the Commonwealth Government to upgrade street lighting in 7 council areas to improve energy efficiency, and employ an Energy Efficiency Education Officer to work with households and businesses.

## 2.3 Social

Urban growth pressures are not necessarily an issue in the Northern Inland owing to slow population growth compared to metropolitan areas.

However, shortage of rental accommodation in mining affected towns (Narrabri and Gunnedah) is becoming an issue with low income persons are being marginalised from the rental market in these communities.

According to the 2011 Census, less than 4 per cent of Northern Inland residents claim to be born overseas, however there are notable exceptions in Armidale owing to a large number of overseas students. Skilled migrants are also to be found across the region, particularly in the larger centres. Settlement Services for migrants, including refugees are provided within the Northern Inland region.

### Social Infrastructure

Schools, hospitals, police stations, courts, recreation parks/centres and other public buildings, as well as sporting, cultural and community events, are critical to the viability of local communities. Two particular concerns were uncovered during community consultations:

- Arts infrastructure (buildings, venues and events) and support to local arts groups (covering all genres including visual, dramatic, literary and musical) are important aspects of social capacity and relate to community quality of life.
- The public library system in NSW helps to build educated, connected and harmonious communities. However, there has been significant decline in NSW government funding for the library system. Adverse comparisons were also made with State funding in other jurisdictions. Public libraries meet needs across economic, social and environmental dimensions of society. Users of public libraries cross categories of age, gender, occupation, employment status, ethnicity and income. They offer community hubs to assist overcoming information and digital divides.

### Health

During the community consultations for development of this Plan health was the key issue for many local towns and communities. Stakeholders identified a lack of access to regular and basic health and community services as one of their greatest needs. The Northern Inland region is

within the Hunter New England Local Health District area which covers the Tablelands, McIntyre, Peel and part of the Mehi and Upper Hunter clusters.

The Health District describes its services in six categories. Northern Inland does not have any tertiary referral Hospitals or mental health hospitals. Both Armidale and Tamworth have Rural referral Hospitals. The region has six district health services, 29 community health services and 12 community hospitals as shown in Figure 7.

**Figure 7. Health Service Locations, Northern Inland NSW**


*Source: Hunter New England Area Health Service*

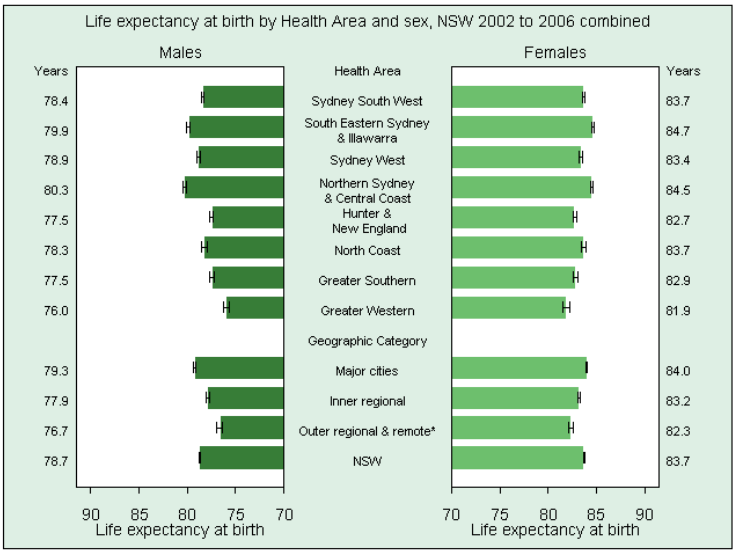
According to the RAI Insight Index, 63.50% of adults in the Northern Inland region can identify with at least one of the following risk factors; smoking, alcohol, obesity, no exercise, which ranks the region 40th out of 55 RDA regions nationally.

NSW Health has identified Seven Strategic Directions that will guide the development and delivery of health services now and into the future:

1. Make prevention everybody's business.
2. Create better experiences for people using health services.
3. Strengthen primary health and continuing care in the community.
4. Build regional and other partnerships for health.
5. Make smart choices about the costs and benefits of health services.
6. Build a sustainable health workforce.
7. Be ready for new risks and opportunities.

In determining their strategic direction, the Hunter New England Local Health Area uses a broad range of health indicators for various dimensions of health. These include demographic features, social determinants, burden of disease within the population, health inequities and health priorities. While there has been great improvement in the health of Hunter New England residents in the last 100 years, these gains have not been equally shared among all population groups and Aboriginal life expectancy is still shorter than population averages (Figure 9).

**Figure 9. Life Expectancy Comparisons, NSW**




*Source: Hunter New England Area Health Service HealtheRESOURCE*

The region is likely to benefit from two recent initiatives:

- The joint medical program between the University of New England and University of Newcastle which provides clinical placements for medical students in the Armidale and Tamworth hospitals. This program provides students with experience outside metropolitan areas, and is expected to boost rural doctor numbers thus helping to ease doctor shortages in our region.

- The establishment of Medicare Local New England, a Commonwealth Government National Health Reform initiative aimed at improving patient access to services by linking GPs, nursing and other health professionals, aged care, aboriginal health services, and by addressing service gaps.

## Other Social Issues

Community consultation and the information contained in council community strategic plans reveals a number of other social issues including:

- The majority of LGA Community Strategic Plans focus on the need to make communities more liveable to service existing residents as well as attract new ones. This encompasses issues such as recreational areas and cycle/walking paths.

- Slow population growth suggests the need to attract more permanent in-migration of residents to the region and leverage our strengths such as affordable land and housing, lack of congestion and pollution, lower cost of living expenses, and more family-oriented close-knit communities.
- The lack of GPs and medical specialists is a common concern.
- Crime and anti-social behaviour rates a strong mention in the plans of some councils.
- Indigenous issues, particularly the need to re-engage indigenous youth in training and employment rate highly in most plans.

## 3. Access to international, national and regional markets:

### 3.1 Transport

The expansive NSW regional road (Figure 10) network forms a web across the State and underpins almost all economic and social activity in rural and regional NSW. It includes national, state, regional and local roads developed and managed by the three tiers of Government through a framework of collaborative arrangements.

**Figure 10. Key Northern Inland Road Freight Routes**


*Source: PEECE (2012)*

Local government officers regularly raise the need to maintain or enhance NSW Government funding for timber bridge replacement. This is a major infrastructure challenge for a significant

number of smaller rural councils given their limited rates and revenue base. Comments were made on rapidly increasing volume of road freight with impact on road infrastructure and implications of changing truck mass limits and harmonisation with interstate regulations. There are 22,000km of local roads, both sealed and unsealed in Northern Inland NSW, which combined, require approximately a $266 million investment to bring them to a 'satisfactory' standard based on Local Council reporting (Table 12).

**Table 12. Northern Inland Transport Infrastructure Backlog**

| Council | Total length of roads maintained by Council (km) | Govt Grants ($) per km road maintained | Maintenance backlog ($M) | Grants as a % of Maintenance Backlog | Required Annual Maintenance Expense ($M) | Grants a % of Maintenance Expense | Asset value ($M) | Grants as percentage of Asset value |
|---|---|---|---|---|---|---|---|---|
| Armidale-Dumaresq (2010-11) | 1,048 | 4,177 | 8.1 | 54% | 2.8 | 154% | 168 | 3% |
| Tamworth (2011-12) | 3,234 | 2,224 | 37.2 | 19% | 6.1 | 119% | 587 | 1% |
| Narrabri (2010-11) | 2,155 | 1,950 | 18.6 | 23% | 4.7 | 89% | 112 | 4% |
| Moree (2010-11) | 2,796 | 2,671 | 28.2 | 26% | 24.0 | 31% | 217 | 3% |
| Inverell (2010-11) | 2,091 | 2,594 | 76.8 | 7% | 4.6 | 117% | 303 | 2% |
| Gunnedah (2011-12) | 1,592 | 3,356 | Not provided | Not provided | 3.6 | 149% | 134 | 4% |
| Tenterfield (2010-11) | 1,606 | 4,799 | 2.0 | 394% | 2.0 | 394% | 213 | 4% |
| Uralla (2010-11) | 961 | 2,947 | 6.2 | 46% | 2.8 | 100% | 84 | 3% |
| Gwydir (2011-12) | 2,200 | 2,560 | 37.6 | 15% | 8.3 | 68% | 127 | 4% |
| Glen Innes (2011-12) | 1,135 | 3,596 | 14.8 | 28% | 1.5 | 265% | 136 | 3% |
| Guyra (2011-12) | 967 | 3,490 | 14.4 | 23% | 3.0 | 111% | 58 | 6% |
| Liverpool Plains (2010-11) | 1,390 | 4,263 | 7.1 | 83% | 4.6 | 128% | 407 | 1% |
| Walcha (2010-11) | 923 | 3,156 | 14.5 | 20% | 1.9 | 154% | 305 | 1% |
| **Totals** | **22,098** | **3,008** | **266** | **25%** | **70** | **95%** | **2,851** | **2%** |

*Source: Council financial statements*

As outlined in the State of the Regions report (SoR 2013), it has been suggested the in the post-mining boom era, government investment in infrastructure may be critical to maintain/improve market access and enhance the economic performance of regional Australia. Table 12 indicates that there is ample scope and need to do this for the road network in the Northern Inland region.

The funding model for road infrastructure is problematic in that studies reveal the majority of benefit from road upgrades accrues to the private sector, which increases the argument for private funding. Moreover, benefit-cost analysis will always favour transport upgrades in heavily populated metropolitan areas compared to regional areas. However, the SoR (2013) analysis raises the question of increased government investment in infrastructure (with transport as the case-study) to improve the national balance sheet, on which infrastructure assets such as roads have been run-down. The theory is that with improved economic performance from better infrastructure, the increase in tax revenue can be used to re-pay the investment – a considerable deviation from the 'free-market' approach which has dominated government thinking since the 1990's.

There is considerable support within communities west of the Great Dividing Range for the proposed Inland Rail link from Melbourne to Brisbane via western NSW. This would provide an important opportunity to improve freight transport and logistics in country NSW and attract investment in road-rail service hubs.

A decade has seen a major transformation of passenger air transport in Australia including opening of new low cost jet services to major regional tourism centres but also cessation of services to sizeable towns such as Inverell and Gunnedah. Air services are increasingly important

for connections to the nation and the world. For many smaller communities access to professional services for individuals and businesses can only be reliably maintained through regular passenger air services.

There is concern about deterioration of air services to rural NSW, with limited competition, timetabling and service availability. Airlines and airport operators (usually local councils) also find it difficult to absorb costs of enhanced security measures when annual income through passenger movements is quite small. Many Northern Inland airports require substantial upgrades to both security and general facilities to handle increased passenger numbers. However, most councils are unable to provide the funding necessary for such upgrades.

Public transport services within and among dispersed regional towns and cities has always proven to be challenging. In larger towns public transport is mainly comprised of private bus and taxi services. Private bus and NSW CountryLink rail/bus link some towns. Northern Inland communities seek improvements in public transport, particularly inter-town, given the need to access health services, training and employment opportunities in the larger centres. In small rural towns and villages public transport options are few. This is a particular burden for the young, elderly, disadvantaged and disabled.

Community transport for health plays a vital role in the region and in general increases the mobility of people living in remoter towns and non-urban areas.

The other major transport issue looming in the region is the dominance of coal on the rail network, causing freight bottle-necks and reducing the opportunities for other goods to move by rail. RDANI has been working with a transport consortium to examine the feasibility of a rail line from Moree to the port of Yamba, with a new floating port off the coast of Yamba.

The other important transport issue looming for the Northern Inland region (in fact all regional areas) is future access to Sydney airport by regional airlines. It has been mooted that congestion to Sydney airport may mean regional carriers will need to fly into Newcastle in the future. This would have major implications for business activities in the region.

## 3.2 Telecommunications and Broadband

Poor broadband access and speeds (bandwidth) can have serious implications for:

- Business competitiveness (via access to markets, customers, suppliers, networks etc.), and therefore the ability of regional NSW to attract and retain business investment;
- Access to education and training and government and public information services plus social interactions (all increasingly requiring online facilities);
- Attraction and retention of those with professional skills and training to rural and regional areas where skill shortages are most acute.

Availability of broadband services is generally improving, particularly in regional cities and larger towns, but there is anxiety that widening of the gap between services in metropolitan versus non-metropolitan areas will have adverse effects.

The Northern Inland is in a unique position as the home to not only a first release site of the National Broadband Network (NBN) in Armidale, but also home to the first fixed wireless site of

the NBN in Tamworth. These services will help close the gap between metropolitan and non-metropolitan areas in many sectors, but particularly with the introduction of tele-health and tele-education programs. These developments will significantly enhance the capacity of our region to create and benefit from the digital economy.

Table 13 provides results for the RAI Insight 'Technological Readiness' indicators. In general, the Northern Inland region rates poorly on all indicators, despite being the pilot rollout site for the NBN. The region has relatively low number of workers in IT and technology related industries, though there are several cutting edge firms in the region producing high-end technologies related to agriculture.

**Table 13. Northern Inland Technological Readiness**

| Technological Readiness (KEY THEME) | | Theme ranking | 44 |
|---|---|---|---|
| Internet connection | % of household with internet connection | 55.40% | 42 |
| Broadband connections | % households and businesses with broadband connection | 58.50% | 46 |
| Businesses in technology and related industries | % of workforce employed by tech related businesses | 4.30% | 35 |
| Workers in ICT and electronics | % emplyed as ICT and electronics specialists | 0.80% | 39 |

Source: *RAI INsight (2013)*

# 4. Comparative advantage and business competitiveness:

## 4.1 Major Industry Sectors

The Northern Inland region hosts a range of industries including agriculture, agri-business, mining, aviation, manufacturing and processing, natural resources development, tourism, transport and distribution, education and training, engineering and construction, information technology, and research and development.

Cattle and sheep are the main livestock. The Tablelands have a long history of fine wool and beef output. The Slopes and Plains are major areas for cotton and wheat. Other primary production outputs include grains, lamb, dairy products, pork, fruit, potatoes, poultry, eggs, timber, viticulture and aquaculture.

Mineral deposits range from large coal and coal seam gas deposits in the Werris Creek to Narrabri/Moree area to metals and gemstones on the Tablelands. Antimony, coal, gold, tin and sapphires have been the more important commodities mined in the region.

### Agriculture

A variety of climate and soils translates into a rich diversity of Northern Inland agricultural enterprises. The Tablelands are predominantly grazing enterprises of fine wool production, fat prime lambs and cattle. The Slopes and Plains feature a mix of grazing and cropping with the Plains generally focussing on irrigated crops on black soil areas regarded as some of the best agricultural land in Australia. The Tamworth area also has a strong poultry focus.

The importance of agriculture in the area means over 30% of businesses in the Northern Inland are involved in agriculture or agribusiness and these businesses employ over 18% of the

workforce, or 14,900 people (SoR 2013). Over $2 billion per annum of agricultural produce comes from Northern Inland (ABS Census 2006).

The region has progressive agricultural farmers backed up by key research facilities based around the centres of Armidale, Tamworth and Narrabri providing research and advice on world's best practice. The region is visited by scientists from around the world to observe developments in agriculture.

### Agribusiness

Over 30% of businesses in the Northern Inland are involved in agriculture or agri-business and the economic wellbeing of the region is closely tied to the success of these sectors. Northern Inland agribusinesses include modern abattoirs, cotton gins, local food and dairy processors, millers, grain handling terminals, farms, intensive producers, vineyards and cellar doors. Agribusiness services include equipment and machinery supply, agricultural advisory, chemical and fertiliser supply, soil testing, forestry support, scientific research, aerial agricultural, precision farming equipment, engineering services, permaculture, fencing, irrigation and reticulation systems, earth moving, veterinary and livestock care.

There is opportunity for industry and job growth in the agri-food sector through initiatives to encourage value-added products and services. An increase in jobs and investment in agri-food will lead to a more sustainable regional industry base.

### Aviation

Major facilities include aircraft maintenance, flying schools and charter services. Tamworth airport features QANTASlink maintenance facilities for Dash 8 aircraft, companies maintaining general aircraft, the BAE flying school, Australian Defence Force facilities, and general aviation pilot training facilities.

Armidale airport is the base for Fleet Helicopters, Edwards Corporate Jet Services and the SuperAir Company which specialises in aerial topdressing activities as well as general aviation maintenance facilities. The Aircrew Check and Training company office in Armidale supplies worldwide aviation services. General aviation service companies are also located at Inverell, Moree and Narrabri airports. However, a number of Northern Inland centres that have had commercial aviation services for five decades are now without a service.

A new international pilot training school is about to be established in Glen Innes, with assistance from the Commonwealth government via the RDA Fund. This will attract 600 students annually, and is estimated to inject $20 million per annum into the local economy.

### Manufacturing and Processing

The region has a sizeable manufacturing and processing (M&P) sector, centred on value adding to agricultural products, primarily meat and cotton but also including a number of grain and oilseed processors. Tamworth M&P includes two meat processing firms, food processing companies and numerous smaller related organisations. Recently, the city was connected to the national gas grid which should provide additional manufacturing opportunities through a competitive energy source.

All large regional towns (cluster D) have M&P industries. Moree, Narrabri and Gunnedah firms process agricultural products, and have established precision and heavy engineering enterprises ready to take advantage of expanded mining. Inverell has a large meat processing plant, a fish food processing facility as well as fabrication and manufacturing operations. Other regional towns have smaller processing companies that all contribute to the wealth of this industry sector.

Growth opportunities include viticulture, glasshouse horticulture and value-added food processing. However, general manufacturing is under pressure from off-shore competition, access to finance, and for exporters, currency fluctuations.

### Tourism

Northern Inland NSW is home to rugged bush gorges, the Tamworth Country Music Festival, Aboriginal cultures, festivals, events, heritage sites, farm stays, artesian springs, and the New England is now an official cool climate wine region.

The value of tourism to the Northern Inland NSW region is significant, with 3.8 million visitor nights in 2011-12. All visitors contributed over $795m to the local economy. Tourism is also valuable for exposing potential tree-changers to advantages of living in this region. Destination NSW has summarised the benefits of tourism to any region.

There is an exciting opportunity to develop a whole of region campaign to lure tourists from international or major city and coastal holiday destinations.

### Natural Resources Development

There are numerous government and business activities linked to natural resources include mining, agriculture, forestry, solar and wind renewable energy generation and water uses.

Coal and coal seam gas (in Gunnedah, Liverpool Plains, Inverell, Moree and Narrabri Shires), sapphires (Inverell and Glen Innes Severn Shires), gold and antimony (Armidale Dumaresq) are valuable domestic and international exports. Gunnedah basin coal is experiencing major investment with rising demand for skilled workers and associated flow-on to the region. Narrabri basin seams produce enough gas to operate a small power station, and exploration for methane gas is underway to the south and west of Gunnedah.

The region has two Catchment Management Authorities (Namoi and Border Rivers Gwydir) with action plans to ensure effective management of land and water based natural resources. There is ongoing advance in the capability of land managers to continually improve their natural resource base.

### Engineering and Construction

Major firms are located through the region accounting for over 10% of total businesses. Some have a traditional agriculture and agribusiness market while others specialise in more urban needs. Many firms compete within the region with national providers and there is an emerging market for firms located in the Gunnedah basin for coal mining and related industries. Many firms in the Northern Inland face skilled workforce shortages. The RDANI Committee is developing and assisting with programs to address these shortages.

### Transport and Distribution

The Northern Inland is strategically located. Reliable highway transport corridors traverse the region linking Sydney, Brisbane, Melbourne, the mid and far north coasts of NSW and the port city of Newcastle. A regional road network connects major centres and reasonable local road networks provide for services in each local government area. However it is estimated that $266 million is needed to bring roads in the Northern Inland up to a satisfactory standard.

Daily passenger rail services run from most Northern Inland centres to Sydney. Freight rail links Moree and Tamworth to Sydney and Newcastle ports and is utilised for the growing export trade. QANTASlink operate daily services to Sydney from Armidale, Moree, and Tamworth. Brindabella flies from Tamworth to Brisbane and Aeropelican flies from Narrabri to Sydney and Newcastle. Charter air services also operate from the major airports.

### Education and Training, IT, Research

The Northern Inland has educational facilities equal to any metropolitan city, from pre-schools to university. The region hosts the University of New England, 11 TAFE Campuses, 17 Public High Schools, 89 Public Primary Schools, 13 Private High Schools, 32 Private Primary Schools, and 70 early learning/childcare facilities. Some 10% of employment in Northern Inland NSW is in the education sector.

The New England Institute of TAFE has a wide regional presence using modern technologies to deliver courses and training to match employer needs. However, centralisation of courses in larger centres (Tamworth, Armidale) and associated pressures on employers and students is an issue in smaller towns.

The University of New England (UNE) is the oldest regional university in Australia and has a reputation as a leader in higher learning and hosts a number of key research centres. UNE interacts with the region's industries and communities on its teaching and research. Courses are varied and cover many employment areas experiencing skills shortages. Major courses areas: Arts, Medicine and Health, Business, Information Technology, Education, Science, Agriculture and Law.

Research and IT based enterprises are a developing sector, based principally around Armidale. For instance, globally competitive companies associated with animal genetics, animal breed societies, and associated research professions operate around the world. Armidale is also a first release site for the National Broadband Network.

Educational software is also being produced by individuals and firms. The recently established information technology cluster in the town of Uralla provides related services to Australia and beyond.

Agricultural industry research facilities are based across the region. Research based at the north western centre of Narrabri attracts overseas business travellers as well as generating knowledge utilised locally and worldwide.

Narrabri also is the location for the CSIRO Australian telescope.

## 4.2 Strengths & Weaknesses

The regions strength (the agricultural sector) is also the regions weakness, as it leaves the regional economy vulnerable to the vagaries of climate and commodity price fluctuations. This was well illustrated in the Moree drought study (CARE 1996) which revealed the size of the negative impact on the Moree economy during the drought of the early 1990s. The drought caused gross output (equivalent to business turnover) to fall by 30% and value added (equivalent to household income plus gross operating surplus) to fall by 50%. These are massive economic impacts, and reveal the extent to which many local economies in the Northern Inland region are linked to the fortunes of the agricultural sector.

The declining state of the regional infrastructure (roads in particular) is a weakness which reduces business profitability and hinders timely access to markets. Compared to metropolitan regions, the region is also weak in business support services, which can be problematic when trying to grow the business sector, or attract new businesses to the region.

There have been numerous studies investigating means of diversifying the regional economy and reducing the reliance on commodities. One cited objective is the need to increase the number of industries in the technology and information sectors which tend to involve higher skilled, higher paid workers. While there have been some gains in this area, it has hardly been spectacular and there is hope that the rollout of the NBN may accelerate the gains.

In terms of new industry opportunities, the stand-out would appear to be renewable energy, due to the abundance of land, feedstocks and suitable climate (wind and sunshine). However constantly shifting government policy, combined with yet to be proven economic feasibility means that progress has been slow. The issue of access to the NSW Government-owned electricity grid infrastructure is also problematic (the cost of grid access is around 17 cents/kWh).

At present, renewable energy for on-site use appears to be the only viable option. Once grid involvement is required, the costs become prohibitive. And yet, the potential for new agricultural energy crops to fuel bioenergy production seems large. This would diversify agricultural incomes, and allow regional economies to develop their own energy generation industry based around renewables. It may also substantially lower business energy costs, improving profit levels, regional employment and wealth (as it the objective of the abattoir in Inverell).

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