Mr Tim Watling
Committee Secretary
Senate Standing Committees on Education, Employment and Workplace Relations
PO Box 6100
Parliament House
Canberra ACT 2600
Australia

Dear Mr Watling

Thank you for the invitation to provide a submission to the Senate Inquiry: *Higher Education and Skills Training to Support Future Demand in Agriculture and Agribusiness in Australia*.

Skills Australia is pleased to have the opportunity to contribute to the Committee's deliberations. I am attaching Skills Australia's submission for the consideration of the Committee.

If you have any queries about the submission or would like further information, please contact Dr Caroline Smith, Director of Skills and Workforce Development Policy. Dr Smith can be contacted via or on .

We look forward to hearing the outcome of the Inquiry in due course.

Yours sincerely

Sue Beitz

Head of Secretariat

Skills Australia

13 January 2012

Skills Australia Submission to the Senate Inquiry: Higher Education and Skills Training to Support Future Demand in Agriculture and Agribusiness in Australia.

Skills Australia welcomes the opportunity to make a submission to the Senate Inquiry into *Higher Education and Skills Training to Support Future Demand in Agriculture and Agribusiness in Australia*. Skills Australia is an independent statutory body providing advice to the Minister for Tertiary Education, Skills, Science and Research on Australia's current, emerging and future skills and workforce development needs.

The importance of skills and workforce development for Australia's future

Skills Australia has released a number of reports looking at the future of the Australian workforce and considering how we can ensure Australia has the workforce capability required for a productive, sustainable and inclusive future.

In 2010, Skills Australia published *Australian Workforce Futures*, its first national workforce development strategy. Workforce development is defined as: 'Those policies and practices which support people to participate effectively in the workforce and to develop and apply skills in a workplace context, where learning translates into positive outcomes for enterprises, the wider community and for individuals throughout their working lives'.[1]

This report identifies that Australia will need a more highly skilled workforce with a deeper level of skills than currently exists so as to maintain and improve the nation's economic position in the face of global competition, new technologies and other changes. The report sets an ambitious target of 69 per cent workforce participation by 2025 plus a 3 per cent growth in tertiary enrolments. It also argues for improvement in participation and productivity through a greater focus on foundation skills, including literacy and numeracy and better use of skills at the workplace level. The report proposes workforce planning focused on specialised occupations (i.e. occupations that take a long time to develop, have good education and occupational match and which are of high value to the economy and/or the community).

As part of this work, Skills Australia commissioned economic modelling of the supply and demand for skills. Skills Australia also published several Industry Snapshots, including one for the Agriculture, Forestry and Fishing industry.[2] This snapshot provides extensive data as well as short and longer-term employment growth outlooks for the industry.

In 2011, Skills Australia published *Skills for Prosperity – A roadmap for vocational education and training.* This report builds on the policy challenges outlined in Australian Workforce Futures and identifies the role of the Vocational Education and Training (VET) sector in addressing Australia's skills needs. It puts forward comprehensive reforms for the way the Australian VET sector is developed, organised and financed. It also expresses an ambitious vision of growth to meet future skills and workforce development needs and, through, this the realisation of improved workforce participation, enterprise productivity and social inclusion.

[1] Skills Australia (2010) *Australian Workforce Futures,* p.7, http://www.skillsaustralia.gov.au/PDFs_RTFs/WWF_strategy.pdf.
[2] Skills Australia (2010) *Industry Snapshot: Agriculture, Forestry and Fishing,* http://www.skillsaustralia.gov.au/PDFs_RTFs/IndustrySnapshots/Agricultureforestryandfishing.pdf.

This submission draws on Skills Australia's research reports and focuses primarily on issues relating to supply and demand in the agricultural sector and solutions in policy and practice to address workforce development needs.

Overview of the Agriculture industry

The agriculture industry makes an important contribution to the Australian economy, comprising 2.8 per cent of GDP.[3] Australia exports around two-thirds of its total farm production, contributing to approximately 10.8 per cent of merchandise exports in 2010-11 (including 4.6 per cent unprocessed food and 6.2 per cent processed food).[4] Agrifood exports accounted for a slightly higher proportion of Australia's annual merchandise exports in the years between 2005-2010, at approximately 15-18 per cent (or $25-30 billion a year) during this time.[5]

The Agriculture industry incorporates a variety of industry subsectors including crop production, livestock, dairy, poultry, aquaculture, forestry and logging, and fishing, hunting and trapping. The industry also faces a number of challenges and opportunities which will drive the demand for skills needs in agricultural businesses. Factors such as adverse weather conditions, food security and affordability, new technologies, climate change adaptation, increased corporatisation of the industry, the increased demand for protein and a wider range of food products from Asian economies and many other factors will drive the demand for skills and labour in this industry.

Australia is currently experiencing high levels of economic activity and the agriculture industry competes in its demand for skills with many other areas of the economy, including the resources sector. A lack of appropriate skills could moderate agricultural production or put upward pressure on prices, constraining or even reducing economic growth in the sector and in the economy as a whole.

Characteristics of the agricultural workforce

The agriculture sector has the highest proportion of older workers compared to other industry sectors, with 58 per cent of workers aged 45 years or older, compared to 38 per cent for all industries. Around one third (32 per cent) of the workforce is female, compared to 45 per cent for all industries.[6]

Employment trends and projections

Longer-term analysis of the agriculture labour market shows that there has been a decline in employment in the agricultural industry. In 2002, employment in Agriculture, Forestry and Fishing dropped below 400 000 workers for the first time since the early 1980s, when the labour market survey data series began. This corresponds with a period of extreme drought, but also reflects structural adjustment in the industry and the departure of workers for other sectors. Today, employment in Agriculture, Forestry and Fishing is some 75 000 workers below the average for the industry between 1984 and 2011, of which approximately one third

[3] 'Industry value added' is the measure of the contribution by industry to gross domestic product (GDP) at basic prices. ABS (2011) Australian System of National Accounts (Cat. no. 5204.0).
[4] DFAT (2011) *Trade in Primary and Manufactured Products, Australia, 2010-11,* http://www.dfat.gov.au/publications/stats-pubs/trade-in-primary-and-manufactured-products-australia-2011.pdf.
[5] Australian Government (2011) *Issues paper to inform development of a national food plan,* http://www.daff.gov.au/__data/assets/pdf_file/0009/1926315/nfp_-_final.pdf.
[6] DEEWR (2011) *Australian Jobs*.

can be attributed to short-term fluctuations in recent quarters, and the remaining two thirds to longer-term trends.[7]

With regard to current employment, ABS Labour Force data indicate there were around 327 100 people, or three per cent, of the Australian workforce employed in the Agriculture, Forestry and Fishing industry as of November 2011.[8] Growth in agricultural employment has been relatively flat in recent years, with an increase of 3 300 based on historical growth data over the five years to 2010-11. However this masks significant fluctuations over the shorter term, for example there was a 17.8 per cent decline in employment from 2009-10 to 2010-11.[9] The industry is significantly impacted by short term factors such as adverse weather conditions (including the Queensland & Victorian floods and cyclones), a high exchange rate and uncertainty in relation to trade conditions.[10]

In considering issues of supply and demand of labour in the agriculture sector, Skills Australia believes that it is important to look at both national level data but also to identify issues and emerging trends in relation to industry subsectors and to regions. For example, recent data shows that growth is unevenly distributed across the industry, with some sectors (such as fruit and vegetable growing, deer and poultry farming, forestry and logging, and agriculture and fishing support services) showing positive growth in the year to November 2011. Conversely, horticulture, livestock, dairy, grain and other crop farming all show a drop in employment over the same period.[11]

Employment projections suggest a more positive future. DEEWR's annual industry employment projections estimate that employment in the Agriculture, Forestry and Fishing industry will increase by 27 400, or by 1.4 per cent per annum to 2015-16.[12] This will bring employment levels back up to those experienced in 2010, with strong growth projected for dairy cattle farming, sheep, beef, cattle and grain farming, other livestock farming, and forestry support services.

The industry is also instrumental in creating jobs in related sectors, such as Transport, Storage and Warehousing, and Manufacturing (including food processing).

Future skills needs in the sector

Based on Skills Australia's modelling against three scenarios used in *Australian Workforce Futures*, we can see that education profiles for each respective occupation within the Agriculture, Forestry and Fishing industry (and for all industries) show that all occupations will progressively upskill, with the proportion of those with no post school qualifications decreasing to 2025 under all three scenarios.

The trend of skills deepening is particularly pronounced among Technicians and Trades Workers and Clerical and Administration Workers in this industry. Based on the modelling, qualification levels in both occupational groups would show an increase of about 28 per cent to 2025 in the proportion of workers with post school qualifications under Open Doors.

[7] DEEWR analysis of ABS trend data, November 2011 (Cat no. 6291.0.55.003).
[8] DEEWR analysis of ABS trend data, November 2011 (Cat. no: 6291.0.55.003).
[9] ABS Labour Force, Australia, Detailed, Quarterly (Cat. no. 6291.0.55.003).
[10] DEEWR analysis of ABS trend data, November 2011 (Cat. no. 6291.0.55.003).
[11] DEEWR analysis of ABS trend data, November 2011 (Cat. no. 6291.0.55.003).
[12] DEEWR (2011) *Industry Projections to 2015-16*, http://www.deewr.gov.au/lmip/default.aspx?LMIP/Publications/IndustryEmploymentProjections.

Among Technicians and Trades Workers there is strong growth in the proportion of workers who hold a Certificate I or II qualification, increasing to 34.6 per cent in 2025 under Open Doors, up from 6.8 per cent in 2009. There is also strong growth among clerical and administration workers who hold a Certificate III or IV, increasing from 10.8 per cent in 2009 to 42 per cent in 2025 under Open Doors.[13]

Skills Australia is currently developing new scenarios which will inform economic modelling of the supply and demand for skills and will support the next workforce development strategy. The scenarios are designed to help address the limitations in labour market forecasting, and will provide a range of plausible alternative futures for Australia to 2025. This will help in managing uncertainty in ascertaining supply and demand of skills.

Three of the four scenarios being developed show that the agriculture sector will be expected to grow in the future, especially with the growth of Asian markets including India and China. The 'Long Boom' scenario, which is closest to the Treasury model, suggests that growth in demand for agricultural products will be offset in two ways: by increased automation, consolidation and changed requirements for higher skills in business, technology, veterinary and science; and by the impact of environmental events which significantly hinder agricultural production. The scenarios are expected to be finalised in early 2012.

Regional demand

Agriculture employment is concentrated in regional areas and the industry provides an important source of employment in the regions. The industry provides significant number of regional job opportunities, with the vast majority of employment in Agriculture, Forestry and Fishing (89 per cent) located outside capital cities, compared to just 37 per cent for all industry sectors.[14]

The Reserve Bank of Australia (RBA) has conducted research on the labour market outcomes in regional areas of Australia.[15] The research finds that overall the trends in regional labour markets during the past two decades have been broadly similar to those in capital cities and that unemployment rates across the different regions have tend to converge towards the national average. However the RBA notes that there are some significant differences in labour market outcomes across individual regions and that these differences in part reflect differences in industry structure. For example, regions with a higher than average share of employment in mining and agriculture have tended to have lower unemployment rates than regions where employment is concentrated in the manufacturing and tourism sectors.

The RBA examined 314 statistical local areas (SLAs) where agriculture is the dominant industry in the region and found that over the past decade regional areas that were heavily focused toward agriculture have generally had around average unemployment rates, although it noted that the unemployment rate for a few SLAs in North Queensland rose sharply in 2009. While the trend shows that for 80 per cent of regions the unemployment rate is between 2.3 and 7.9 per cent, there is significant variability with 10 per cent of agricultural regions having unemployment rates of over 7.9 per cent, with the highest being 21.4 per

[13] Skills Australia (2010) *Industry Snapshot: Agriculture, Forestry and Fishing*.
[14] Australian Government (2011), *SkillsInfo*, http://www.skillsinfo.gov.au/skills/IndustryInformation/AgricultureForestryFishing/
[15] M. Cunningham and K. Davis (2011) 'Labour Market Outcomes in Regional Australia', *RBA Bulletin*, September quarter, http://www.rba.gov.au/publications/bulletin/2011/sep/pdf/bu-0911-1.pdf.

cent. The RBA concludes that the low average unemployment rates in mining and agricultural regions are likely to reflect, in part, significant labour mobility in and out of these regions. This is due to the fact that when employment in the industry has declined there has been no notable increase in the unemployment rate in the region. This suggests that the labour mobility adjustment mechanism is more important for agricultural regions than for regions that focus on tourism and manufacturing.[16]

This research suggests that for some regions there are likely to be labour and skills shortages, while for others there would be significant capacity to better engage the local workforce.

Qualifications of the workforce

Workers in the sector tend to have lower skill levels than in other industries. More than half of workers employed in the Agriculture, Forestry and Fishing industry (57 per cent) do not have post-school qualifications, compared with 39 per cent for all industries. Of the remaining agricultural workers, 25 per cent hold a VET qualification at Certificate III level or higher, with a further 10 per cent holding a Bachelor degree qualification or higher (compared to 30 per cent and 26 per cent, respectively, for all industries).[17] Eight per cent hold lower-level certificates, compared to five per cent for all workers.

The above-average proportion of workers without post-school qualifications reflects the higher age profile of the sector. It may also reflect cultural views in the industry where there has not been a tradition of accessing formal training courses as the primary means of skills development .[18] It also reflects that the skills mix within the industry is highly varied, ranging from low-skilled labour (including seasonal workers, such as fruit pickers) to highly-skilled professionals, tradespersons and operators who work in a wide range of roles and are often multi-skilled.

Skills supply from the VET sector

VET student completions in Agriculture, Environmental and Related Studies increased from 12 121 in 2004 to 14 367 in 2009, representing an average change of 4 per cent per annum, compared to 8 per cent for all VET completions.[19] Completions in some subjects areas grew between 2004 and 2009, such as Agriculture (6 per cent per annum), Environmental Studies (6 per cent), Horticulture and viticulture (4 per cent) and Fisheries studies (2 per cent). However, completions in Forestry Studies fell markedly over this period (dropping by 23 per cent per annum), as did Other Agriculture, Environmental and Related Studies (by 15 per cent), albeit from a small number of students in both subjects.

The use of apprentices and trainees in Agriculture, Forestry and Fishing is lower than that of all industries. While 1.5 per cent of workers in the industry are an apprentice or trainee, this is far below the average of 3.9 per cent for all industries.[20] The growth in Apprenticeship *commencements* within the Agriculture, Forestry and Fishing industry, however, is slightly

[16] RBA (2011) Regional Unemployment Rates by Dominant Industry, using ABS, DEEWR and RBA data
[17] DEEWR(2011) *Australian Jobs*.
[18] Skills Tasmania (2006) *Industry Training Demand Profile: Agriculture*, p.36, http://www.skills.tas.gov.au/providers/industryadvice/training_demand_profiles/agriculture.pdf.
[19] NCVER (2011) *Students and Courses* [N.B. The latest year for the number of qualifications completed is 2009].
[20] DEEWR(2011) *Australian Jobs*.

above average, having increased by a total of 5 per cent per annum between 2004 and 2010 (to 5 017), compared to 4 per cent per annum for all industries.[21]

Completions for apprentices within the Agriculture, Forestry and Fishing industry have increased by 1.1 per cent between 2004 and 2010 (to 2 187), although this is slightly lower than the increase of 1.2 per cent for all industries.[22]

Skills supply from Higher Education sector

There are fewer students completing higher education studies in Agriculture, Environmental and Related Studies than in the VET sector, with 3 773 completions in 2010. Unlike the steady completions reflected in the VET system, higher education completions in Agriculture, Environmental and Related Studies have actually declined by 1 per cent per annum between 2004 and 2010, compared to an average growth of 4 per cent per annum in all subjects. The only exceptions to this trend were in the subjects of Environmental Studies and Other Agriculture, Environmental and Related Studies, both of which increased during this time.[23]

In comparison, completions in both Agriculture and Forestry Studies dropped by 6 per cent per annum between 2004 and 2010 (to 631 and 60 completions, respectively), while Horticulture and Viticulture dropped by 14 per cent per annum (to 117 completions) and Fisheries Studies declined by 22 per cent per annum (to only 35 completions).[24]

The story is similar for higher education enrolments in Agriculture, Environmental and Related Studies. While enrolments have risen in by 27 per cent in Environmental Studies between 2004 and 2010, enrolments in subject areas explicitly related to agriculture have all dropped during this time, with studies in Agriculture declining by 17 per cent (to 1 238 enrolments), Horticulture and Viticulture by 57 per cent (to 283), Forestry by 41 per cent (to 69) and Fisheries Studies by as much as 81 per cent (to only 82 enrolments).[25]

As enrolments give a sense of student demand, this decline in student take-up of agriculture-related subjects raises the risk that institutions will find it harder to offer study options if insufficient students are interested in pursuing these courses.

To summarise: training in the agriculture sector occurs at fairly low levels, but is stable and growing consistently (if modestly) in VET courses and apprenticeships, but student numbers are lower and are slowly declining at the higher education level. As *Australian Jobs* notes, the fact that more than half of workers in the industry do not hold post-school qualifications suggests that 'on-the-job training and experience contribute significantly to skill development'.[26]

The reasons for a decline in higher education enrolment and completion activity throughout much of the last decade are unclear but may be related to factors such as the prolonged drought and perceptions of uncertain employment in the industry. Strategies to increase demand may therefore warrant close attention. Skills Australia notes that the National Farmers Federation (NFF) is working with the Australian Institute of Agricultural Science and Technology, the Australian Council of Agricultural Deans and other stakeholders to address

[21] NCVER (2011) *Apprentices and trainees 2011 - June quarter.*
[22] NCVER (2011) *Apprentices and trainees 2011 - June quarter.*
[23] DEEWR (2011) Higher Education Statistics Collection.
[24] DEEWR (2011) Higher Education Statistics Collection.
[25] DEEWR (2011) Higher Education Statistics Collection.
[26] DEEWR(2011) *Australian Jobs*, p.15, http://www.deewr.gov.au/Employment/ResearchStatistics/Documents/AustralianJobs.pdf.

the poor image of agriculture, which may be discouraging students from considering agricultural careers.

There are existing strategies in place to bolster uptake of agricultural qualifications, with Government providing agricultural units of study with the highest level of funding support available through the Commonwealth Grant Scheme ($19,542 per Commonwealth supported place in 2011) for higher education students. We do note however the recommendation of the recent review of Higher Education Base Funding that students contribute 40 per cent of the cost of their courses and that government contributes 60 per cent across all fields of education. This would mean an increase of several thousand dollars a year for agriculture students on current costs. Agriculture is identified in the review as a course that requires more funding than it currently attracts. The review recommends increasing total funding (including both student and government contribution) by up to 25 per cent.

Policy levers also exist within the apprenticeship system to support skills take up at both Commonwealth and state level. Youth training payments are available for agricultural apprenticeships (including school-based apprenticeships) and apprentices are eligible for incentive programs available to 'traditional trades' through special concessions under the National Skills Needs List. These include the $800 Toolkit for Trades, the $1,000 Apprenticeship Training (Fee) Voucher and new incentives for Agricultural and Horticultural Australian Apprentices. Under Tools for Your Trade initiatives there is also an additional tax exempt bonus of up to $1,700 available as apprentices reach milestones in their training (providing up to $5,500 to eligible Australian Apprentices over the life of their Australian Apprenticeship). The Australian Government is also currently reforming the Australian apprenticeship system to help address skill shortages and improve apprenticeship completion and retention rates.

Nature of employment

In considering the issue of attracting and retaining workers in the industry, it is also important to consider the nature of employment including wages. Median weekly wages in agriculture are below the all industry average for both full-time and part-time workers. Between 2006 and 2010, the mean weekly earnings for full-time workers in the Agriculture, Forestry and Fishing Industry was nearly one-quarter below that of full-time workers in all industries (at 76 per cent). Part-time workers in agriculture fare slightly better, with mean weekly earnings around four-fifths (81 per cent) of those for workers across all industries.[27] See Table 1 below.

Table 1: Comparison of Agriculture, Forestry and Fishing Industry mean weekly earnings in main job by full-time or part-time status, with all industries (ANZSIC 2006), 2006–2010[28]

	Units	2006	2007	2008	2009	2010
Agriculture, forestry and fishing, Part-time	($)	294	360	316	379	398
Agriculture, forestry and fishing, Full-time	($)	813	817	857	981	956
All Industries, Part-time	($)	388	412	428.39	450	468
All Industries, Full-time	($)	1045	1126	1160.2	1219	1263

[27] ABS Employee Earnings, Benefits and Trade Union Membership (Cat.no. 6310.0)
[28] ABS Employee Earnings, Benefits and Trade Union Membership (Cat.no. 6310.0)

It is also the case that workers in the sector work longer hours than in all other industries. For all workers (full-time and part-time) in Agriculture, Forestry and Finishing, the average weekly hours worked was 42, compared to 34 for workers in all industries. Average weekly hours for full-time workers in Agriculture, Forestry and Finishing is significantly higher (51 hours) than for workers in all industry (34 hours). Working hours for part-time employees is closer to the average for all industries.[29] See Table 2 below.

Table 2: Comparison of Agriculture, Forestry and Fishing Industry average actual weekly hours by full-time or part-time status, with all industries (ANZSIC 2006), 2006–2011[30]

	Units	2006	2007	2008	2009	2010	2011
Agriculture, forestry and fishing, Full-time	(hrs)	50	51	51	51	50	51
Agriculture, forestry and fishing, Part-time	(hrs)	15	15	15	16	15	16
Agriculture, Forestry and Fishing, Total	(hrs)	41	42	42	42	41	42
All industries, Full-time	(hrs)	42	42	41	41	41	41
All industries, Part-time	(hrs)	17	17	17	17	17	17
All industries, Total	(hrs)	35	35	34	34	34	34

The rate of casualisation is significantly higher in agriculture, forestry and fishing than the all industry average. In 2010, 25.6 per cent of workers in the industry were employed on a full-time casual basis, compared to 7.4 per cent of all industries. The extent of full-time casual employment in agriculture has tended to fluctuate in recent years. In 2006, 36.6 per cent of workers in the industry were employed on a full-time casual basis, dropping to 21 per cent in 2008. This is likely to be due to the sector responding to pressures such as the less favourable economic conditions arising from the global financial crisis and drought by reducing employment in casual workers. The proportion of part-time casual workers in the sector is also slightly above the all industry rate and has been more stable over time. In 2010, 19 per cent of workers in Agriculture, Forestry and Fishing were employed on a part-time casual basis, compared to 17 per cent of all industries.[31] See Table 3 below.

Table 3: Comparison of Agriculture, Forestry and Fishing Industry incidence of casual employment by full-time or part-time status, with all industries (ANZSIC 2006), 2006–2010[32]

	Units	2006	2007	2008	2009	2010
Agriculture, forestry and fishing Part-time	(%)	16.7	20.4	20.3	18.3	19.0
Agriculture, forestry and fishing Full-time	(%)	36.6	29.6	21.0	24.7	25.6
All Industries Part-time	(%)	16.9	17.0	17.1	17.9	17.0
All Industries Full-time	(%)	10.0	7.7	7.0	6.5	7.4

[29] ABS Labour Force, Australia, Detailed, Quarterly (Cat. no. 6291.0.55.003).
[30] ABS Labour Force, Australia, Detailed, Quarterly (Cat. no. 6291.0.55.003).
[31] ABS Employee Earnings, Benefits and Trade Union Membership (Cat. no. 6310.0).
[32] ABS Employee Earnings, Benefits and Trade Union Membership (Cat. no. 6310.0).

Issues raised by the Committee

Funding and priority given by governments at the federal, state and territory level to agriculture and agribusiness higher education and vocational education and training

In *Australian Workforce Futures,* Skills Australia argued that the tertiary sector will require additional resourcing and the development of new strategies to encourage greater participation in education and training. We therefore recommended an investment of an additional $660 million cumulating each year to 2025 compared to the 2008 base to provide for a three per cent per annum growth in enrolments in higher education and VET.

In *Skills for Prosperity,* Skills Australia recommends increased and sustained investment to enhance the capacity of the VET sector to provide the highly skilled population Australia needs to improve workforce participation promote social inclusion and enhance productivity growth.

Whilst the investment capacity and commitment of governments will be required, we suggest this is a responsibility that should not be carried by governments alone. Skills Australia proposes that reform of the investment framework entails a partnership approach to investment by government, individuals and enterprises, with an increased contribution being borne by those individuals or enterprises who stand to benefit most from the skills that are gained.

We estimate that the cost of the total package of reforms recommended by Skills Australia over the next 15 years would require an additional $310 million per annum for VET, accumulating from $8,286 million in 2008, so that total funding rises to an estimated $10,283 million in 2015 and to almost $12 billion in 2020. This proposed annual commitment in public funding of just over 3 per cent per annum accumulating is approximately the same as the projected increase in the required number of qualifications needed to meet estimated demand. We also argued for additional funding to support the needs of learners, especially those from disadvantaged backgrounds.

Agricultural and related educational facilities

Skills Australia has not conducted research into the state of agricultural and related educational facilities in Australia and makes no comment about whether there has been a decline. However we do believe that having sufficient, high quality education facilities is important.

We support locally driven solutions and the importance of ensuring the needs of disadvantaged learners and communities are met. While competition can be healthy in terms of driving quality and price improvements, competition in thin training markets can have a negative influence on overall effectiveness. This can be a significant issue in regional and remote Australia, especially in the VET sector. In *Skills for Prosperity*, we therefore propose that governments should clearly articulate the role of the public provider and we recommend maintaining core or base funding or develop specific funding frameworks to support the ‘public good’ role of the TAFE sector. The TAFE system has a significant function in regions to protect against market failure and as a lever of government policy.

We note the significant recent investment in capital facilities that has been made by government in educational facilities. This investment has taken place in all sectors – in schools, including Trade Training Centres, VET and higher education, the latter for instance through the Structural Adjustment Fund which has facilitated joint approaches to service

delivery and to facilities and technology development, especially in regional Australia. The Government has recently announced 11 new projects under the latest round of funding. These include projects in a number of regional universities, such as the University of Southern Queensland, Southern Cross University, University of New England and Charles Darwin University.[33]

Skills Australia also recognises the importance of flexible forms of educational delivery. The world of work is rapidly changing and education and training products must be flexible and responsive to meet the needs of learners and to reflect changes in industry. Information and Communications Technology (ICT) has the potential to be a critical tool in providing greater access to learning, including across rural, regional and remote areas. Much is already being done to redesign learning products and services with the development of flexible, innovative and creative learning products that are driven by industry's skill needs.

Online and blended delivery is a way of expanding the reach and quality of education and views the National Broadband Network (NBN) as a critical tool for supporting the use of ICT in learning. We believe that the NBN has the capacity to provide greater access to learning across rural, regional and remote Australia in both small and large enterprises.

Strong cooperation between training providers and between the school, VET and higher education sectors is also an effective way to achieve greater opportunities for individuals and enterprises to access education and training facilities and resources. In *Skills for Prosperity* we suggest strategies to better support pathways across the education sectors to meet the projected demand for higher level skills and qualifications.

In *Skills for Prosperity* we argue that progression between education sectors should be as simple as possible, including between informal and formal learning. Recognition of prior learning is a powerful tool for bringing people into the learning system as they are able to have skills and knowledge developed outside the formal education system assessed and valued against qualifications frameworks. Articulation and credit transfer agreements between institutions are also essential mechanism to support learning pathways.

We note that the Board of AgriFood Skills Australia currently has a focus on VET in Schools programs, having identified increasing the number of students in agrifood qualifications as a priority over the coming 12 months. According to AgriFood Skills Australia, presently fewer than 4 per cent of students nationally involved in VET in schools undertake an agrifood qualification. In an attempt to address this issue, AgriFood has entered into partnership arrangements with two states (Queensland and South Australia) to deliver agrifood qualifications in schools.

Skills Australia views the VET in Schools program as having value in broadening opportunities for school students and providing links to the world of work. However, stakeholders have expressed considerable disquiet in relation to this program, claiming uneven quality, confused purpose and lack of confidence in the program's outcomes. In *Skills for Prosperity*, we highlight the complexities inherent in a highly flexible system and recommend that a national review of VET in Schools programs be undertaken.

[33] DEEWR (2011) 'Gillard Government investment opens the doors to higher education', Joint Media Release, 7 December, http://ministers.deewr.gov.au/gillard/gillard-government-investment-opens-doors-higher-education.

Skills Australia also strongly advocates the benefits of on-the-job training. Adequate workplace training is essential for ensuring students are work-ready upon graduation, but also allows students access to the most up-to-date technology used by industry. Furthermore, Skills Australia and many of our stakeholders view work-based training as central to improving retention and completion rates in education.

Policy solutions and strategies to address gaps in supply and demand

There are a range of possible solutions to balance the supply and demand of workers. Skills Australia advocates a targeted approach to planning for workforce development that focuses on specialised occupations. Strategies can include workforce development initiatives at the enterprise, industry or regional level including the use of attraction and retention strategies as well as efforts to raise labour force participation. Migration can also be an important part of strategies to balance supply and demand.

Reform of the supply side is an important potential part of potential solutions, both at the VET and higher education level. A positive image of the sector and good labour market information to potential students also plays a role in addressing any gaps in supply and demand.

Planning for workforce development

One key aspect of Skills Australia's approach to workforce development is to concentrate planning efforts 'where there is significant risk to the economy, and to communities, of certain skills not being available, or where potential exists for market failure because of under or over supply'.[34] As a result Skills Australia has developed the notion of specialised occupations, i.e. those occupations that require specialised skills, learned in formal education and training, at entry level.

For these occupations the impact of market failure if these skills are not available is potentially significant. Skills Australia has developed a list of specialised occupations which includes a number of occupations related to the agriculture industry, including Agricultural and Forestry Scientists (ANZSCO 2341), Land Economists and Valuers (2245), Cartographers and Surveyors (2322), Chemists (234211) and Veterinarians (2347). A number of agricultural (and agriculture-related) occupations at the six-digit level are also included on the Skilled Occupations list (SOL) which is used for general skilled migration purposes. Skills Australia would therefore recommend that planning efforts focus on these particular occupations in the first instance.

In other areas outside of the Specialised occupations, Skills Australia expects that the market will create a balance of supply and demand. This concept does assume that the labour market is operating effectively. However we note that there may be particular pressures in some regional areas. It is important to also to note the distinction between skills shortages and labour shortages.

Workforce Development

In order to ensure that the skills supplied by the education system matches the needs of industry and enterprises a greater focus must be placed on workforce development. The workforce development agenda encompasses all of the factors that encourage the development of skills and their use in Australian workplaces, and drives participation and

[34] Skills Australia (2010) *Australian Workforce Futures*, p.18.

productivity improvements. In *Australian Workforce Futures* we recommended that governments leverage their influence to encourage workforce development in enterprises of all sizes, with a focus on small business. This needs to be underpinned by a partnership approach and a shared agenda between the key parties responsible for workforce development.[35]

The broader context in which enterprises operate, including the dynamics of their industry sub-sector, has an important influence on business and workforce planning and development. Many of the contextual issues enterprises need to consider in business and workforce planning and development are relevant to the industry as a whole. Whether it is government funding priorities, the exchange rate, technological developments, climate change, the impact of drought, government regulations, or the nature of global competition, enterprises competing in an industry sub-sector often share common concerns and, in some cases, can benefit from pursuing common responses.[36]

Australian Workforce Futures recommended the establishment of a national program of industry clusters and/or networks to address the collective skills and workforce challenges faced by enterprises in an industry sub-sector or region. We note and support the very successful workforce development initiatives occurring in the agriculture industry in Australia and believe that this is an important area for potential further expansion. Examples include:

- The **Narrabri 'Make it Work'** approach facilitates collaboration and capacity building to address regional skills and workforce challenges at the local level. The initiative focuses on engaging human capital through development of industry and regional career pathways designed to build and manage local skills capacity. Strategies include: professional development for business owners and managers including HR practice, skills utilisation and job design; retention of the existing workforce via up-skilling and the development of cross-industry skills sets; career opportunities for young people in the region; and assessing regional skills demand. For further information, see http://www.agrifoodskills.net.au/.

- Dairy Australia has commissioned the **People in Dairy Program**, which includes a new Diploma of Business (Human Resources) in Dairy, targeted primarily to on-farm business advisers. The program is delivered by the National Centre for Dairy Education Australia (a partnership between Dairy Australia and Goulburn Ovens TAFE). It is supported by a comprehensive website providing farmers and consultants with a suite of tailored HR tools. The People in Dairy program has also initiated projects to: help advisers increase their capacity to support farmers on people issues; build the whole industry's ability to attract and retain people; and develop future farmer leadership capacity to influence public policy and manage collective investments. For further information see http://www.thepeopleindairy.org.au.

- The **Regional Agrifood Skills and Workforce Development Strategy** seeks to build robust labour pools in rural and regional Australia through cross-industry, locally based collaboration of enterprises, local governments and shires, and their respective communities

[35] Skills Australia (2010) *Australian Workforce Futures*, p.67.
[36] Skills Australia (2010) *Australian Workforce Futures*, p.52.

The Australian Government has established Regional Development Australia (RDA), which is a network of 55 committees located throughout Australia to provide a strategic framework for economic growth in each region. Skills Australia sees a role for these committees to advise on local skill shortages and the solutions to better integrating skills with regional development priorities.

Skills utilisation as part of workforce development

Workforce development includes the development and utilisation of skills at the enterprise level. Skills utilisation is concerned with maximising the contributions that people can make in the workplace, and therefore how well people's abilities have been deployed, harnessed and developed to optimise organisational performance.[37] Qualitative research conducted by Skills Australia has identified a link between strategies to maximise the skills of workers and benefits to employers such as productivity, innovation, profitability and retention, and employee benefits such as job satisfaction and motivation.[38]

The study found that skills utilisation strategies include job redesign, employee participation, autonomy, job rotation, multi-skilling and knowledge transfer (mentoring and applying new learning). The organisations studied are from industries across the economy, operating in the public, private and not-for-profit sectors and in a wide range of geographical locations. Small, medium and large employers were all found to participate in improving the skills use of employees. Small employers benefited from their ability to be flexible, adaptive and innovative, while large employers benefited from their ability to provide employees with a diversity of job roles and experiences.

Skills utilisation is often triggered by tight labour markets and the need to attract and retain employees when faced with strong competition for skills and labour. The research identified five critical success factors in introducing successful skills utilisation strategies. These are: (1) strong leadership and management support, including middle and line management; (2) a cooperative, inclusive culture and supporting organisational values; (3) Communication, consultation and collaboration; (4) effective human resources practices; and (5) employee motivation and commitment. Skills Australia will be disseminating this work during 2012.

Raising the supply of skills by lifting participation

As noted above, there is wide variability in the levels of unemployment in agricultural areas of Australia, with some areas experiencing unemployment of over 20 per cent. This suggests that while there may be a potential supply of skills and/or labour in these regions, there are barriers or disincentives to participation which need to be addressed.

Australian Workforce Futures highlighted the importance of raising Australia's labour force participation from around 65 per cent to 69 per cent by 2025. Achieving this target is critical if we are to avoid or minimise skills and labour shortages.[39] The need to expand workforce participation means that the education sectors need to reach many more disengaged and disadvantaged learners. This will require additional support services and additional funding. Industry and education providers working with local employment services will also be important.

[37] Definition adapted from UKCES (2010) *High Performance Working: A policy review*, Evidence Report 18, London: UK Commission for Employment and Skills, May, p.3.
[38] Skills Australia (forthcoming) *Better Use of Skills, Better Outcomes: A research report on skills utilisation in Australia*.
[39] Skills Australia (2010) *Australian Workforce Futures*, p.25.

Raising the supply of skills through migration

We note the introduction of government initiatives targeted to parts of the agriculture sector, such as the Pacific Seasonal Worker Pilot Scheme (now the Seasonal Worker Program). This scheme allows Pacific seasonal workers from nominated pacific countries to work in Australia for four to six months. The scheme allows seasonal workers to work for horticultural enterprises that demonstrate that they cannot find enough local labour to meet their seasonal harvest needs.

The agriculture sector does make use of 457 visas arrangements, although at a lower rate than some industries such as health. For example in 2010-11, 457 visas were used to bring 80 mixed crop and livestock farmers, 40 agricultural scientists and 20 land economists to Australia.[40]

Migration will continue to play a significant role in supplementing domestic training efforts and measures for Australians, by supporting and helping to balance any anticipated shortfalls. However, it is widely acknowledged that Australia should not rely on migration to meet skill needs, but should also focus efforts on effective workforce planning, skills acquisition and the utilisation of existing skills within the local labour force.

Demand-led/Entitlement Funding

The way the VET sector is currently financed and organised is overly complex. We have recommended moving to a national system of an individual and enterprise demand-led model of public funding to remove financial barriers and to allow increased choice of training provider. Through a demand-led model, which puts learners and enterprise at the forefront of the system, we believe the VET sector will be better placed to meet the demands for additional skills in the future, including in the agricultural sector. However, Skills Australia is also attentive to the need to avoid perverse outcomes, market failure or poor quality delivery, especially in rural and regional areas. We therefore consider it essential that the role of the public provider in such situations be clarified and that quality assurance mechanisms be firmly in place, supported by increased consumer information and transparency.

Higher Education is already in the process of moving to a demand-led funding model for students. From 2012, the Government will no longer specify the number of undergraduate places it will fund public universities to provide. Every domestic student enrolled in an undergraduate course of study will be entitled to a funding contribution. The Government has made this change in order to grow the higher education sector and encourage more people into university degree courses.

Across jurisdictions, changes have been underway for some time to put the VET sector on a similar footing. Skills Australia proposes a ‘targeted’ or prioritised entitlement to a publicly funded training place with the highest proportion of public subsidy to be afforded to those students undertaking lower level vocational courses up to and including Certificate III. Skills Australia welcomed the announcement in the 2010/11 federal Budget of the introduction of entitlement funding which will provide a guaranteed training place for Australians aged under 25 years to enable them to get their first qualification or lift their qualification to a higher level.

[40] Department of Immigration and Citizenship (2011) Unpublished data (BE4356.02)

Enterprise Funding

Skills for Prosperity proposes a new industry-driven funding program in order achieve a broader focus on workforce development and skills use, rather than the more traditional focus simply on training and skills formation. As mentioned above, workforce development is concerned with the factors that encourage both skills formation and skills use. Allocating funds to enterprise initiatives can help to create demand for training services and promote effective use of skills in the workplace. It was therefore proposed that the fund would allocate funding to enterprises or industry sectors for workforce development where enterprises deliver nationally accredited training; demonstrate robust workforce development plans linked to business development or industry planning; and, make a co-contribution to the cost of the program scaled according to the enterprise's size.

The Australian Government has taken up this recommendation in the form of the National Workforce Development Fund which was announced in the 2011/12 Budget. Skills Australia is transitioning to become the National Workforce and Productivity Agency and will administer the National Workforce Development Fund. The fund will provide $558 million over four years to support training and workforce development in areas of current and future skills need. Government funding will be supplemented by a co-contribution from industry with government contributing at higher levels for small businesses.

On 21 September 2001, the Hon Chris Evans announced consolidation of the Government's industry skills programs would result in $110 million being made available to industry for the remainder of 2011-12. This would be comprised of:

- $50 million through the National Workforce Development Fund (consolidated from the Critical Skills Investment Fund);
- $29 million through the Accelerated Apprenticeship Program;
- $15 million through the Apprenticeship Mentoring Program; and
- $15 through the Workplace English Language and Literacy Program.

Better Information for Potential Students and prospective employees

One of the risks associated with demand-based funding is a mismatch between students' choice of course and industry skill requirements. We therefore argue in *Skills for Prosperity* the case for better information being made available to VET users. Skills Australia views robust, objective and easily accessible consumer information as a powerful means for users, owners and purchasers of services to monitor and compare the characteristics and quality of outcomes. There may also be a need to improve public perceptions around pursuing a career in agriculture to increase the enrolments in agriculture education and training courses.

Workforce development initiatives in some industry bodies, such as those from Dairy Australia, include visits to schools to explain the opportunities and benefits of working in dairy. This may be especially important in an area such as agriculture which may be suffering from an image problem given the impact of extended drought and other natural disasters which may mean prospective employees/students don't see agricultural work as an attractive or stable career option.

Skills Australia also notes and supports the project AgriFood Skills Australia is currently working on to promote career opportunities and pathways within the agrifood industry. According to AgriFood Skills Australia, the challenge for many agrifood sectors has been the attraction and retention of workers. They anticipate that this project will help to highlight the prospects for young workers in the agrifood industry.

Feedback we have received from both industry and peak bodies highlights that career advice for learners is often poor or absent and is impacting on choice and ultimately work outcomes. We believe that initial student counselling and career advice, quality teaching, mentoring, tutorial support and special assistance during the learning program would help students to select a program suited to their aptitudes and objectives and to complete modules and courses.

Improved information, transparency and better outcomes are fundamental to lifting the reputation of the VET sector. Robust, objective and easily accessible consumer information is a powerful means for users, owners and purchasers of services to monitor and compare the characteristics and quality of outcomes. In *Skills for Prosperity* we make a number of recommendations to increase information and transparency through a *MySkills* website and improved data collection.

Concluding comments

This submission highlights the complexity of the agriculture sector, as well as emerging challenges and opportunities. On the demand side, we can see that there has been an overall decline in the number of jobs in the industry over recent decades, but projections of growth in years to come. On the supply side, the workforce is ageing more rapidly than the labour force as a whole and is comparatively low skilled. And there are expectations that the need for more skilled workers will arise. Whilst the data shows increases in VET completions in agriculture and related sectors, this is at a lower rate than in other industries. Higher education completions are in decline.

It is also apparent that there are existing levers in place to improve the capacity of the sector through incentives in apprenticeships and higher education. Further that the direction of travel in skills policy and funding is for a greater focus on the demand side, through an enterprise based funding route and the introduction of a student entitlement approach in higher education and in areas of the VET sector. Skills Australia is of the view however, that there is also a need for increased investment in the tertiary sector as a whole to meet Australia's current and emerging skills needs. It is also important that there is adequate provision of training opportunities in both institutional and workplace settings.

In reviewing the available data and complexity of the sector, Skills Australia would support the need for further research on supply and demand for skills in the agriculture sector. However it is important that this work include the issues of attraction and retention in the sector and the role that workforce development initiatives could play in meeting this gap. To achieve this, it is important that a partnership approach is taken and that the industry takes a leadership role. It is also important to ensure that this work makes a clear conceptual distinction between labour shortages and skills shortages.

Part of the remit of the new National Workforce and Productivity Agency is to develop and monitor sectoral skills and workforce development plans in conjunction with the Industry Skills Councils, and to provide independent advice on sectoral and regional skills needs to be funded and to support workforce planning and productivity, including in small business.

The priorities for this work will be developed in 2012 and the agriculture sector will be considered in this mix.

It is apparent from consideration of the issues that there may be a perception problem within the agriculture industry, rather than a lack of opportunities and incentives in the sector. Coordinated action to address the image of the industry, as well as attraction and retention, could well go a long way towards addressing the needs of the sector, along with the reforms to the training system outlined above. Current initiatives towards workforce development in parts of the sector provide encouragement, but there is potential for more to be done.