

# Australia and New Zealand Regional Science Association International 44th Annual Conference



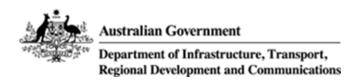
### CONFERENCE PROGRAMME

ANZRSAI welcomes participants to its 44<sup>th</sup> annual conference, hosted this year online and at RMIT University, Melbourne. The core theme for this year's conference focuses on:

### Risk! The Challenge of Managing Risks to Regional Futures

(Melbourne and Online, 6-7 December 2021)

ANZRSAI is pleased to acknowledge our conference sponsors.







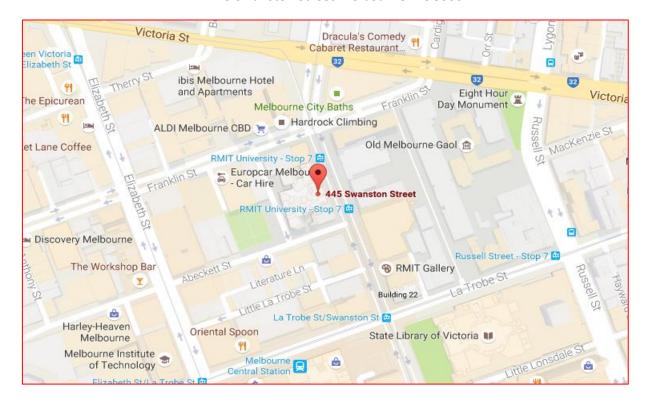




#### **CONFERENCE VENUE**

The conference will take place at:

### RMIT Swanston Academic Building, Building 80, level 7 445 Swanston Street Melbourne VIC 3000



#### **CONFERENCE DINNER**

The first day of the conference will conclude with Conference Dinner co-hosted by ANZRSAI and the RMIT. This will take place at 6:30pm after the Keynote Lecture at 5pm. The venue will be advised once numbers are confirmed. The conference dinner will include presentations of the ANZRSAI Awards, sponsored by the Bureau of Communications, Arts and Regional Research (BCARR) in the Department of Infrastructure, Transport, Regional Development and Communications.

#### **CONFERENCE DETAILS**

Should you require further clarifications, please do not hesitate to contact:

Professor Bruce Wilson, Director

European Union Centre of Excellence at RMIT University

Telephone: +61 414 236 765, Email: <a href="mailto:bruce.wilson@rmit.edu.au">bruce.wilson@rmit.edu.au</a>

#### **WELCOME FROM THE PRESIDENT**



After the disappointment of having to postpone our annual conference last year, ANZRSAI is delighted to be returning to RMIT in Melbourne for our 44<sup>th</sup> conference.

The core theme of our conference is *Risk! The Challenge of Managing Risks to Regional Futures*. The importance of this theme at the current time is obvious to everyone.

I am very grateful to Professor Bruce Wilson and his colleagues in the European Union Centre at RMIT for offering to host a hybrid conference in Melbourne, with the options of people participating in person or on-line. I am confident this will be a conference with something for everyone with an interest in regional policy and practice.

I also thank BCARR – the Bureau of Communications, Arts and Regional Research – in the Department of Infrastructure, Transport, Regional Development and Communications, for their financial support as the Conference's chief sponsor. This is a significant contribution to regional science in Australia. I particularly thank Karen Malam and Lucy Williams for their ongoing support for our annual conference.

Among other publication opportunities, participants are welcome to submit their paper presented at the conference to the *Australasian Journal of Regional Studies*.

Thank you for joining us. It has been a trying two years, and very difficult for many people. We anticipate that the conference will be a rich experience for those of you who are able to join us, either in person or online.

Rolf Gerritsen

ANZRSAI President, 2021

### The Keynote Speakers

#### **MONDAY 6 DECEMBER**

#### FIRST KEYNOTE ADDRESS, 10:15AM

## PROFESSOR LAUREN RICKARDS (RMIT UNIVERSITY)



Lauren Rickards is a Professor in the School of Global, Urban and Social Studies, where she is Director of the Urban Futures ECP and co-leader of the Climate Change Transformations research program. A human geographer and ecologist by training, she now works on climate change futures and related questions about the urban-rural and human-nature relationship. She is a Lead Author with the Intergovernmental Panel in Climate Change (IPCC) chapter on Australasia.

#### SECOND KEYNOTE ADDRESS, 5:00PM

## PROFESSOR ROBERT HASSINK (KIEL UNIVERSITY)

Robert Hassink is Professor of Economic Geography at Kiel University in Germany and Visiting Professor in the School of Geography, Politics & Sociology at Newcastle University, UK. He has worked at several research institutes and universities in the Netherlands, Germany, Norway and South Korea. Over the years he has carried out various research projects on regional innovation policies, industrial restructuring, regional economic adaptation and creative industry clusters in Western Europe and in East Asia, particularly in China and South Korea.





Research Today, Policy Tomorrow

PROFESSOR HASSINK'S ADDRESS IS KINDLY SPONSORED BY THE REGIONAL STUDIES ASSOCIATION

https://www.regionalstudies.org/.

# The Keynote Speakers (continued)

#### **TUESDAY 7 DECEMBER**

#### THIRD KEYNOTE ADDRESS, 10:00AM

## DR SKYE AKBAR (UNIVERSITY OF SOUTH AUSTRALIA)



Dr Skye Akbar is a researcher and educator in UniSA's Business School who applies her experience with a focus on supporting the wellbeing of local peoples through improved understanding of how best to achieve self-determined sustainable community economic development. Originally from the Eyre Peninsula, Skye is of the Waljen group of the Wongutha Peoples. She works to support evidence-based decision making that can nurture context and culturally inform local solutions to local problems.

#### FOURTH KEYNOTE ADDRESS, 1:15PM

## PROFESSOR FIONA HASLAM MCKENZIE (UNIVERSITY OF WESTERN AUSTRALIA)

Fiona Haslam McKenzie is Co-Director of the Centre for Regional Development at UWA. Her background is in political geography, researching the socio-economic impacts of the restructuring of the agricultural industry. Fiona has extensive experience in population and socio-economic change, housing, regional economic development and analysis of remote, regional and urban socio-economic indicators. She has undertaken work for the corporate and small business sectors, as well as conducting work for all three tiers of government.



#### CONFERENCE TIMETABLE

### Monday 6 December

9.30am Registration Desk Opens

Level 7 of Swanston Academic Building 80, 455 Swanston Street, Melbourne

Tea and Coffee available

10.00am Welcome to Country Location: 80.07.07

Welcomes

Chair: Bruce Wilson

Rolf Gerritsen, ANZRSAI President Bruce Wilson, Conference Convenor

10.15am First Keynote Address Location: 80.07.07

Chair: Emma Shortis

**Professor Lauren Rickards** 

Urban Futures Enabling Capability Program, RMIT

11.15am MORNING TEA

11.30am First Contributed Papers Session

12.45pm LUNCH

1.45pm Second Contributed Papers Session

3.00pm AFTERNOON TEA

3.15pm Third Contributed Papers Session

4.55pm Refreshment Break

5.00pm Second Keynote Session

Chair: Andrew Beer

Professor Robert Hassink

Economic Geography at Kiel University, Germany

6.00pm Close of Day 1

6.30pm Conference Dinner

### Tuesday 7 December

10.00am Third Keynote Address Location: 80.07.07

Chair: Paul Dalziel

Dr Skye Akbar

Researcher and Educator, Business School, UNISA

11.00 Morning tea

11:15 Fourth Contributed Papers Session

12:30 Lunch

1:15 Fourth Keynote Address

Chair: Bruce Wilson

Professor Fiona Haslam McKenzie

Co-Director of the Centre for Regional Development at UWA

2:15 Annual General Meeting

3:00 End of Conference

#### **G**UIDE TO PRESENTERS IN THE CONTRIBUTED PAPERS SESSIONS

The sessions for the contributed papers allow for each speaker to have **20 minutes** each for the presentation, including time for questions of clarification or other immediate feedback. Once all speakers in a session have completed their presentations, this will leave about **15 minutes** for general discussion about any of the papers.

# First Contributed Papers Session Monday 6 December, 11.30am-12.45pm

Chair: Delwar Akbar Location: 80.07.07

#### **SORENSEN, Tony**

Agile Development Leadership in Regional Australia: A Case Study from the Armidale (NSW) Region

#### COFFEY, Brian, Judy Bush, Lisa De Kleyn

Urban Greening beyond the Major Cities

#### Wilson, Bruce and Chloe WARD

Disasters in Country Australia: Risks for Businesses Recovery

# Second Contributed Papers Session Monday 6 December, 1.45pm-3.00pm

Chair: Tony Sorensen Location: 80.07.07

#### **BATABYAL, Amit and Hamid Beladi**

Health Interventions in a Poor Region and Resilience in the Presence of a Pandemic

#### VIDYATTAMA, Yogi, Muhammad Halley Yudhistira, Melia Husna

COVID 19: The Issue of Contagion, Public Policies and its Implication for Eastern Indonesia

#### AKBAR, Delwar, Trang Nguyen, Azad Rahman, John Rolfe

Managing Risks in Agricultural Supply Chain through Stakeholder Collaboration: An Australian Case Study

# Third Contributed Papers Session Monday 6 December, 3.15pm-4.55pm

Chair: Yogi Vidyattama Location: 80.07.07

#### NAUDÉ, Cliff

Analysis of Urban-Regional Household Income Differences in Australia using Decomposition Techniques

#### **BATABYAL, AMIT and Seung Jick Yoo**

Tax Policy and Interregional Competition for Mobile Venture Capital by the Creative Class

#### TRENDLE, Bernard

Do State Borders Affect Commuting Flows? A Case Study of the Queensland and New South Wales Border along the Tweed River

#### MCINTYRE, Tiffany, Mark Wilson, Paul Childerhouse and John Saunders

Towards a Unified Theory of Supply Chain Value Creation and Capture

# Fourth Contributed Papers Session Tuesday 7 December, 11.15am-12.30pm

Chair: Bruce Wilson Location: 80.07.02

#### HEFFERAN, Mike

Cumulative Causation Revisited: How Relevant in 2021 Regional Development? Observations from South-East Queensland

#### Saunders, Caroline, Paul DALZIEL and Andrew McCallum

Geography Matters for Small Advanced Economies: Implications for Economic Strategy

#### Wilson, Bruce, Lars Coenen, Leo Goedegebuure, Emma SHORTIS

Policy Experimentation: Contending Placed-Based Approaches to Regional Innovation

#### **ABSTRACTS**

AKBAR, Delwar Session 2

Central Queensland University, Australia

Email: d.akbar@cqu.edu.au

Title: Managing risks in agricultural supply chain through stakeholder collaboration: An

Australian Case Study

Co-authors: Trang Nguyen, Azad Rah and John Rolfe

Abstract: Agricultural supply chain in northern Australia region has been exposed to many natural and man-made risks and uncertainties. Particularly farmers and the agri-businesses have been suffering from these risks for many years. Effective collaboration among the supply chain actors and agencies can improve the efficiency of the supply chain, thereby can maintain the sustainability of the businesses involved within a supply chain. Very few studies examined or reviewed the actors and agencies relationship in supply chain collaboration in order to improve the efficiency along the supply chain. This study examines actors and agencies relationship that contribute to supply chain activities. Data were obtained from a multistakeholder workshop discussion which focused on supply chain collaboration issues. Our analysis of the stakeholders' position demonstrates that initial and operational activities in supply chain collaboration are based on the involvement of multiple forms of agency, including individual agency, collective agency and external agency, performed by internal and external actors (chain members and other entities) in adhering or responding to the chain collaboration structure. Implications for improving the effectiveness of supply chain collaboration associated with each agency form are then provided.

BATABYAL, Amit Session 2

Rochester Institute of Technology, USA

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Title: Health Interventions in a Poor Region and Resilience in the Presence of a Pandemic

Co-author: Hamid Beladi

Abstract: We focus on a poor region and study the nexuses between health interventions undertaken by a regional authority (RA) and this region's Holling resilience in the presence of a pandemic such as Covid-19. First, we show how a health intervention by the RA probabilistically affects an appropriately defined health indicator. Second, we compute the chance that the health status of this region's population falls below a minimum acceptable level in the presence of the health intervention. Third, we solve an optimization problem in which the RA maximizes the likelihood that the health status of this region's population stays above a minimum acceptable level at a given economic cost. Our analysis demonstrates that there is a connection between a health intervention, a region's health status, and its Holling resilience by presenting two applications. Our analysis reveals that this paper's methodology can be used to compute a region's Holling resilience with a particular health intervention. The main policy implications of our analysis concern the need for a RA to pay attention to (i) a region's health infrastructure and financing, (ii) sufficient engagement with the region's population, (iii) regional heterogeneity, (iv) data collection, and (v) the likelihood that sicker regions are likely to require more health interventions at a higher cost.

BATABYAL, Amit Session 3

Rochester Institute of Technology, USA

Email: aabgsh@rit.edu

Title: Tax Policy and Interregional Competition for Mobile Venture Capital by the Creative

Class

Co-author: Seung Jick Yoo

Abstract: We study how tax policy affects the competition for venture capital by the creative class in two regions A and B. The creative class in each region produces a final good with venture capital and its own abilities or creative capital. Venture capital moves freely between the two regions and the representative creative class member in each region has access to an initial amount of venture capital. Each region taxes venture capital at a particular rate and the tax revenue is paid out as a transfer to the representative creative class member. In this setting, we perform five tasks. We begin by determining the first-best tax rates in the two regions. Second, we solve for the net price of venture capital and then express the objective function that is to be maximized in each region as a function of this price. Third, we compute the first-order necessary conditions that describe the optimal tax rates in the two regions and show that the sign of the tax rate depends on the net exporting position of the region. Fourth, for specific parameter values, we calculate the two tax response functions and discuss their properties. Finally, we compute the two equilibrium taxes as a function of the model's key parameters and show that these taxes must be of opposite signs.

COFFEY, Brian Session 1

RMIT University, Australia

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Title: Urban Greening beyond the Major Cities

Co-authors: Judy Bush and Lisa de Kleyn

Abstract: Urban greening is attracting considerable research and practical attention for its contribution to conserving biodiversity, mitigating the urban heat island effect and enhancing the liveability and sustainability of urban settlements. This is eminently sensible given the multiple and intersecting challenges facing societies around the world. However, little is known about the need for, potential of, and experience with urban greening in regional cities, towns and other settlements. This is problematic because urban research, including urban greening research, is largely focussed on big and developed cities, with it far from clear whether the results from that research are transferable to other forms of settlements: what works in a metropolitan context may not be suitable in a regional context. Given this, our paper will explore the relevance and contribution of urban greening in regional settlements, drawing on examples provided from leading regional settlements.

DALZIEL, Paul Session 4

Lincoln University, New Zealand Email: <a href="mailto:paul.dalziel@lincoln.ac.nz">paul.dalziel@lincoln.ac.nz</a>

Title: Geography Matters for Small Advanced Economies: Implications for Economic

Strategy

Co-authors: Caroline Saunders and Andrew McCallum

Abstract: New Zealand is a small advanced economy in the South Pacific Ocean. Policy advisors often compare New Zealand's economic performance with those of other successful small advanced economies. These comparisons generally recognise that New Zealand is uniquely distant from the world's largest and highest-income markets. Nevertheless, it has become commonplace for policy advisors to say "Geography is not destiny: New Zealand can do better". This paper draws on standard regional economic development analysis to conclude that geography matters for economic strategies. It draws on endogenous growth theory to explain how the properties of knowledge mean that knowledge can sustain increasing returns to scale and hence productivity growth. The paper draws on that theory to introduce a mission-oriented innovation research programme that has contributed to creating and capturing greater value from New Zealand food and fibre exports.

HEFFERAN, Mike Session 4

Queensland University of Technology, Australia

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*Title*: Cumulative Causation Revisited: How Relevant in 2021 Regional Development?

Observations from South-East Queensland

Abstract: Myrdal first postulated his theory of Cumulative Causation in the mid-1950s, presenting a multi cause approach to the unique economic / regional development and possible dominance of a particular region. The approach has remained of (reasonable) significance, particularly in places such as Australia where private capital dominates urban development, often under 'green field' conditions. Critics may consider that it simply reflects the truism that 'investment and development beget investment and development' and, further, that development drivers are now much more complex and diverse.

This paper provides an introduction to research underway, based in South-east Queensland, and discusses the identification and the overall relevance of a Cumulative Causation model in that region, both historically and in the contemporary environment. It is planned that this initial work will lead on to the wider investigation into the evolution of this broad region and its realignment within a now quite different economic environment. The COVID pandemic may have highlighted these shifts but it would be held that long term trends were already well underway.

MCINTYRE, Tiffany Session 3

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Co-authors: Mark Wilson, Paul Childerhouse and John Saunders

Title: Towards a Unified Theory of Supply Chain Value Creation and Capture

Abstract: The purpose of this paper is to synthesis value creation and value capture in a supply chain context. A series of propositions are developed from the previous literature and integrated into a holistic framework for value creation and capture. A case study of an agribusiness supply chain founded in a horticultural region of New Zealand is subsequently used to empirically verify the unified theory. The results identify the core value creation drivers and enablers, and value appropriation mediators that determine the net value capture of a supply chain. Insights from the exploratory case study refine and verify the propositions and associated framework. Two alternative value pathways are identified, internal opportunism or collaborative co-creation. Thus, the paper identifies a symbiotic relationship of value creation and value capture that advances our knowledge beyond the current discrete conceptualisation. By drawing upon value theory, an exploratory framework unifies these concepts, resulting in novel implications for management decision making.

NAUDÉ, Cliff Session 3

Exponential Economics, Australia

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Title: Analysis of Urban-Regional Household Income Differences in Australia using

**Decomposition Techniques** 

Abstract: Australia faces an urban-regional (i.e. rural) policy dilemma. Meanwhile, decomposition techniques, notably Oaxaca-Blinder and Cotton-Neumark, have been used to account for differences in wages between specific groups due to differences in race, gender and union membership, in addition to attributes such as education or industry. This paper uses decomposition techniques to assess the extent to which differences in average household incomes between urban (state capital cities) and rural / regional Australia can be explained in terms of differences in such observable characteristics as: age of population, population density, immigration, gender participation, level of education, occupation / skill level, sectoral employment and internet access. The decomposition results indicate that a significant portion of the differences in average household incomes between urban and regional Australia can be explained by differences in the variables identified, but a portion cannot. The paper concludes with a discussion of the implications of these results for regional policy in Australia.

SHORTIS, Emma Session 4

RMIT University, Australia

Email: emma.shortis@rmit.edu.au

Title: Policy Experimentation: Contending Placed-Based Approaches to Regional Innovation

Co-authors: Bruce Wilson, Lars Coenen and Leo Goedegebuure

Abstract: Innovation, understood as the process of collective problem-solving to generate new products or processes, is recognised widely as a necessary resource for delivering prosperity for citizens (see Isaksen et al 2018). Over the past decade, the European Union (EU) has promoted adoption of a Smart Specialisation Strategy as a necessary condition for access to the Cohesion Funds for innovation (see Foray 2014), and many regions in other parts of world have explored its relevance to their circumstances (see Wilson 2016). However, the struggle of many regions to engage with the Smart Specialisation process has led to calls to focus more particularly on the Foundational Economy as the basis for radical social innovation (see Foundational Economy Collective 2018).

On initial inspection, the concept of Foundational Economy and the precepts of Smart Specialisation appear to be deeply contradictory. On the one hand, the Foundational Economy approach draws attention to the everyday requirements of local economies, even in those that are relatively poor – that is to say, everyday services related to obtaining food and other household goods, education, transport and health services, and local authority support. On the other, Smart Specialisation focuses cross-sectoral entrepreneurial actors, from business, research, government and civil society, in identifying specific regional (knowledge) assets which can support diversification into new products or services that can be globally competitive. However, there is a much more nuanced relationship between the two approaches. Whereas Smart Specialisation privileges technological, business-oriented innovation which draws on unique assets to develop global competitive advantage, the foundational economy is a resource for inventing new ways of delivering on social, cultural and environmental outcomes. Furthermore, the now omnipresent importance of considering the implications of the climate emergency means that economic outcomes are inevitably entwined with social and environmental priorities. As the focus on place-based innovation has intensified, it has become apparent that organisational resources (analytical and process expertise, in particular) and collaborative relationships are necessary for the realisation of innovation opportunities in both processes.

This paper will explore these issues through reflection on a policy experiment with Smart Specialisation in Gippsland, a region in transition from a primary, albeit not exclusive, reliance on coal and power generation, in south eastern Australia. It will outline several dimension of experimentation in the approach adopted to supporting place-based innovation in Gippsland. Particular attention will be given to the different elements of institutional capability that are necessary for implementation of Foundational Economy and Smart Specialisation principles as complementary contributions to place-based social, economic and environmental development.

SORENSEN, Tony Session 1

University of New England, Australia Email: Tony.Sorensen@une.edu.au

Title: Agile development leadership in regional Australia: a case study from the Armidale

(NSW) Region

Abstract: Regional development practice has to evolve fast to help often economically disadvantaged non-metropolitan communities adapt successfully to an accelerating raft of new technologies and start-up businesses trying to operate them effectively. Former top-down government organised and inspired coping strategies may well need considerable replacement by leading community-based individuals and organisations performing a variety of roles. These include business development, and high quality the leadership the greater will be the chance of successful adaption to rapidly changing circumstances.

I am involved with a high-class community group called New England Visions 2030 run by Maria Hitchcock OAM, which involves 6 leading community activists. The paper will examine our collective aims, roles, procedures, tasks, networking, attitudes and accomplishments since the team's formation two years ago. It also explores how we work with several other development groups in our community to deliver better economic, social and environmental outcomes. In my view, our activist model could be adopted beneficially by many regional locations, albeit modified to better suit local conditions. Several other observations are likely to be of interest to conference participants. One, in particular, keeps surfacing and that concerns the inability of many community and even business groups to refine their projects sufficiently to deliver clear and achievable aims, objectives, and delivery processes that can attract both funding and necessary regulatory permissions.

TRENDLE, Bernard Session 3

University of Queensland, Australia Email: <a href="mailto:batrendle@hotmail.com">batrendle@hotmail.com</a>

Title: Do State Borders Affect Commuting Flows? A Case Study of the Queensland and

New South Wales Border along the Tweed River

Abstract: This paper explores the impact of State borders on commuting flows. Barriers exists when the commuting frequency at a cross-border link is below the expected level, given other characteristics, such as origin and destination size and distance. Work here applies spatial interaction modelling techniques to census 2016 Journey to Work data for the SA2s of the Richmond-Tweed region of New South Wales and the Gold Coast region of Queensland. The study is particularly relevant, with border closures the apparent instrument among choice of State leaders hoping to restrict the spread of Covid-19, though the impact on State economies and regional labour markets is yet to be fully understood. The analysis uncovers evidence of barrier effects using 2016 data, a perhaps surprising result, given that Australian States and Territories share the same language, culture and a constitution prohibiting trade barriers between the states.

Session 2

University of Canberra, Australia

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Title: COVID 19: The Issue of Contagion, Public Policies and its Implication for Eastern

Indonesia

Co-authors: Muhammad Halley Yudhistira and Melia Husna

Abstract: As in other countries, the incident of COVID and its infection rate is not the same in every area in Indonesia. In addition, the different local conditions and situations would mean the policy action items often need to be adapted to these factors. To do so, the role of local government in delivering the suitable public health services for the COVID situation in their area as well as its prevention strategy become crucial. Even though the central government is important in the long term strategy, local governments often take central role in slowing the pace of contagion effect and preparing so the local health centre and hospitals capacity are not overrun by the disease. This is especially in decentralised countries such as Indonesia where health authority and service delivery are in the hand of local government. This has put a lot of pressure in their financial capacity and hence, their ability to induce activity to the local economy. This study aims to understand the contribution of local government in Indonesia and its financial position on COVID prevention and economic recovery effort. This preliminary study mainly focus on pattern in different region in Indonesia. A special attention is given to the Eastern Indonesia since their remoteness would be a protective factor but has the vulnerability and bare a greater risk if the virus able to escape to the community. In addition, its economy should already be affected by the important prevention measure as well as the economic downturn in other area in Indonesia.

WARD, Chloe Session 1

RMIT University, Australia

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*Title*: Disasters in Country Australia: Risks for Businesses Recovery

Co-author: Bruce Wilson

Abstract: Disasters affect regions in country Australia with increasing regularity. Bushfire, drought, flooding and cyclones have all wreaked enormous damage in the past decade, compounded in the last two years by the impact of pandemic restrictions. While considerable research and programmatic attention has been given to community recovery, relatively little has been given to the complexities of the implications of disasters for businesses, and particularly to business recovery.

In 2021, the Regional Australia Institute has set out to address this issue with a series of projects undertaken as part of its Regional Research Connections program. This paper reports on one of these projects. Based on case studies conducted in three regions in separate states, the project found that scarcely any two businesses even in the same region had the same pathway to recovery. Circumstances in the three case study regions were quite different from each other, as were the regional economies.

This paper will demonstrate the richness of experience and diversity in each of the participating regional economies, and the challenge of developing policy in an abstract setting. Policy formation should focus not so much on the content of possible intervention, but on developing structures and processes that enable a swift and flexible response when disasters do occur.

