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Comment: Future directions for Australasian environmental economics

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1. Introduction

The review of the past contributions of Australasian (Australia and New Zealand) environmental economists by Bennett and Randall (2016) provides a valuable window to the past 60 years. In their categorisation of notable contributions, they highlight the conceptual advances, analytical tools, cross-disciplinary fertilisation and multidisciplinary advances over the preceding decades. According to them, and we concur, Australasian economists have, to date, ‘punched above their weight’ in terms of their global impact.

The key questions that we pose, as discussants to Bennett and Randall, include the following: Will Australasian environmental economists continue to outperform relative to their peers elsewhere in the world? And, if so, how might this be accomplished? By necessity, this requires us to speculate on possible futures for the environmental economics discipline in general, and the relative strengths and future expertise of Australasian economists in particular. We see our contribution as not so much predicting the future, but rather highlighting possible future directions for environmental economics and pathways for research investment in Australia and New Zealand.

2. Lessons from the past

As shown by Bennett and Randall, Australasian environmental economists have excelled at the development of analytical tools and the extension of theory to real-world problems. In sum, Australasian environmental economists have been at the forefront of connecting best theory to best practice. In so doing, they have had a remarkably large impact on public policy in both Australia and New Zealand, especially in terms of market-based instruments and innovative environmental and conservation practices.

The willingness of Australian (state and commonwealth) and New Zealand governments to experiment and implement innovative practices in managing pollution (emissions trading), land (Landcare in Australia), water (water allocation markets and salinity trading in Australia and nutrient trading in

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New Zealand), fisheries management (individual catch shares in New Zealand and Australia) and simply by removing distorting subsidies (agriculture) has made this region a 'laboratory' for the world. The application and learning from innovative environmental regulation in Australia and New Zealand has also provided valuable insights for other nations who must also grapple with the problems of pollution, cost-effective environmental regulation, water scarcity, overexploitation of natural resources or simply the practice of 'sustainable development'.

In our view, the key lessons from the past are that the willingness of Australasian environmental economists to 'get their hands dirty' and work out practical ways to use the insights of relevant theory has been a major factor in their success within their respective countries, and globally. Putting theory into practice requires integration across multiple subdisciplines. As shown by Bennett and Randall, this has resulted in both cross-fertilisation from other areas of economics, and other disciplines, and a *modus operandi* that includes research within multidisciplinary teams.

Government financial support for national research organisations, such as CSIRO in Australia and collaborations among Crown Research Institutes and independent research organisations in New Zealand, and also funding for university collaborations like the Environmental Economics Research Hub in Australia have all been important in supporting multidisciplinary teams and pioneering research. In turn, these interdisciplinary and multidisciplinary efforts have had a substantial and beneficial impact for both the profession and on-the-ground outcomes in the two countries.

3. Learning from success

The projected relative decline of Australia and New Zealand in terms of both their economic and demographic weight in the world over the next 60 years (Johansson *et al.* 2012) would suggest, all else being equal, that the relative importance of Australasian economists will also decline. In other words, as more resources in large emerging economies are devoted to mitigating their own environmental problems, and as more academics and practitioners from these countries focus on the environment, we might expect the relative importance and relevance of Australasian environmental economists to diminish although their pioneering work may, paradoxically, become even more important in their applications.

Learning from the successes of the past 60 years provides possible pathways as to how the Australasian environmental economics profession might continue to 'punch above its weight' in the years to come. First, to maintain their global significance, Australasian professions must reach out and engage with their Asia-Pacific and Latin American neighbours, and be active participants in helping resolve the environmental problems many of these countries face. Just as the Australian Centre for International Agricultural Research (ACIAR) has been at the forefront of forging

agricultural research partnerships over many decades that mutually benefit donor countries and Australia in terms of agriculture, a similar focus and effort is required in terms of the environment and natural resources. Indeed, a similar-sized agency with a collaborative research focus supported by both Australia and New Zealand in the area of the environment, broadly defined, would be an important initiative that would be of benefit to Australasia and its region. Not only would such a centre and its partnerships allow Australasia to assist in resolving national, regional (such as Asian haze) and global (increasing greenhouse gas emissions) externalities, but would, by providing valuable insights and cross-fertilisation of ideas and practices, help Australia and New Zealand to resolve their own technological externalities.

Second, Australasian environmental economists need to add further linkages into those sectors in which both countries are major players regionally or globally. This includes food, agriculture and also water for which there is already a high level of expertise and well-established research centres in both Australia and New Zealand. New directions might also be developed in the climate mitigation and adaptation, finance, tourism and the energy and resource (including mining) sectors where Australia and New Zealand are important regional players. To illustrate the potential research synergies across these sectors, consider that it was only in 2015 that the Climate Finance Lab was established with funding from the UK, US, Netherlands and German governments, along with several philanthropic foundations, to create new ways of financing climate mitigation and adaptation. This international laboratory will support the identification and piloting of cutting-edge climate finance instruments and intends to leverage billions of dollars of private investment into climate change mitigation and adaptation in developing countries (The Global Innovation Lab for Climate Finance 2015). There is absolutely no reason why Australasians should not be at the forefront of such innovation whereby new instruments, coupled with good data analysis and economic theory, can be used to respond to a host of environmental challenges.

Third, as documented by Bennett and Randall, Australasian economists contributed to the cross-fertilisation of psychology and economics and also the development of behavioural economics. We contend that a similar cross-fertilisation is emerging which could have an equally important impact in terms of responding to environmental challenges and increasing the relevance of the environmental economics profession. In particular, we highlight the increasing connection between risk analysis, resilience thinking, decision-making and environmental economics. Both Australia and New Zealand can benefit enormously from such cross-fertilisation and innovative thinking given that both countries, among OECD nations, are subject to much greater risk of natural disasters (earthquakes, cyclones, floods), and also because of their relative isolation from exotic pests and diseases. The work of the Centre of Excellence for Biosecurity Risk Analysis (CEBRA) at the University of Melbourne offers just one example of the innovative and cross-cutting work in risk that could support world-leading work in environmental economics.

4. Conclusions

Much has been accomplished over the past 60 years, and much more will be achieved by Australasian environmental economists over the coming decades. In the decades hence, the relative economic importance of Australia and New Zealand will decline with the emergence of rapidly growing economies with large populations. Without making the most of its comparative advantages, this long-term global trend could endanger the Australasian profession's ability to 'punch above its weight'. Paradoxically, this trend could also create an opportunity for ongoing influence as emerging economies develop an interest in learning from Australasian experiences as they respond to their own environmental and resource issues, and the capacity to adapt those lessons to their own contexts.

While the direction of research will, and should, in large measure, be determined by individual researchers, we contend that there are substantial benefits from public funding, coordinating and facilitating research programs. Three possible and additional research investment pathways that we contend would generate large benefits to Australia and New Zealand, and globally, include support for the following: (i) collaborative research partnerships that respond to the major environmental challenges of rapidly growing emerging economies supported by the expertise of Australasian environmental economists; (ii) meaningful linkages between environmental economists in non-traditional sectors, such as in climate finance, and their policy testing and application; and (iii) risk and decision-making within environmental economics with a focus on ways to respond to catastrophic risks.

No future path is assured, just as past performance is not necessarily an indicator of future returns. Nevertheless, we contend that with adequate research investments, there are strategies and pathways available that will allow the academics and practitioners of environmental economics in Australia and New Zealand to deliver important national, regional and also global benefits for the next 60 years, and beyond.

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