

# **MEMBER FOR FLINDERS**

**Liz Penfold MP**

## **Parliamentary Travel Report**

**Melbourne 30<sup>th</sup> July – 7<sup>th</sup> August 2003**

### **Objectives of Travel:**

As the Member of a diverse rural electorate I was pleased to have the opportunity to attend a conference titled “The City & the Bush” hosted by the Centre of Policy Studies, Monash University.

I am often concerned that many of the decisions affecting people in my electorate are made by bureaucrats based in the City. I believe it is important to find out what information or data is being used and how we can inform and influence decision makers. The opportunity to network and highlight the benefits of the Flinders Electorate is invaluable.

The conference also coincided with a briefing by AWB outlining their future directions. My electorate produces 33% of South Australia’s grain production, so this briefing was particularly relevant for me.

I also took the opportunity to meet with Jacob Cherian Managing Director of Ausker Energies whose office is based in Melbourne. Ausker Energies are working on various wind farm and desalination proposals in my electorate. In January this year I travelled to India on a trip hosted by Jacob and as a result Pamela Mathew who is Managing Director of the IT company O/E/N and also the Chairperson of the Confederation of Indian Industry will be visiting South Australia later this year.

## Wednesday 30<sup>th</sup> July

Depart Port Lincoln, travel to Melbourne.

## Thursday 31<sup>st</sup> July Melbourne

Read ‘*City and the Bush Conference*’ information and checked Sofitel venue for early start.

Confirm meeting with Jacob Cherion.

Explore the new Federation square and Potter Centre Art Gallery.

## Friday 1<sup>st</sup> August

8.15 am to 5 p.m. **City and the Bush Conference**



*Four South Australians recently attended the City & the Bush Conference in Melbourne. Pictured here are Liz Penfold MP, David Furniss CEO Kangaroo Island Development Board, John Banfield chairman Port Pirie Regional Development Board*

***“The City & the Bush - What the Economic Modellers Have Found About Rural and Regional Australia”*** Conference hosted by the Centre of Policy Studies, Monash University.

The models that are created by academics are used by our Governments when they make decisions regarding our future. I was particularly interested to find out on what they based these insights and whether we could use them to help make our case to get more assistance in the bush, particularly on Eyre Peninsula.

I was amazed that the only person to mention the need for infrastructure was Mr. John Brumby, the Victorian State Treasurer, in his opening address, and that the interconnection between exchange rates and the income that comes into the bush through exports (what I call the real money not just money stirred around later) was not mentioned at all. It irks me that the interest rate is held up by the Federal Reserve Bank ostensibly to cool the property market but thereby attracting overseas funding and keeping our exchange rate high. This makes our exports less competitive in the world markets, makes competing imports cheaper locally and gives us less Australian dollars in return for our exports so we have less money in our regions where it is needed most. Why not keep the interest rate low and provide more money for everyone as most of our regional dollars find their way to the city economies anyway? We, in the bush, have had severe droughts and are recognised as having

lower standards of living and income than our city counterparts, but are left with a high exchange rate for our products and less money in our pockets so that city folk don't buy houses they can't afford. In the long run this will mean less money in the city. However monetary policy and the fact that the higher interest rates are protecting those who have a choice at the expense of those who haven't was not mentioned as one of the variables to be taken into account when models were made, that I noticed.

Opening address: – **Hon John Brumby**, Victorian Treasurer and Minister for State and Regional Development.

This was an excellent address and if the Labor Government performed as they proposed then regional Victoria could expect to boom. However I suspect it will only be the marginal seats that will really see the benefits. The Minister admitted that their regional policy was one of the reasons that they won some of the regional seats and consequently won the election.

The address was particularly relevant to Eyre Peninsula where he mentioned the need to compete on the world economy, looking for the unique and the competitive advantage, not being able to afford to waste people or opportunities, the need to remove obstacles created by governments and their bureaucracies, to lift productivity, and the importance of education.

He stated the importance of community cabinets (the last one being in Mildura), the rural Managers Conference, boosting infrastructure expenditure (with a budget of \$550 million for fast rail alone) together with an across portfolio Regional Infrastructure Development Fund of \$180 million, boosting innovation with a special mention for food processing and green fields sites. Highlighted was an expenditure of \$413 million by Hydro Tasmania on wind farms.

A target of 1.2% per annum population growth for regional Victoria is proposed and an export target of \$12 billion by the year 2010. A Business Ready Investment Program that aims to help with the preparation of prospectuses to attract funding from Superannuation and Banks to the regions is underway.

His concluding comments were that water is a crucial part in the equation and the urgent need for conservation and efficiency in the system. No one would disagree. He gave an example of an open drain taking 93 mega litres from the Murray and losing around 80 mega litres leaving around 10 mega litres being used. \$70 million is being spent to convert the Wimmera Mallee to pipelines. The Minister also spoke of market forces and trade entitlements within this equation.

## The City & The Bush - Session 1

**Dr. Philip Adams,**  
Director Consulting Centre of Policy  
Studies (CoPS) with Monash  
University.

Dr. Adams pictured here with Liz during a  
conference break



Herewith Abstract of presentation by **Dr. Philip Adams** “*Medium-Term Prospects for Australian Regions*”

The MMRF-Green model is a dynamic, multi-sectoral, multi-regional model of Australia, with enhanced capabilities for analysis of environmental policies such as carbon permits. It is very detailed, distinguishing up to 50 industries, 8 states/territories and 56 sub-state regions. Each solution of the model produces a picture of the Australian economy at this level of detail for a particular year.

In addition to being used for scenario analysis, MMRF-Green is being used to make realistic forecasts for the economy at a high level of detail over periods of policy relevance (say up to 10 years). The starting point is a set of scenarios for the macro economy of each state/territory supplied by a macroeconomic forecasting agency, currently Access Economics. Expert forecasts for major export commodities are also drawn upon, as is a detailed scenario for changes in technologies and household preferences. The role of MMRF-Green is to forecast a microeconomic picture consistent with the state-based macroeconomic scenarios and other inputs. In this paper we present our most recent MMRF - Green forecasts, concentrating on the prospects for sub-state regions. .

Last year Dr. Adams caused a furore when he put Eyre Peninsula 56<sup>th</sup> out of 56 Australian regions in forecasted growth rates, while this year our region is equal last with the far West of New South Wales region.

I was particularly interested to hear what he had to say and was pleased that he took the time to speak with me during the break. Dr. Adams suggested that I speak to Mr. Andrew Beer who works in policy studies in South Australia, which I will do during the next sitting of Parliament or at the South Australian Regional Development Conference in Victor Harbour in September where he is speaking.

Dr. Adams ‘Medium-term Prospects for Australian Regions’ was very interesting. His conclusions include observations about the characteristics common to most ‘relatively fast growing regions’.

His last statement was, “*In our forecasts we tried to take account of some of these factors, (as listed) but have not accounted for other non-economic drivers such as the level of commitment by individual businesses and people within regions to achieve better than average. How these levels of commitment are focused to produce above-average growth is the ultimate challenge of each region and each industry.*” This statement is very relevant to Eyre Peninsula, where the organisations and industries

that have dynamic drivers at the helm are making a huge difference and are a big help to me when attracting entrepreneurs or encouraging politicians to take an interest in our region.

I appreciated receiving an e-mail from Dr. Glyn Wittwer, Senior Research Fellow CoPS, following the conference. It made me feel that perhaps attending conferences, putting in submissions, doing reports, writing letters and talking to people **can** help to make a difference to outcomes and perhaps these will have a ripple effect that will ultimately help this wonderful region to fulfil some of its potential. Dr. Wittwer's email states:

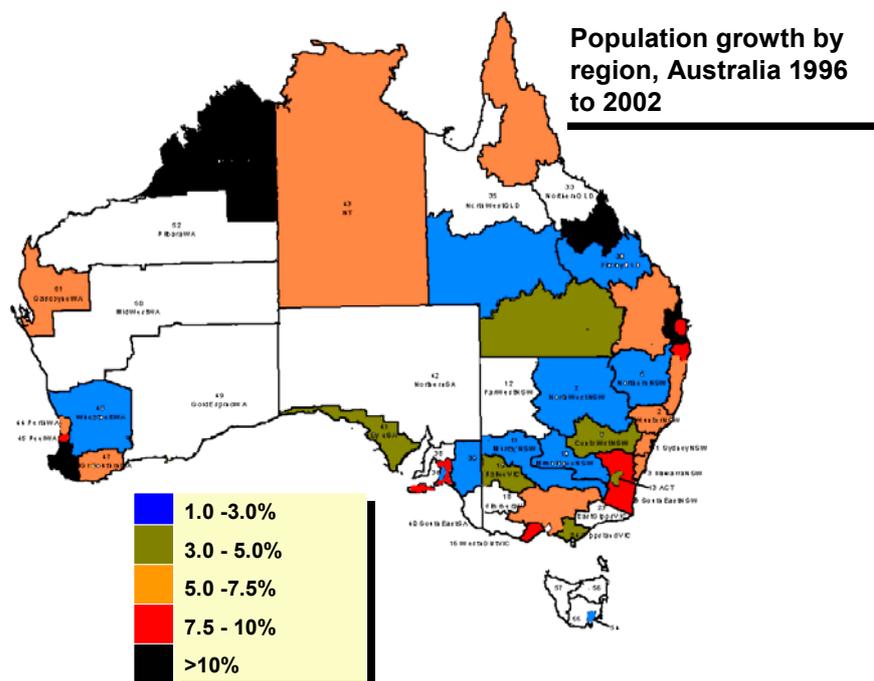
*Dear Mrs Penfold*

*Please find attached a map of population growth by region for Australia. It provides a slightly different picture of the growth in your electorate than that provided in our presentation on Friday at the City-Bush seminar in Melbourne. That is, Eyre Peninsula will not be in the bottom three or four regions for employment growth between 1996 and 2010, given what has already happened from 1996 to 2002.*

*I have let my colleagues know of my concerns about certain anomalies in our forecasting. Fortunately, we are a small outfit where such matters can be resolved easily.*

*My own understanding is that earlier estimates of agricultural growth were based on the gloomy outlook that prevailed in the early 1990s when interest rates were sky high and made life impossible for investors in many sectors. The weak Australian dollar since 1996 has also provided a boost to rural industries.*

*Yours sincerely  
Glyn Wittwer.*



An article on page 16 of *The Australian* Thursday August 7<sup>th</sup> 2003 in Prime Opinions entitled 'Magnificent seven in job growth towns,' put Port Lincoln top of the list of 40 Boom Towns in Australia with 8.6% population increase and a 22.2% job increase in the five years to 2001. Since then the whole region has boomed with most towns experiencing growth even the inland ones. Three Zimbabwean diesel mechanics and their families have been recruited to the small inland town of Wudinna alone.

Impacts of Commonwealth grants across the states and territories – **Dr Vince Fitzgerald** (chairman, Allen Consulting Group)

The abstract of his paper '*Reform of Commonwealth-State Relations: A Fairer and More Efficient System*' herewith.

This presentation discusses the conclusions of the *Review of Commonwealth-State Funding*, commissioned by New South Wales, Victoria and Western Australia and conducted jointly by Professor Ross Garnaut and Dr Vince FitzGerald over 2001-2002. The Review found that the present system, encompassing over \$50 billion of revenues collected federally and passed to the States, has serious weaknesses which affect the efficiency of the economy, the equity of service delivery among Australians and the accountability of governments at both levels. The system has substantial economic costs and is actually regressive in its effects on the distribution of income among individuals and households across Australia. Moreover, large differences in service provision in and between metropolitan and rural and remote regions are accepted and, in some respects, entrenched by the system.

The Review recommended reforms to both the system of allocation of 'specific purpose' grants in areas like health and education, and the related system of allocation of untied grants - essentially the redistribution, on the basis of the Commonwealth Grants Commission's 'horizontal fiscal equalization principles' of the GST revenues. The proposed reforms:

- focus equity objectives not on States and Territories, but directly on achieving equitable access by individuals and households across Australia to the public services most important to them;

- end the proliferation of specific purpose payments and establish new cooperative federal arrangements in three key broad areas of public services for which both levels of government share responsibility - health and aged care, education and training, and indigenous community development;

- establish a simpler and fairer basis for redistributing the untied grants (mainly the proceeds of the GST), subject to strong guarantees of States and Territories' existing real per capita grants;

- provide unambiguous strong fiscal incentives for States and Territories to pursue growth-promoting policies;

- promote transparency and accountability by decision makers and facilitate broader understanding within the community about public finances.

The Final Report, and supporting papers, are available at:

<http://www.reviewcommstatefunding.com.au/index.html>

## City and the Bush Session 2

Regional Poverty, Tax and Social Security - **Anthony King** (director, Regional Modelling, NATSEM) The abstract of his paper with joint authors Ann Harding, Rachel Lloyd, and Anthea Bill '*Assessing Poverty and Inequality at a Detailed Regional Level: New Advances in Spatial Micro simulation*' herewith.

During the past three years NATSEM has been developing new spatial microsimulation techniques, involving the creation of synthetic data about the socio-economic characteristics of households at a detailed regional level. The data are potentially available at many levels of geographic aggregation, down to the level of the Census Collection District (about 200 households). This paper describes the results of initial attempts to link the new database to NATSEM's existing STINMOD static microsimulation model of taxes and transfers in Australia, so that the spatial impact upon poverty and inequality of possible policy changes can be assessed. This paper outlines the techniques used to create the synthetic household microdata and demonstrates how it can be used to analyse poverty rates, the spatial microsimulation.

The Causes Of Regional Economic Disparities (The Case Of Tasmania) – **Dr James Giesecke** (Senior Research Fellow, CoPS) His paper '*Identifying the Causes of Regional Economic Disparities: The Case of Tasmania*' abstract herewith.

In the six years between 1992/93 and 1998/99 Tasmania's real GDP grew at an annual average rate of approximately 2 per cent - a rate of growth less than half that of the rest of Australia. In this presentation, a two-region (Tasmania and the rest of Australia) dynamic computable general equilibrium model of the Australian economy is used to identify the causes of Tasmania's divergent growth experience. These causes are traced to a large number of structural and policy changes in the two economies. Ultimately, no simple or mono-causal explanation for the divergent growth experience is found -the relatively slow growth of the Tasmanian economy is the net effect of a large number of (sometimes countervailing) influences. Nevertheless, from among these many influences, it is possible to distinguish those that had a sizeable impact from those that had a negligible impact.

Structural Change And Regional Employment Growth – **Dr Tony Meagher** (Senior Research fellow, CoPS) The abstract herewith.

Between 1991 and 2001, significant changes occurred in the distribution of employment between industries and occupations in Australia. As different regions employ different mixes of industries and occupations, these structural changes were also associated with significant changes in the distribution of employment between regions. In this presentation, a decomposition methodology is used to identify the contributions of various occupations to the difference between regional and national employment growth. Four regions differentiated by population density are considered, two urban and two rural. The occupations used are, firstly, the thirty-five sub-major groups of the Australian Standard Classification of Occupations (ASCO). However, the methodology is also applied to alternative ASCO aggregations designed to identify the contributions of jobs requiring different levels of skill and jobs with different orientations to the global economy.

### **City & the Bush - Session 3**

Regional Labour Market Adjustment – **Dr Jacqueline Dwyer** (Senior Economist, Reserve Bank). Dr. Dwyer and Jeremy Lawson’s abstract herewith.

Over the past two decades, there has been a marked divergence in regional labour market outcomes within Australia. In this paper, we examine two aspects of this divergence. First, we analyse the wide variation in employment growth rates, finding that stronger rates of employment growth were associated with industry structure, proximity to factor and product markets, and the level of regional amenity. Second, we investigate how regional labour markets adjusted to different employment conditions. While regional migration is found to be the dominant adjustment channel, the relative strength of the migration adjustment differs across regions. Out-migration, accompanying employment declines, was stronger amongst regions with initially high unemployment rates and low regional amenity. Similarly, regions with initially low rates of unemployment and high regional amenity experienced stronger rates of in-migration in response to rising employment.

Dr. Dwyer made the relevant points to Eyre Peninsula of the need for critical mass to retain services, amenity (place needs to be good to live in) and the need for human capital. With 10 hospitals, 72 education institutions covering an area of around 42,000 square kilometres and only 22,000 voters, in the electorate of Flinders, critical mass is a real problem for us.

**A/Prof John Madden** (Associate Professor, CoPS) His paper with James Giesecke, *‘A Method for Assessing Regional Labour Market Adjustment; with an Illustrative Example for a Competition Policy reform’* abstract herewith.

This paper investigates the impact on regional labour markets in Tasmania of national competition policy (NCP) in the Utilities sector. We undertook historical simulations with the FEDERAL-F model which indicated an increase in the rate of primary factor productivity improvement in the Utilities sector following the introduction of NCP. We compute, at the regional level, indices of net labour inputs that are lost from such a productivity increase, finding that the direct effects of NCP involve significant labour market adjustment costs. However those critics of competition policy reforms who have focussed on adjustment costs have ignored important general equilibrium effects such as the mitigation of adjustment costs in other industries, and, in particular, the effects on labour market adjustment from state government fiscal reactions. We also find that, so long as these general equilibrium effects are modelled, policy makers interested in regional adjustment costs can use indices of the change in regional employment and unemployment as good proxies for the extent of regional labour market adjustment costs.

### **City and the Bush – Session 4**

*“Regional Impacts Of Water Reform”* – **Prof. Mike Young** (Director, Policy And Economic Research Unit, CSIRO Land And Water)

Professor Young was from South Australia. Unfortunately his computer had been hacked into and the password changed however he gave an excellent address on a *‘Blueprint for a national water plan’*, without assistance. While no paper was provided some of the points he made follow. There could be errors as the comments are based on my notes. Professor Young’s abstract herewith:

Water is fundamental to life and characterised by an array of serious problems. Many of our current rivers, wetlands, estuaries and groundwater systems can not be defined as healthy. Our water entitlement and allocations systems lack clarity and discourage investment. The solutions lie in crafting new ways of working that guarantee both river health and greater security for investors. According to the Wentworth Group, the nation needs to commit to:

- Protecting river health and the rights of all Australians to clean usable water;
- Establishing a new, nationally consistent water entitlement and trading system that provides security to both water users and the environment; and
- Engaging local communities and ensuring a fair transition.

In order to evaluate these options and design implementation details, considerable modelling is required. As always, the devil is in the detail. This paper will explore the nature of the insights and analyses required.

COAG identified three fundamental reforms needed –

1. Protect river health and the right to clean water.
2. Environment first
3. Comprehensive groundwater System of Accounts

One hectare of planted trees takes away about \$2 million worth of water. Therefore doesn't increase the flow of water into the Murray.

Half of the base flow of water in the Murray River comes from ground water. Taking away irrigation therefore won't give a 100% increase in water to the river but only the amount that doesn't flow back in after irrigation.

The current system allows people to load costs on others without accounting for them. He believes that we can bring water systems back into balance within 10 years but that it will take up to 50 years to bring ecological balance back.

He stressed the importance of the tributaries Ovens and Para and the need for modellers to take all these variables into account.

As I understand it, flood irrigation near the river results in around 60% being permanently lost with around 40% draining back into the river. Drip systems however use 100% but actually take much less water.

Dr. Young believes that water put back into the river system gives a net benefit by:- Hydro power, diluted salt therefore higher value in produce, it is cheaper to dilute than to put in expensive interception systems, and diluted salt reduces household and business costs.

He proposed a nationally consistent trading system where irrigators dial in and trade over internet accounts. System linked between States. Water from lower value crops would inevitably flow to go to higher value crops.

Wentworth Group Reforms – Blue Print.

Start the process of reform by buying 1,500 giga litres of water. He recommended that this be done 'quickly and bravely', thereby pumping \$2 billion into an area to start a new economy as if it is done slowly the money would be 'dissipated'.

New structures would be needed e.g. an Environmental Trust.

**Session 4** continued with **Dr. Glyn Wittwer** (Senior Research Fellow, CoPS)  
His abstract herewith.

The general equilibrium ORANI model and its successors have contributed to regional economic analysis in Australia for the past 25 years. Advances in computing power and specialised software have made it easier to model regional economies within a general equilibrium framework. Demands for such modelling have come from the election of politicians by region and disparities between urban and rural areas in amenities and income. Now, environmental and water allocations issues are being added to the analyses undertaken with regional general equilibrium models.

The Enormous Regional Model (TERM) developed by Mark Horridge is capable of treating regions at the ABS statistical division level as separate economies, joined by inter-regional trades. A methodology has been developed at CoPS to use relatively modest regional data inputs to create an elaborate database for each region that is consistent with the published national input-output table. The database provides an economic profile of each statistical division. The TERM model utilises this database, and also models transport services in a more detailed manner than earlier general equilibrium models.

Independent of the extraordinary drought of last year, various public agencies are seeking to improve modelling of water allocation issues. CoPS is being funded to undertake model development work by the Productivity Commission and CSIRO, together with Victoria's Department of Treasury & Finance and Department of Primary Industries. TERM provides an ideal starting point for this work. Previous studies have devised an input-output structure of irrigation water usage. The project we are currently undertaking will extend this to a regional general equilibrium framework. In early work on the model, we will concentrate on improving the theory of water usage in irrigation sectors. In subsequent work, we aim to model water trading, and links between irrigation and salinity damage.

**Session 5**

Rapporteur – **Dr Peter Crossman**, Assistant Under Treasurer And Government Statistician, Queensland

Closing Address – **Professor Peter Dixon** (Director, CoPS)

**Monday 4<sup>th</sup> August**

**A Study Tour Australian Wheat Board (AWB) Limited Head Office Melbourne with Liberal State Members and one Federal Member, organised by James Holland.**



*Pictured from left to right: Brendan Fitzgerald, Director AWB Limited (from Kimba), Liz Penfold MP, Andrew Lindberg Managing Director and Chief Executive AWB Limited, Ivan Venning MP and John Meier MP.*

This morning I met with senior management in the board room and was given an introduction to, and overview of, the structure of AWB.

AWB have 16% of the world export market which is very small compared with the big American groups. AWB has a turnover of \$5.6b but this must be compared with Cargill which has sales of \$US98 billion. It could eat our Wheat Board and not even notice and yet Australia Competition & Consumer Commission (ACCC) say AWB Ltd. can not consolidate or diversify. This would appear to be a very dangerous situation for our Australian Wheat farmers. 90% of the wheat from South Australia is exported. We have seven ports, two of which are in my electorate of Flinders, at Port Lincoln and Thevenard.

AWB markets 28 varieties of wheat and 48 products into 50 countries without the government support provided by other countries. In USA 60% of farmers income is from Government subsidies, in India there is a 70% domestic price support for their farmers and in China there is a \$500 per tonne of wheat cost barrier protection.

The pooling system gives economies of scale and the ability to fill large standard orders without the risk management as there is no credit risk to the farmer even though 80% of markets are in the developing world, as letters of credit and sale against document are used by AWB. AWB International Ltd. is the buyer of last resort and must take the wheat offered, by law.

**Interesting comment about GMO grain.** AWB are gearing up to deal with GMO product and have no issue about the science. However they state the markets are not ready for it and systems not geared up for adequate separation. GMO's are still an issue in Japan, Middle East and parts of Asia and grain needs a very careful handling and distribution system to cope with GMO's. This is very much as I understood the situation.

Ports are an issue. Outer Harbour will only take Panamax vessels (up to 80,000 tonnes) as it is only 12 meters deep at high tide. There are six Cape Bulkers 200,000 tonne vessels but no grain ports in Australia currently capable of taking them. I would like to see what - if anything - we could do to help Boston harbour to be deepened to take them. Perhaps the jetty could be lengthened. However I don't think we are getting a benefit at present for even being able to take Panamax as our harbour in Port Lincoln is used for two-port loading and our farmers pay that penalty. The cost penalty by not using Cape Bulkers is over \$8 per tonne may be increased by \$8 per tonne also.

Toured the head office visiting the pool traders (it's quiet for them at present), the exchange rate dealers (there is one on call at all times), and the call centre, where Lachlan Bishop from Clare in South Australia is working in the Grower Service Centre, [www.awb.com.au](http://www.awb.com.au) phone 03 92092930. It's good to have someone to contact who actually knows where Eyre Peninsula is. The whole briefing was fascinating and the business much more complex than one would imagine.

Lunch was with the executive leadership group. Managing Director Andrew Lindberg was the guest speaker, followed by a panel discussion with Andrew and the General Manager of the National Pool Sarah Scales and the Chief Operating Officer, Jill Gillingham.

Dinner was with the Senior Management and several guest speakers spoke on various subjects to do with the operations of the business.

### **Tuesday 5<sup>th</sup> August – AWB tour continued**

Met in AWB boardroom and given a very interesting and thorough talk on AWB's Risk Management by David Johnstone. I had no idea what was involved in covering all aspects of the risks in selling our grain overseas. Of particular interest was the trade with Iraq. The whole concept of risk management was very applicable to other situations both business and political and I have noted where I can use it in future in my electorate.

*Pictured during the AWB tour is Caroline Schaefer MLC and James Holland Stakeholder Relations Adviser with AWB*



We then toured the “just in time” loading facilities at the Port of Melbourne and returned to the office where the study tour ended.

That evening I had dinner with Jacob Cherion, Managing director of the Ausker group of Companies. We discussed wind farms, desalination and numerous other business opportunities for Eyre Peninsula, South Australia and India. Also discussed was the impending visits of the Director of the EBAN group of companies, Reji Abraham and Pamela Mathew who is Managing Director of the IT company O/E/N and also the Chairperson of the Confederation of Indian Industry, Southern Region – Kerala State. The Confederation is India’s equivalent to our Chamber of Commerce now Business SA, and I have undertaken to introduce her to our chairman, Patricia Crook on the 26<sup>th</sup> of August when she is in Adelaide. Ms Mathew will also visit Port Lincoln with Jacob.

**Wednesday 6<sup>th</sup> August**

**‘Radio Telescopes of the Future’ Dr Melanie Johnston-Hollitt**



This stunning picture is Australia’s proposed design for the Square Kilometre Array Telescope which will have to compete with a number of other designs from throughout the world.

Each proto type is absolutely unique with one, being painted green and made tall enough so that sheep can graze underneath!

I attended an exhilarating meeting, “Radio Telescopes of the Future”, organised by the South Australian Branch of the Australian Institute of Physics and Astronomical Society, in the Kerr Grant Lecture Theatre, University of Adelaide on the new Square Kilometre Array (SKA) and Low Frequency Array (LOFAR) telescopes.

The excellent speaker was Dr Melanie Johnston-Hollitt, LOFAR Fellow of the Leiden Observatory, The Netherlands but originally from Adelaide. The invitation explanation said:

“At the end of the last century, the launch of satellite instruments such as the Hubble Space Telescope and the commissioning of the 10m class reflectors allowed optical astronomy to experience an era of unparalleled success.

Now in the 21<sup>st</sup> century, radio astronomy will undergo a similar renaissance. Several exciting new instruments are currently planned or under development, which when completed, will provide a unique view of the Universe. Two such instruments are the Low Frequency Array (LOFAR), and the Square Kilometre Array (SKA). I will discuss details of these complementary interferometric arrays and give a glimpse of the existing and, in some cases, revolutionary science these devices will allow.”

Dr. Johnston-Hollitt's overheads and film sequences showed the proposed SKA telescopes that are being designed by the countries involved some of which have already made working proto types. It is exciting to think that our Australian design is one of those being considered and that Australia, and possibly South Australia, could be the site chosen for either or both of the telescopes.

These telescopes are very expensive with the SKA expected to cost \$1.2b.

An unexpected pleasure was a presentation by students of a special Ship program school for students with higher intellectual potential about their photographs of the skies above Adelaide. It would have been good to have had our Kimba Area School students who are providing radio noise data using monitoring equipment for the Australian SKA bid.