

ANZRSAI Newsletter

AUSTRALIA AND NEW ZEALAND REGIONAL SCIENCE ASSOCIATION INTERNATIONAL
An interdisciplinary international association of researchers and practitioners on
the growth and development of urban, regional and international systems

August 2009

In this Issue

What region is this?	p1
Reflections on PRSCO 2009	p1
ANZRSAI: A History Bob Stimson	p3
Rural and Regional Development in Canada:	
Rob Greenwood seminar notes	p6

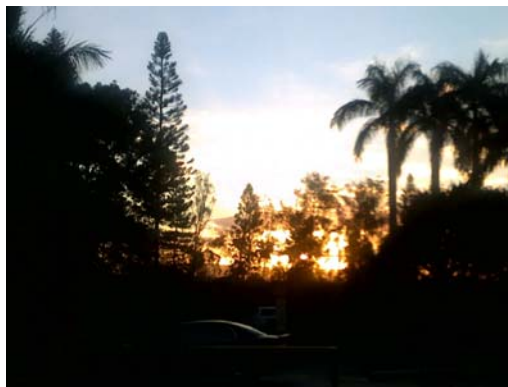
Noticeboard

Conferences	
ANZRSAI Council members	p10

Contributions welcome.

Please send contributions, notices of events and conferences, and articles of 500 – 1,000 words to the editor at anzrsai@anzrsai.org
Articles must include your name and professional affiliation

What region is this?



Can you guess?

It is in Australia and it figures in sporting and climate change news.

For an answer see page 10.

Membership Reminder

Your membership may have lapsed if you did not attend and renew at the December 2008 Annual Conference. The Annual General Meeting extended paid-up 2008-09 memberships until December 2009. If you are not paid up, please renew for 2008-09 now!

Reflections on the PRSCO 2009 Conference

Paul Dalziel
President, ANZRSAI

Between the 19 and 22 July 2009, ANZRSAI hosted 130 delegates of the 21st Conference of the Pacific Regional Science Conference Organisation, held at Conrad Jupiters on the Gold Coast. PRSCO 2009 was a genuinely international event. The plenary sessions included addresses by participants from Australia, Europe, Japan and the United States, and there were papers in the contributed sessions from 16 countries.

Organising and hosting an event of this size and international significance was a considerable achievement for our association. Work began when our immediate past President, David Fuller, travelled to Vancouver to attend the

ANZRSAI Newsletter

PRSCO conference in May 2007. Not only was David able to observe how PRSCO operates, he was also able to speak at the conference to invite delegates to Australia in 2009.

Once back in Australia, David began laying the foundations for PRSCO 2009. With the support of Council, he booked the conference venue, set up the conference website and prepared promotional material for distribution at other events organised by the Regional Science Association International. In May 2008 the first call for papers was published, and in August that year the website began to receive its first abstracts.

Further work began in earnest when David called a meeting of interested people during the ANZRSAI conference in December 2008. An organising committee was established, made up of David Fuller, John Madden, Christine Smith and myself. John took on the role of organising the keynote speeches and invited sessions, Christine formed a subcommittee with John Madden and Estella Rodighiero to organise local hospitality, and I took on the role of organising the contributed paper sessions. David was responsible for following up sponsorship possibilities, and overseeing relations with the conference venue and the conference organisers at the University of Wollongong.

A special mention should be made of many contributions by Bob Stimson. Bob was our main contact with RSAI, and his advice and suggestions on a wide range of issues that came up were always very welcome. We asked Bob to give the welcome address on the first morning of the conference, and are very grateful for the effort he put into preparing and delivering a first-

class account of regional science in Australasia from its earliest days to current centres of research excellence.

The success of the conference was built on the quality of its invited and contributed paper sessions. Every keynote address was outstanding, both in content and presentation, and the convenors of the special sessions worked hard to organise very stimulating programmes: Paul Collits; Peter Crossman with Greg Watts; John Madden; Yinhua Mai; Philip McCann; Mark McGovern; Adam Rose; and Bob Stimson. It was an honour, also, to have Professor Roberta Capello (President, RSAI) and Professor Yoshiro Higano (Executive Director, PRSCO) be present and active participants throughout the conference.

A large conference like this is not possible without the practical support of a large number of people. Apart from the people already mentioned, I would like to record our gratitude to Hazel and Greg Jones (executive officers of ANZRSAI), Elena di Stefano and her team of conference organisers at the University of Wollongong, Janelle Wilson and her team at Conrad Jupiters, and the local sponsors at Griffith University and the Gold Coast City Council.

It would not have been possible for our small association to host such a large international event without the major sponsorship support of the Australian Government, through the Department of Families, Housing, Community Services and Indigenous Affairs and through the Department of Infrastructure, Transport, Regional Development and Local Government. These agencies have been long-standing supporters of ANZRSAI, and their involvement on this occasion

ANZRSAI Newsletter

allowed us to produce an event about which we can all feel very proud.

The work is not completely done. The last accounts are being settled, and Christine Smith is editing a special issue of the *Australasian Journal of Regional Science* to include papers from the conference. John Madden was elected the incoming President of PRSCO, and so is already turning his thoughts to the next PRSCO conference in 2011. For the incoming ANZRSAI Council, the challenge is to build on the success of PRSCO 2009 to continue to raise the profile of regional science in this part of the world.

ANZRSAI: A Presidential History

Bob Stimson, a Council member and the fourth President of ANZRSAI provided a historical view on the development of ANZRSAI at the PRSCO 2009 conference at the Gold Coast in July. This article is derived from Professor Stimson's slides.

Participation and Organisation: 1970s to 2000s

ANZRSAI's beginnings date from the May 1971 meeting of the Australia and New Zealand Association for the Advancement of Science (ANZAAS) in Brisbane, QLD. A small group of mainly economists and geographers met there to discuss the formation of an Australian and New Zealand Section of the Regional Science Association. The meeting was convened by Prof. Alex Kerr, economist from Murdoch University, WA. They decided to form an ANZ Section of RSA and to conduct informal meetings of the group at ANZAAS conferences. Alex Kerr was elected the 1st President and a Council of 11 members formed.

The first annual conference was held in 1976 in Brisbane where John Holmes became the second President and Ralph Funck was keynote speaker. In 1978 John Brotchie became the 3rd President and in 1980, Bob Stimson became the 4th President. During the late 1970's conferences were attended by about 60 to 100 people and Annual Conference Proceedings were published.

During the 1970's the ANZ Section of RSA became a small but active group from Universities, CSIRO Division of Building Research in Melbourne, regional development organizations, such as the Hunter Valley Research Foundation, and a few policy people from various federal and state government agencies.

At the beginning of 1980s a formal constitution of the ANZ Section of RSA was adopted and Council began to incorporate state and territory representatives. By 1984 state and federal governments were sponsoring the Annual Conference and ANZRSAI had begun publishing Conference Proceedings. Membership grew to over 200 and widened to incorporate practitioners and researchers.

During the 1980s an increasing number of regional development and policy people and practitioners become involved in the ANZ section of RSA. The ANZ Section of RSA established a Secretariat Office established at U New England and this later moved to U Queensland. The Council decided to locate the Annual Conference in non-metropolitan locations and to increase the focus on regional development policy and practice. Department of Transport and Regional Services became a regular sponsor of ANZRSAI. ANZRSAI added awards including the best Regional

ANZRSAI Newsletter

Development Plan Award, the John Dickenson Award for Best Paper at Annual Conference and the Award for best paper in Australasian Journal of Regional Studies.

During the 1990s regional development policy and practice became the strong driver of growth in ANZRSAI. Practitioners became the dominant group on Council and total membership grew to more than 300. The federal Department responsible for regional matters became a sponsor of ANZRSAI. ANZRSAI received a grant to enable the Section to launch Regional Policy and Practice in 1993, edited by Tony Sorensen, It became Sustaining Regions in 2001, edited by Andrew Beer, with a four person Editorial Board and a 16 person Editorial Advisory Committee. Sustaining Regions maintains its explicit focus on federal, state and local regional development issues. During this time ANZRSAI developed a program of regional development activities for policy people and practitioners and there were attempts to develop an award program in regional development practice.

During the 2000s the diversification of interests in ANZRSAI has been affected by emergence of two rival organizations, a reduction in the participation of practitioners and regional development professionals, reduced interest in regional issues among economists and fewer quantitative human geographers. The ANZRSAI Secretariat has been abandoned, conference participation has fallen and funding for *Sustaining Regions* was interrupted. The Association has survived in Australia and New Zealand thanks to the efforts of a core group of academic regional scientists and practitioners. Council continues to include both academics

and practitioners with interests in regions.

Research Activities: 1970s to 2000s

The Specialty Group for Input-Output modeling developed and extended its contribution to the practice of regional development. The Association began awarding Thesis prizes to graduate and honours students. The *Australian Journal of Regional Studies* was launched in 1987 with Roy Powell as Editor and an Editorial Committee of 3.

Modeling was emerging as an innovative technique for regional research. Urban and regional modeling undertaken by CSIRO included entropy-based models [Brotchie, Sharpe, Batten, et al.]. The Monash ORANI Model was expanded to incorporate regional analysis under the leadership of Peter Dixon. Modeling was applied to the inter-urban hierarchy. A strong Specialty Group in Input-Output modeling emerged in Queensland led by Rod Jensen, et al.

The early conferences discussed papers on

- Regional modeling
- Regional interaction
- Regional inequalities.
- Regional labour markets
- Change in rural regions and country towns
- Spatial aspects of stagnating growth
- Equity considerations in metropolitan development
- Impacts of technological change, and
- Techniques and approaches in Regional Science.

In the 1980s conference papers considered:

ANZRSAI Newsletter

- Regional development and resources sector.
- Rural communities.
- Regional impacts of drought.
- Evaluating impacts of subsidies.
- An expert systems approach to urban and regional planning.
- Tourism.
- Fiscal policies and urban development.
- Impacts of foreign investment in cities and regions.
- Economic restructuring.
- Regional employment.
- Housing studies.
- Labour markets, unemployment and economic restructuring, (Newcastle, Adelaide and Queensland).
- Rural regional performance (New England) and.
- Large Scale Urban Models (Queensland).

In 1995 the journal was renamed the *Australasian Journal of Regional Studies* and grew to 3 issues per year and an Editorial Board of 13 to 18 members including overseas regional scientists. Book reviews and international papers emerged. Key topics included Input-Output modeling, regional growth and change models, labour markets, economic restructuring, regional development and policy.

During the 1990s research developments included:

- Growing interest in the 'triple bottom line' in regional development strategy, and
- Increased modeling of spatial differentials in regional social and economic performance and in the functional classification of urban centres.

This work was conducted in universities and government agencies across Australia and New Zealand.

Other important work included:

- Extending economic modeling to include regional analysis (Monash and Queensland).

During the 2000s the *Australasian Journal of Regional Studies* produced an annual Special Issue containing refereed papers from the Annual Conference while continuing to publish international authors. The topics covered have diversified and the journal has become an on-line journal with a high academic ranking.

Strong centres of regional science continue to exist in Australia and New Zealand. Australian Research Council supports regional science initiatives such as the Research Network for Spatially Integrated Social Science.

International Activities

In August 1981 the ANZ Section of the Regional Science Association hosted the 6th Pacific Regional Science Conference Organization in Surfers Paradise. ANZRSAI or the ANZ Section of RSA had become international and subsequently hosted the 11th PRSCO in Cairns in 1991, the 14th PRSCO in Wellington in 1997 and the 21st PRSCO in the Gold Coast in J u l y 2 0 0 9 .

ANZRSAI members took up roles in the Regional Science Association. Kevin O'Connor was elected to RSA Council and in 1990 Rod Jensen became President of the RSAI.

During the 1990s and 2000s this international involvement of ANZRSAI members grew. Roy Powell, Jacques Poot, John Madden, Bob

ANZRSAI Newsletter

Stimson and Philip McCann were elected to RSAI Board. Bob Stimson became President of RSAI 2005 and 2006. Jacques Poot became Pacific Editor and Philip McCann became an Editor of Papers in Regional Science.

The Future

There are big policy issues that need to be addressed using regional science methods. These include:

- Regional inclusion/exclusion
- Links between migration, employment, and housing markets
- Metropolitan dominance and sustainable development of mega-city regions
- Rural decline
- Impacts of infrastructure investment on regional economic development
- Regional impacts of climate change and carbon trading schemes
- Indigenous economic development.

The challenges facing the ANZ Section of RSAI include:

- Recruitment of new members
- Graduate students and Early Career Researchers
- Public agency research organisations.
- Re-engagement of policy people and practitioners in regional development.
- Greater involvement of members in international regional science activities and forums.

There is much to do, and every indication that ANZRSAI will continue. To paraphrase our web site,

we appeal to members from diverse practical and academic backgrounds and professional activities including geography, economics, politics and planning, all with some degree of regional interest, and so provide for a comprehensive mixture of public and private interests in practice and r e s e a r c h .

The attractive quality of this extraordinary mixture for members is that it accurately reflects the width and dynamics of regionalism itself.

With thanks to Professor Bob Stimson for permission to use his materials, and with apologies for omissions and additions.

Vale Rod Jensen

The Australian and New Zealand Regional Science Association International is sad to report the passing on 23 August of Emeritus Professor Rod Jensen.

Rod was one of the earliest founders of regional science in Australia, and was particularly influential in the development of input-output modelling. From 1983 to 1986 he served as P r e s i d e n t o f A N Z R S A I .

Rod played a leading role in ensuring regional science in Australia was strongly connected with international scholars. In 1990 he was elected President of Regional Science Association International, the first Australian to hold this position.

The recent PRSCO international conference hosted on the Gold Coast included two special sessions on input-output modelling in honour of Rod Jensen. During those sessions, many of his former colleagues and students spoke appreciatively of Rod's scientific contributions and leadership.

ANZRSAI Newsletter

The ANZRSAI Council expresses its condolences to Enid and their family.

Rural and Regional Development in Canada

Seminar: Dr Rob Greenwood
“Rural and Regional Development: Lessons from Canada and the North Atlantic Rim”

Defining Rural

Dr Greenwood presented definitions of four types of ‘rural’ regions. This classification was developed by the Canadian Rural Revitalization Foundation. Each type differs in performance, characteristics and needs.

1. Rural *Adjacent* (mixed economy; daily commuting to urban)
2. Rural *Non-Adjacent* (mostly primary resource)
3. Rural *Remote* (mostly single industry, northern; aboriginal)
4. Rural *Amenity* (cottage country, retirement communities, resorts)

UN Indicators of well-being commonly define rural regions as needy. The ground truth is more nuanced. While population growth is not as rapid as in urban centres due to declining fertility, rural regions can and do grow through rural urban linkages and supply chain linkages.

Rural Adjacent regions thrive on rural urban linkages, providing housing an urban workforce, and on supply chain linkages marketing their goods and services to the urban market and to export markets. They are vulnerable to rising urban transport costs, but urban communities support development of

transport infrastructure to access rural labour force.

Rural Non-Adjacent regions rely on supply chain linkages to markets for their primary resource products. They are vulnerable to seasonal variations, resource depletion and shifts in commodity markets.

Rural Remote regions may rely on supply chain linkages for their usually resource –based industries. Their rural-urban linkages and supply chain linkages are extended and costly. Their aboriginal populations have cultural links to the land and may be growing, but local productivity growth may not sustain living standards. Engaging an aboriginal workforce in the economy can be an opportunity for these regions.

Rural Amenity regions enjoy a growing population of retirees. However retirement incomes are not growing. Local productivity growth is essential to their continued economic development and this can flow from resorts and services to visitors.

Dr. Greenwood recalled the work of Canadian economist Harold Innes whose staples thesis demonstrated that economies developed to exploit and use natural resources only will have difficulty sustaining growth. Regions hosting the resource based sectors need to develop supply chain linkages and the human resource and organizational capability necessary to capture non-resource based opportunities.

Rural-Urban Linkages

Rural-urban linkages are as important to economic development as supply chain linkages. Dr Greenwood presented 2001 population census data

ANZRSAI Newsletter

on Canada showing that population growth in metropolitan areas with an urban core of 100,000 or more has been greater than in census agglomerations with an urban core between 50,000 and 99,999, which in turn grew faster than census agglomerations with urban cores of 10,000 to 49,999. These data illustrate the effect of size of the urban core on rural adjacent regions.

He also presented 2001 census data on the population growth of regions classified by the strength of metropolitan influence on those regions, as estimated from journey to work data. These data show rates of population growth falling from close to the rate growth of metropolitan areas where metropolitan influence was strong, to population decline where metropolitan influence was weak. Regions with no Metropolitan influence experienced slow population growth. Territories containing only rural small towns experienced the fastest population growth.

It is very important for regional development policy to address the characteristics and the various routes of rural-urban dependence.

It is important to use direct and indirect supply chain linkages to define development opportunities. Linkages within the region create agglomeration opportunities. Linkages outside the region provide growth opportunities.

Non-resource opportunities are critical to successful regions. Productivity is the key, not population. Regions must use their assets well and pool their capacities. Rural urban linkages can and should be mapped so that communities which depend on each other can map governance processes across their region.

Regional Dynamics and Strategy

Dynamic regions with rapidly growing employment may have highly productive traditional sectors, diversified supply chain linkages, growing, non-resource based opportunities, including small manufacturing, and the human resource and organizing capability to capture opportunities.

Geography and regional strategy matters.

The drivers of regional development include

- The development or expansion of existing primary resource based industry sectors such as agriculture, fishery, forestry, etc.
- Diversification building on primary industry sectors to capture upstream or downstream supply chain linkages
- Diversification into new non-resource based sectors such as tourism, non-resource based manufacturing, services and “new-economy”

While the expansion of the existing primary resource based region might occur spontaneously, all economic development requires focused and long-term efforts to build the capacity of the human resource base and the organizational capabilities of the community. The lack of resources and capability at municipal level constrains the development of appropriate policy. Strategies for regions smaller than a state must be precise, rifle-shot approaches, and not waste their efforts on seeking opportunities for which the region is not prepared.

ANZRSAI Newsletter

Regions should seek to develop the built capital, and to develop the social capital of skills and community trust which complement their natural resources, eco-systems and native environment. The social capital dimensions are often not considered in relation to built capital. Skills are vital enablers of development. Community trust is a key driver and influencer of development because it creates a basis for coordinated action.

Community capacity building, creating and retaining skills and building community trust are all central to innovation and to realising the advantages of geography.

The new regional economic development is driven locally and collaborates with government.

Success requires:

- Fiscal resources
- Human resources including leadership, skills and participation
- Legal authority to align and pursue economic strategy
- Local democratic accountability and legitimacy
- Geographic area with defined boundaries, and
- Time

All regional participants must sign on to and align with the plan. This requires consistent and continuous effort at engaging and re-engaging communities. Where, as in Australia and Canada, power is more concentrated in the central government, and in provincial (state) governments, the regions must be very tightly engaged and focused on their plan, and must leaders must work to maintain continuity of the vision.

Municipal government is maturing and becoming a more powerful collaborative partner for regions. Successful regions have the governance to use their resources and ruthlessly execute their plans.

Robert Greenwood is a past president of the Canadian Rural Revitalization Foundation (CRRF) <http://crrf.concordia.ca> which achieves its mission, to revitalize rural Canada, through education and research for rural leaders in the community, the private sector and in government. CRRF is a voluntary charitable foundation which funds itself from the earnings of an endowment fund which includes donations from regional communities and businesses. It fostered the development of baseline data on a selection of Canadian regions, conducts research on best practice, sustains interdisciplinary networks and fosters rural urban links.

Rob Greenwood is Director of the Leslie Harris Centre of Regional Policy and Development at Memorial University Newfoundland, Canada.

The Harris Centre connects the students, faculty and research of Memorial University with the communities in Newfoundland by acting as a broker, helping communities to define priority themes and projects and identifying and approaching suitable partners within the University to collaborate with communities. The weak ties which the Centre builds with communities, strengthen regional capacity, inform and engage citizens in their democracy, and bring research and other projects into the university.

Notes by Tony O'Malley with apologies.

ANZRSAI Newsletter

What Region was this?

Here is another view of that region.



The Gold Coast
Pictures courtesy of Hazel Jones

Up-Coming Conferences

GIScience 2010

14-17 September 2010

Zurich, Switzerland

www.giscience2010.org

Full papers due 29 Jan 2010

4th National Economic Development Conference

29th - 30th September

The Sebel Albert Park, Melbourne

<http://www.halledit.com.au/ed09>

Hosted by Economic Development Australia, the 2009 conference is focused on the theme of collaborative solutions for job creation. It is directed at practitioners not researchers.

SEGRA 2009

Sustainable Economic Growth for Regional Australia

13th National Conference

27-29 October 2009

Kalgoorlie-Boulder, WA.

The theme is Regional Australia:
exploring new frontiers

http://www.segra.com.au/segra/segra_prog.html

ANZRSAI Council 2009-10

President

Paul Dalziel

Lincoln University, Canterbury NZ

Vice President (Australia)

Paul Collits

RMIT University, Hamilton

Vice President (New Zealand)

David Wilson

AUT University, Auckland

Secretary/Public Officer

David Fuller

University of Wollongong

Treasurer

Tony Sorensen

University of New England, Armidale

Council Member (NT)

Rolf Gerritsen

Charles Darwin University, Darwin

Council Member (SA)

Tony O'Malley

Outlook Management, Adelaide

Council Member (VIC)

Vacant

Council Member (TAS)

Robyn Eversole

University of Tasmania, Burnie

Council Member (QLD)

Christine Smith

Griffith University, Brisbane

Council Member (ACT)

Shelby Canterford

Geoscience Australia, Canberra

Council Member (NZ)

Bill Cochrane

Waikato University, Waikato

Council Member (NSW)

Ann Hodgkinson

University of Wollongong, Wollongong

Council Member (WA)

Marilynn Horgan

City of Joondalup, Joondalup

Contact details

Executive Officer

ANZRSAI

PO Box U236

University of Wollongong NSW 2500

Email: anzrsai@anzrsai.org

Website www.anzrsai.org

Ph 0409973329



ANZRSAI Inc
 PO Box U236
 University of Wollongong
 WOLLONGONG NSW 2500 AUSTRALIA
 Fax:+(61) 02 42214970
 Email: anzrsai@anzrsai.org
 Web: www.anzrsai.org

Membership Application

Subscription year: 1 July 2008 to 31st December 2009

Title: Telephone:.....
 Given Name: Fax:.....
 Surname: E-mail:.....

Mailing Address for Publications and Notices:-

Membership Category (see below):

Your Specialist Area(s) of Expertise/Skill(s)

IMPORTANT – PLEASE READ AND INDICATE YOUR RESPONSE: The information contained on this form will be retained by ANZRSAI and may be made available exclusively to ANZRSAI members for information and networking purposes

I *agree/*disagree with this information being made available exclusively to ANZRSAI members

Signed.....

MEMBERSHIP includes

- *Regional Science Association International (RSAI) membership*
- *Australasian Journal of Regional Studies, (3 issues/year)*
- *Sustaining Regions, (3 issues/year)*
- *The ANZ Section Newsletter, (4 issues/year)*

2009-10 Membership Fee (GST Inclusive)

Standard	AUD \$160.00
Student	AUD \$ 30.00
Emeritus	AUD \$ 60.00
Institutional	AUD \$ 337.50

RSAI/ANZRSAI members will receive an access code that will give them electronic access to all RSAI materials including *Papers in Regional Science* (4 issues per year), and the international newsletter **RSAI News** (3 issues/year)

TOTAL AMOUNT DUE: \$ _____ **PAYMENT METHOD:** Cash Cheque Credit Card

CARD HOLDER'S NAME _____

BANKCARD MASTERCARD VISA

□□□□□□□□□□□□□□□□

EXPIRY DATE: □□□□

SIGNATURE: _____

Please return this form with payment in Australian Dollars to:

ANZRSAI Inc., PO Box U236, University of Wollongong, WOLLONGONG NSW 2500 AUSTRALIA

Enquiries: Tel 0409973329 / E-mail: anzrsai@anzrsai.org

Please tick here if you require a Tax Invoice/Receipt for this payment

THE REGIONAL SCIENCE ASSOCIATION INTERNATIONAL (RSAI)

The Regional Science Association International (RSAI) is an interdisciplinary, international organisation focusing on understanding the growth and development of urban, regional and international systems. This is promoted through meetings and publications, developing appropriate concepts and methods of analysis, and through the discussion of regional problems and policies. The Australia and New Zealand Section Inc. (ANZRSAI) is the local 'branch' of the international body.

The broad membership of the ANZRSAI Inc., together with its international affiliation with over 35 countries, provides an Australia -New Zealand perspective within a global regional development context.

The ANZRSAI's goals are:

- To disseminate knowledge relevant to regional issues and process
- To encourage research and analysis in fields relevant to regional policy and process
- To provide forums for the discussion of research, planning and process.
- To encourage and facilitate the professional development of those involved in regional economic and social research, policy and practice
- To develop policies in liaison with relevant agencies with respect to regional analysis and process
- To raise community awareness of regional economic and social policy and practice.

Through its annual conference, meetings and publications, the ANZRSAI encourages members to participate in discussions in order to achieve greater recognition of the need for regional development policy and practice, and to ensure that appropriate structures are pursued within regions in support of regional development based upon analysis and appropriate planning. It is committed to ensuring that Australian regional development process is of a quality that is recognised world wide.

The Association's membership encompasses people from many disciplines, including economists, geographers, planners, educators, engineers and consultants, and from many fields of activity; government, universities, research and planning establishments and the private sector. A major strength of the Association lies in the interaction of these various perspectives.