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Ladies and Gentlemen

Thank you for the opportunity to deliver today's Parliamentary Library Lecture. It gives me great pleasure to share with you some aspirations of inland Australia and, in that context, key aspects of Charles Sturt University's current and potential role in achieving these aspirations.

In recent times, Charles Sturt University has sought to position itself strongly as the National University of Inland Australia.

This approach resonates with that of our namesake, Charles Sturt, an Australian explorer whose 19th century expedition inland to determine why the Murrumbidgee and Murray rivers flowed west is regarded as one of the greatest explorations in our history.

Clearly Captain Sturt was a problem solver. Charles Sturt University takes a similar approach. Consideration of intractable problems and preparing professionals to take on those challenges in our communities is the essence of the University's mission.

My lecture today will focus on themes in a policy paper distributed last week by the University – "Growing Our Communities through Education and Research". This document identifies some of the University's priorities for areas of growth in Australia's inland communities.

The document is not a set of demands or a list of woes; rather it is a means to explore the opportunities for tackling the challenges we face in inland Australia. These challenges are:

- 1. Maintaining and improving both the health and well-being of inland Australians, and the clinical practice education experiences for students who want to become part of the health workforce of inland Australia.**

2. Growing the agricultural sector, while sustaining our environment;
3. Continuity of supply and retention of qualified professionals;
4. Equitable access to local nationally and internationally recognised education opportunities, including oncampus accommodation;

I would now like to address these points one by one and I welcome your questions on them.

1. **Maintaining and improving the health and well-being of inland Australians**

It will not be news to anyone here today that people in rural areas of Australia have poorer health than their metropolitan counterparts. In particular, the health status of Aboriginal people and Torres Strait Islanders is unacceptable.

Flowing from this imbalance in health outcomes, and other contributing factors, the Australian Institute of Health and Welfare *Health Report 2006* found that there were 3,300 additional deaths annually in rural and remote communities above what would be expected for the same population groups in major cities (Australian Institute of Health and Welfare, 2006).

Implementing workable strategies to increase the number of health professionals practising in inland and rural locations, without oversupplying metropolitan centres, will be a critical priority for both the Commonwealth and State governments over the next two decades.

While there has been a strong commitment by government to address shortages in the supply of doctors, dentists, oral health therapists/hygienists and nurses in inland communities, Australia needs

a comprehensive strategy to address the geographical mal-distribution across the range of allied health occupations.

The provision of health education and training in inland and rural areas is critical to sustaining and growing our rural health workforce and has been proven to significantly increase the probability that graduates will remain to practise in inland and rural communities.

A report by the Western Research Institute on graduate destinations found that more than 70% of Charles Sturt University's on-campus graduates from the health disciplines who were originally from regional areas, and over 20% of on-campus graduates from metropolitan areas, took up their first job in a regional area (Western Research Institute, 2006).

The current evidence would appear to support the conclusion that it is necessary to educate health professionals in inland and rural Australia to address the mal-distribution and corresponding shortage of allied health professionals.

There is also support for the view that rurally based education and training may be more cost-effective.

After an extensive review of the Health Workforce by the Productivity Commission in 2005, it concluded that: "...provision of education and training in rural and remote areas may still be a more cost-effective way of improving access to health workers than, for example, seeking to entice less willing qualified practitioners away from the major population centres through the use of financial incentives ... [T]he Commission supports a strong focus on the provision of regionally-based health workforce education and training..." (Productivity Commission, 2005b)

In a preliminary survey by the Australian Medical Students Association, it was reported that 25% of medical students were considering buying their way out of their six years rural service obligation (Adelaide Advertiser, 2007).

While studies have shown that 'rural outreach programs' (such as short experience placements in rural health services) have a positive effect on student perceptions of rural communities, there has been no definitive study to establish their effectiveness in actual retention of graduates in rural practice.

Charles Sturt University is committed to growing and developing our professional health programs to address the effects of mal-distribution on the supply of health professionals. We do so through the provision of education programs totally delivered in inland communities, featuring innovations characteristic of inland Australia. This must enhance significantly the recruitment and ongoing retention of the graduate professionals in inland Australia.

Inter-professional learning is one of the hallmarks of Charles Sturt University's approach to addressing the rural health workforce shortage. Inter-professional skills are particularly critical in rural locations where the shortage of trained health professionals requires practitioners to have a broader understanding of health practice beyond their particular discipline. In fact for this reason I would assert that the requirements for health professionals working in inland locations are higher than for similar professionals working in metropolitan situations.

Reflecting this success in returning health professionals to practise in inland Australia, earlier this year Charles Sturt University was successful in obtaining funding for the construction and equipping of a new dental and oral health program to address the chronic shortage of dentists and oral health professionals across inland Australia.

Charles Sturt University takes the strong evidence based view that educating students in inland areas significantly increases the probability of them going on to practise in inland and rural communities.

Therefore we believe consideration should be given to the following:

- 1) provision of support for the development of regionally based integrated health workforce plans that link population trends, practitioner intention and demand, and provide a robust framework for point in time planning and funding of health education programs in inland and rural universities;**
- 2) a review of existing funding programs designed to encourage metropolitan graduates to locate to rural practice to determine their cost-effectiveness and capacity to meet the long term needs of inland and rural communities;**
- 3) establishment of University Departments of Rural Health at rural based institutions, in areas not presently covered by these departments, to support clinical exposure and retention of clinical practitioners;**
- 4) that funding for rural health education programs is directed to the development and expansion of health disciplines located in inland and rural institutions in identified areas of need.**

Clinical practice education provides students with real life experience in clinical decision-making. Unlike medical graduates, the majority of health professionals are expected to be ready for professional clinical practice upon graduation.

In order to practise as a health professional, graduates need to be competent and confident in assessment, clinical decision-making, care planning and evaluation. This is critical to safe, quality patient care.

Intensive clinical practice experience is also a requirement for the registration of nursing and allied health clinicians in Australia. The level of exposure to clinical practice during undergraduate and postgraduate education ranges across the professions, with up to 1000 hours typically required for nursing and allied health professions.

Charles Sturt University has a particular focus on professional education and the preparation of employment-ready graduates across all its programs. Clinical practice education is central to Charles Sturt University's teaching/learning philosophy and is embedded in its strategy.

The cost of clinical practice education for universities is significant, including the cost of clinical coordinators to organise placements, academic supervision, travel to placement locations and accommodation, negotiation of contracts, insurance coverage and placement fees payable to some providers.

Nursing and allied health students are required to fund all or part of their attendance on clinical placement including travel, accommodation (often supplementary to maintaining accommodation near their University campus) and loss of income. This is estimated to cost each rural student an average of \$1500. These costs reflect the fact that rural and inland students typically have to live away from home, travel longer distances and face increasing accommodation and associated costs (eg. broadband or dial up connections) to access clinical placements.

To meet the demand for additional clinical education places, many universities have established primary health care clinics as part of their professional preparation programs to provide clinical exposure for students.

In inland areas in particular, these clinics have the added advantage of providing reduced cost health services to inland communities in areas

of critical shortage and have the capacity, utilising tele-health technology, to act as a base for extending services to more remote locations.

Charles Sturt University has established small specialised clinical simulation laboratories across its campuses to provide students with access to realistic environments in which to practise and be assessed on their clinical skills.

The University has established a Podiatry Clinic and a Diabetic and Cardiovascular Screening Clinic in Albury-Wodonga (cardiovascular disease and diabetes are two of the leading causes of death in inland Australia) and a Functional Rehabilitation Clinic in Bathurst.

In an Australian first, Charles Sturt University has been granted funding from the Commonwealth Government to construct and equip five Dental Education Clinics across inland NSW to meet the clinical experience requirements of students enrolled in its new dental science and oral health programs. These clinics will not only provide students with a high quality clinical practice environment, they will also provide for members of our communities unable to access public services or afford private services.

Inland Australia needs a sustainable framework to ensure the continuous supply of nursing and allied health professionals to meet the needs of an ageing population and to provide more cost effective care options into the future.

With a significant number of health students being educated outside metropolitan areas, Charles Sturt University believes that consideration might be given to the construction of a state-of-the-art Centre for Inter-professional Clinical Simulation Training in inland Australia. Such a Centre would not only help to prepare students for professional practice but would also support continuing professional education and

development and inter-professional learning for existing practitioners. This might also help to address the common concern of rural practitioners about lack of access to training and development opportunities.

The establishment of such a Centre would require changes to accreditation practices and the recognition of formal competencies obtained through clinical simulation. It would also require the support of area health services in rural areas.

The recurrent cost of operating the Centre might be met, in part, through the provision of continuing professional development courses for health professionals in both rural and metropolitan centres on a fee for service basis.

Charles Sturt University is also of the view that the Government should give consideration to the following:

- 1) examination of funding models for the expansion of university operated primary health care clinics in inland and rural locations to perform the dual role of increasing public health services in critical areas of shortage and expanding clinical placement opportunities;**
- 2) examination of the options for extending Medicare, or providing fee for service payments, for the full range of primary health care services offered by existing and future university health clinics in inland and rural areas (eg. dentistry, physiotherapy, podiatry, speech pathology and psychology). Such a program would expand existing public rural health services, utilise existing capacity within universities, provide incentives for rural universities to develop health services associated with academic programs and provide a reduced cost service to inland and rural**

communities under the Medicare Benefits Scheme or special service program;

- 3) exploration, with the health insurance industry, of options for extending insurance rebates to clinical services provided by students under supervision on a lower cost per service basis;**
- 4) examination of options for extending university primary health care services and clinical education to outer regional and remote communities through the expansion of tele-health care facilities. This might also include support for the establishment of mobile clinical education units that can transport students, supervisors and equipment to remote communities to deliver health services and provide students with clinical experience;**
- 5) review the funding cluster for nursing and allied health to ensure that it appropriately reflects the true cost of pre-clinical and clinical education; and**
- 6) examine the establishment of a Rural Clinical Placement Support Fund to provide direct out-of-pocket financial support to rural students to attend clinical practice programs.**

2. Growing the agricultural sector

You will, of course, be aware that agriculture is a critical part of Australia's economy, representing 3% of Gross Domestic Product (GDP) and about 22% of Australia's merchandise exports.

As other sectors of the economy have grown, it can no longer be said that Australia 'rides on the sheep's back'. However, the continuing importance of agriculture to Australia's economic health and prosperity is often understated.

In employment terms, agriculture is central to the sustainability of inland and rural communities. Around 17% of those employed in inland and rural Australia are directly engaged in agricultural production. This year, it was estimated that more than 670,000 Australians were employed, or dependent on someone employed, in agricultural, forestry and fishing industries.

There are about 6.5 billion people in the world today and this is estimated to climb to 9.3 billion by 2050. The World Health Organisation estimates that population growth and improved standards of living in the developing world will significantly impact demand for agricultural production with per capita consumption of livestock products worldwide estimated to rise by 44% by 2030 and poultry consumption predicted to grow even higher. If negotiations to reduce global agricultural subsidies are successful, agricultural trade worldwide is estimated to increase by around AU\$330 billion by 2020. This will occur at a time of reduced availability of land for food production due to land being diverted to energy production or removed from production due to environmental concerns.

The growing demand for food worldwide is a major opportunity for Australia's agricultural sectors and our national balance of trade.

Department of Education, Science and Training figures show that Charles Sturt University is at the forefront of universities in Australia with substantial domestic undergraduate enrolments for agriculture. In horticulture and viticulture, Charles Sturt University commands 19% of national enrolments and 64% of national distance education enrolments.

The University has recently consolidated its considerable agricultural expertise around the two major areas of plant science and management and animal science and management. The new schools will work

collaboratively to expand agricultural education and research for the benefit of inland Australia.

We are confident this move will help Charles Sturt University to focus on its strengths and strategically invest in areas of agriculture that will stimulate future growth and meet future needs.

The capacity of Charles Sturt University to undertake this role, with broad recognition of all aspects of the problem, can be seen in the Australian Museum's 2007 Eureka Prize for Water Research and Innovation award last month to a joint Charles Sturt University and CSIRO research team, including Professor Shahbaz Khan, Professor of Hydrology in the University's School of Environmental Sciences. Professor Khan is also Head of the UNESCO International Centre of Water for Food Security currently being established at Charles Sturt University in Wagga Wagga.

Charles Sturt University believes integrating agricultural education, research and extension at designated centres of agricultural excellence in public universities is essential in Australia if agricultural professionals and farmers are to effectively utilise and adapt agricultural science and management techniques to contemporary problems and to embrace new agricultural technology into the future.

In a recent report by the Commonwealth House of Representatives Standing Committee on Agriculture, Fisheries and Forestry titled *Skills: Rural Australia's Need – Inquiry into Rural Skills Training and Research* (2006) the Committee noted that "evidence received by the committee during the course of its inquiry indicated that there are severe skills shortages in rural industries and significant gaps in our capacity to respond to those shortages."

The Committee noted the findings of the NSW Legislative Council Standing Committee on State Development titled *Inquiry Into Skills*

***Shortages In Rural And Regional NSW (2006)* which stated: “The evidence before the Committee clearly shows that there are extensive skills shortages in rural and regional NSW across almost all sectors of the economy including ... [the] agriculture sectors.”**

Agricultural employers also indicate that agriculture graduates from metropolitan universities are reluctant to accept employment beyond the fringes of the metropolitan centres.

As agriculture has become less attractive to prospective tertiary students, the agricultural programs in some tertiary institutions have become less viable.

These figures indicate the need for agricultural education, research and extension to be placed in inland locations where the training and technology transfer can be more directly and effectively targeted at its agricultural communities.

On the basis of these figures, Charles Sturt University is of the view that consideration should be given by the Council of Australian Governments to a strategic review of agricultural education and research to examine:

- 1) specific methods to increase enrolments in agricultural higher education;**
- 2) the most effective means to integrate research, education and extension programs in agricultural production regions;**
- 3) the appropriate distribution and number of agricultural education programs within States;**

- 4) the potential for co-location of agricultural education and research in inland and rural locations as a means to enhance recruitment and retention of graduates in inland and rural locations;
- 5) the consolidation of public investment in agricultural education and research in rural public universities as a means to reduce duplication, improve cost-effectiveness, enhance linkages between education, research and extension, build the international standards of agricultural education and research and expand the domestic and international market for Australian agricultural programs.

Charles Sturt University believes it is well-positioned to support such an agenda, in particular because of its concentration on education and research programs in areas directly relevant to the agricultural zones in which it operates; its focus on applied education and research and industry collaboration; its ability to meet workforce needs through the retention of graduates in inland and rural employment, and its capacity to link disciplines in agriculture, environment, management, information technology, spatial information, marketing, bio-security, plant and animal sciences.

2. Continuity of supply and retention of qualified professionals

The impact of Charles Sturt University's location is marked in terms of our retention of graduates in inland and rural Australia. If I could share some figures with you - a study last year by the Western Research Institute on the destination of on-campus graduates after completing their professional studies found that 73% of graduate students from Charles Sturt University who were originally from a regional home location took up initial employment in a regional location. As important, 28% of graduate students from Charles Sturt University with a

metropolitan home location took up initial employment in a regional location.

The analysis also shows that 88% of Charles Sturt University's agricultural graduates from rural areas take up their first employment in the regions and over 40% of Charles Sturt University's agriculture graduates from metropolitan areas also stay in country areas for employment in agriculture. These retention figures demonstrate the value of public investment in agricultural education targeted to workforce needs in the rural agricultural production sector.

Similarly, more than 70% of health graduates with a regional home location took up employment in a regional location and more than 20% of graduates with a metropolitan home location took up employment in a regional location.

Since 1995, the percentage of regional students initially employed in a regional location has grown at an average rate of 1.3% per annum.

To demonstrate the significance of this achievement - between 1995 and 2000 (before the first Charles Sturt University pharmacy graduates) an average of three metropolitan trained pharmacists located to regional areas in NSW each year. Every year since Charles Sturt University's first pharmacy graduates, 35 graduates or more have chosen to practise in rural and regional settings. That is, 117 new pharmacists in inland and rural Australia in just three years. Without Charles Sturt University, many more towns and communities would not have a local pharmacist, leading to a further decline in professional services across inland Australia.

Through our commitment to the operation of distributed campuses across major inland centres, Charles Sturt University has significantly increased access to and participation in higher education across our inland communities over the last two decades.

In just the last 10 years, Charles Sturt University has opened a new campus in Dubbo, and transferred from the University of Sydney, and grown, a campus at Orange to further enhance local access to higher education opportunities to inland communities. Through our extensive distance education programs, adult learners and students from remote communities are able to access high quality educational services locally.

4. Equitable access to local education opportunities

Charles Sturt University is firm in its belief that the people of inland Australia have a right to access a 'nationally' recognised standard of higher education and research in their own backyard. Such standards of education cannot be limited to metropolitan locations.

Retaining skilled professionals is critical to the provision of essential services and the amenity of inland and rural Australia. The loss of skilled professionals has a domino effect across inland communities and their economies. In critical areas such as health services, it can lead to a systemic loss of professional services and support structures essential to community sustainability and growth. This is why Charles Sturt University places such importance on the training of professionals who will choose to practise in inland Australia across all our fields of endeavour.

Our inland location is also why Charles Sturt University recruits rural students to its on-campus programs - 75% of all our on-campus students come from a rural home location. It has been proven time and again that rural origin, accompanied by education fully delivered in a non-metropolitan location, is the major determining factor in the decision of graduates to commence professional practice in a rural location.

On-campus university supported student accommodation is important for students from a rural location who wish to study in a non-metropolitan environment for four reasons:

- 1) being able to live on-campus is now a deciding factor for many parents and students in their choice of university;**
- 2) as many Charles Sturt University students come from rural and remote communities, they do not have the option of living at home during their studies – paying normal residential rents during their study increases the financial burden for students and parents and contributes to increased attrition among these students;**
- 3) students who live in on-campus university supported accommodation are more than 50% less likely to drop out of university study;**
- 4) on-campus university supported accommodation attracts more students to regional centres, contributing to gross regional product and the diversity of our communities.**

Charles Sturt University currently has about 2100 on-campus university supported beds for students across its campuses – less than 40% of student demand. Due to the age of Charles Sturt University’s student accommodation, around 500 beds will be closed within the next five years as they will no longer be serviceable.

Students who live on-campus during their study are more likely to complete their course successfully than students who do not.

It is our view that consideration should be given to the establishment of a special funding program to support the construction of university supported on-campus student accommodation at rurally based universities to expand the availability of low cost accommodation to non-local students to meet identified demand.

Such a program would assist in:

- 1) ensuring that parents and students can make fair academic choices about where they want to study without lack of access to accommodation being a deciding factor;**
- 2) ensuring fairness to students and families from rural and remote areas by providing access to cheaper on-campus university supported accommodation;**
- 3) improving retention and completion rates (and therefore reduce wasted investment in uncompleted studies) and reduce drop-out rates;**
- 4) contributing to the gross regional product of regional communities.**

I hope I have been able today to give you an overview of Charles Sturt University's agenda for inland Australia. It is an ambitious agenda driven by a University with a clear vision of its role in meeting these challenges.

This role for Charles Sturt University as a comprehensive non-metropolitan institution also challenges Australia's culture of metrocentricity and the conventional wisdom that a great university cannot exist outside the capital cities.

Unlike many other countries, Australia has no tradition of international universities being able to exist outside its major cities. This is contrary to the facts elsewhere in the world where significant universities prosper away from larger centres. Think Cambridge or Oxford Universities in the United Kingdom (ranked 2nd and 10th respectively in the world); or Cornell University in Ithaca, New York (12th place and an

Ivy League university) and the University of Wisconsin in Madison, Wisconsin (16th place), or McMaster University in Hamilton, Ontario, ranked 90th in the world. Interestingly McMaster University and Charles Sturt University have agreed to other joint degrees in Canada.

For Charles Sturt University 'inland' is where we work and where we live. It is the historic heart of our nation's economic prosperity and character. It is the food bowl, the energy source and the primary producer for our nation. It is the source of a major part of Australia's gross domestic product and international exports. Inland Australia must therefore be productive and vibrant if Australia as a nation is to develop and prosper sustainably.

'Inland' is the home of great innovation and invention – our remoteness, our variable climate, our participation in a competitive global economy and the challenge of ensuring access to critical services for smaller populations have driven us since the time of settlement. Charles Sturt University is an inheritor and custodian of this tradition.

But our University's role is anything but passive. Charles Sturt University is an agent of economic and social development in inland Australia – our focus is on problem solving and acting as a driver of economic and social development to grow our communities in inland Australia.

Thank you.