



## Scholar Reflections from...

### Australian Capital Territory

#### 2019 Crawford Fund Annual Conference



Five scholars from the Australian Capital Territory attended the 2019 Crawford Fund conference. Four were supported by our ACT Committee, and one was supported by Plant Health Australia.

Our competitive Conference **Scholarships** are offered to young people with a genuine interest in international agricultural research and development to attend the conference and participate in a special set of activities that we have developed since the program commenced in 2010.

Once again, we would like to thank our wonderful mentors, mentioned alongside the scholar they supported, who volunteer their time and offer valuable guidance, support and insights to the scholars throughout the conference.

#### **ACT COMMITTEE SPONSORED SCHOLARS**

**Jordan Cox**, *Australian National University*

**Mentor:** Madaline Healey, *University of Sunshine Coast*

The 2019 Crawford Fund Scholar Program was an incredible opportunity for early career researchers to engage with the key issues complicating the ways access to nutrition is changing for global communities. This year's conference was centred around the themes of water, energy and food in a changing climate using Sir John Beddington's 'Perfect Storm' to explore the expected changes for the ways in which global communities supply and access nutrition.

The first day of the Scholars Program began with a formal opening address from the Hon John Anderson AO. As a former leader of the National Party (and former Deputy Prime Minister), lifelong farmer, and fervent advocate for not-for-profit sectors and international agricultural research, his opening laid bare the considerable challenges we now face in relation to water, soil and food security. However, this clarity was punctuated by optimism, bringing welcomed encouragement for the group of budding researchers in attendance. A heartening, collegiate atmosphere was carried throughout the afternoon as the conference scholars were immersed in new learning experiences- it was here where conference scholars and their mentors were able to meet researchers from other disciplines, creating a collaborative atmosphere and knowledge exchange between the various research fields.

As a young forestry researcher, it was great to get the research perspectives of my mentor, an entomologist developing integrated pest management programs for sub-tropical agroforestry production systems. These enriching experiences continued through to the Sir John Crawford Memorial Address delivered by Professor Ross Garnaut AC that evening: a fitting person to be speaking on the vast opportunities which present for Australian researchers and industrial innovators to contribute to the decarbonisation domestic and global economies. Professor Garnaut continued to stress, as he has done for some years now, the importance of substantive efforts to mitigate climate-change, while he cautioned against weak policy stances which won't deliver the economic transformations required for sufficient innovation and adaptation.

The second day saw conference scholars attend the Crawford Fund Annual Parliamentary Conference at Parliament House. The morning keynote address was delivered by Professor Sir Charles Godfray who spoke about the outlook under the perfect storm nexus. Sir Charles explored the challenges that humanity faces in the context of anthropogenic climate change: population pressures, poor nutritional outcomes and increased resource scarcity which are likely to impact production possibilities and result in increased geopolitical shocks. He went on to say that there are numerous opportunities to address some of these issues, and that encouraging high-income contexts to more readily follow World Health Organisation dietary guidelines presents a bona fide win-win for constraining the growth of carbon emissions at low cost levels.

I found the subsequent speakers at the conference to be thoroughly engaging, and I'm very thankful to have had such an incredible opportunity to hear from expert researchers and some unique perspectives from forward-thinking corporate leaders, such as Sarah Barker (Minter Ellison) who spoke on the opportunities of viewing climate change through the 'liability risks lens of institutional investors'.



In closing the Scholar's Program on the final day, we heard from Andrew Campbell (ACIAR) on the merits of building a career in international agricultural research, and the potential benefits of leveraging international volunteering experiences for those goals. Through some further guided discussions, conference scholars were able to start useful discussions on where they hope to take their current studies or research. As someone nearing the end of my current research project, I found this process, and being part of the Scholar's Program more broadly, an invaluable experience. Attending this year's conference has allowed me to better connect with members of the RAID Network (Researchers in Agriculture for International Development), and to start thinking about some of the opportunities in international agricultural research for development.

It has been an absolute pleasure and privilege to be involved with the Crawford Fund Scholars Program for 2019 and I am very grateful for the support. I would like to sincerely thank the Crawford Fund and organising committee, the ACT committee and mentors, the distinguished guests and speakers in attendance, and the generous donors whose support makes events such as these possible.

**Madi Hickey**, *Animal Health Australia*  
**Mentor:** Jenny Hanks, *Crawford Fund VIC Committee*

This year's Crawford Fund conference "Weathering the 'Perfect Storm': Addressing the Agriculture, Energy, Water, Climate Change Nexus" encompassed a range of challenges, perspectives and food for thought. The conference provided an excellent opportunity to network and meet like-minded individuals from a range of different backgrounds and interest areas. I really valued the knowledge and experiences they shared, and my attendance has broadened my understanding and motivation to pursue my interest in international research and development.

The impact of climate change on food security raises numerous challenges. The conference presentations highlighted the significant disparity between food production and nutrition issues faced within the developed and developing world. On one hand, we see undernourishment and limited food supply, and the other, obesity, overproduction and food wastage. The issue of overproduction raised the important point of changing the focus from producing 'more with less' to 'enough with less'.

As an animal scientist, I was particularly interested in the discussions around the impact of animal production and red meat consumption on the environment. Throughout the conference, livestock production was identified as a key contributor to global greenhouse gas emissions largely through ruminant enteric methane production. The potential to use feed additives to reduce emissions as presented in Dr Di Mayberry's paper 'Reducing GHG emissions from red meat in Australia and developing countries' highlighted the role innovations can play in navigating the environmental impacts of animal production. I am looking forward to seeing how this technology and other strategies progress in this area.

Other innovations, like the Biofilta Foodwall – a climate resilient food growing system - highlighted the role technology has in improving food security by utilising resources and working to the strengths and limitations of the environment. I also really enjoyed Sarah Barker's honest take on the future outlook on the environment from an economic lens and the impact that market and social factors have in driving change.

A key take home for me was the need for dynamic change and innovation to improve global food security – I am motivated by the research being conducted and am optimistic for the future. I would like to thank the ACT committee for sponsoring my attendance and the event coordinators for their time and effort in organising the conference and scholar days.

**Amy Mackenzie**, *CSIRO Ag & Food*  
**Mentor:** Jay Anderson, *University of Queensland*

If I didn't know a career in agricultural science was right for me until the Crawford Fund 2019 Conference, I certainly do now. Attending this conference, titled "Weathering the 'Perfect Storm': Addressing the agriculture, energy, water, climate change nexus", reinvigorated my drive for fighting the current and impending climate crisis in any way I can. It really emphasised the need for sustainable agriculture, and the ways in which agricultural research can help overcome the challenges of a planet in crisis.

I particularly enjoyed the scholar activities, which highlighted career paths that I was previously unaware of and opened my eyes to the possibilities of volunteering in developing countries. I was fortunate enough to have a young mentor who recently volunteered in Laos, and her advice (both career-wise and conference-wise) was one of the best parts of attending the conference. Since this was the first conference I have ever attended, I think the mentoring program was incredibly beneficial for me.



The ‘speed meeting’ activity where we got to meet other scholars and their mentors was also a highlight of the scholar activities. This exercise helped me talk to senior researchers and other scholars, which gave me valuable insights into the other areas of agricultural research.

The conference itself was eye opening, especially the talks from the two keynote speakers, Professor Sir Charles Godfray and Sarah Barker. Sir Charles Godfray gave a talk titled “Can we feed the world without wrecking the environment?”, in which he highlighted the contributions of each agricultural sector to several key issues, including greenhouse gas emissions and water usage. From this it was clear that animal products make the largest contribution to greenhouse gas emissions. He posited the question “what if we all ate healthily?” and showed that if everyone ate according to the health guidelines developed by the World Health Organisation, which is primarily a flexitarian diet, we could reduce the increase in food-system associated greenhouse gas emissions from 51% to 7% by 2050. This figure really resonated with me and demonstrated that the future needs to become more plant-based. Sarah Barker also mentioned this issue of supply and demand, and that if demand does not change (ie. If consumers do not change their diet) then supply is unlikely to change.

While it was clear that the planet is facing massive challenges (hunger, malnourishment, obesity, land and water loss), the overall tone of the conference was ultimately an optimistic one. I learned what world-renowned scientists are doing in their own fields to combat the issues faced with a changing climate, and that there are ways in which researchers can lead the way into a more promising future. Importantly, I realised that even if policy-makers do not take the necessary steps to protect our future, industry still can.

**Jana Phan, Australian Academy of Science**

**Mentor:** Deirdre Lemerle, Crawford Fund NSW Committee

I wasn’t sure if I was eligible to apply, I didn’t know if I was the right fit... but heck, what did I have to lose?!

Thank you to the Crawford Fund’s ACT committee, you’ve provided me an experience that will, no doubt, shape my career in research for agriculture in international development (RAID).

The mentor-mentee partnership is arguably the central pillar of the Crawford Fund’s Scholar Program. I arrived on day one not knowing anyone and left the conference with a more elaborate network. I met my mentor, Prof Dierdre Lemerle, and we quickly got chatting about my future ambitions of working in SE Asia. Dierdre’s experience working in Laos inspired me to make my career ambitions come true. Her extensive network soon became mine too as we ran around meeting people. The mentor’s role in connecting junior professionals, like me, with their extensive and experienced network was invaluable.

Chatting to the other scholars over delicious apple muffins and tasty coffee, I felt at home: we all have ambitions to work in the RAID sector, we all come from diverse disciplines and backgrounds, and we all had no idea what we were doing about this thing people call a “career”. This was refreshing, I wasn’t alone.

The scholar program provided me with opportunities to chat to researchers who have taken diverse career paths. It was surprising to hear from industry representatives and learn what the “big multi-nationals” are doing for RAID, this was a welcome challenge to my preconceived ideas. The conference itself was incredibly intellectually stimulating. An intense day loaded with numerous examples of how the community are coming together to address the agriculture, energy, water, and climate change nexus. I was delighted to hear the messages presented from the two keynote speakers: Professor Sir Charles Godfray and Sarah Barker. They introduced ideas that I had not yet explored in the RAID context – how can we feed the world sustainability through an economic modelling and finance and liability lens, respectively. These talks were very impressive and inspiring. They finished their talks with a clear call for change.

To those students and junior professionals interested in pursuing a career in RAID and considering whether to apply, I encourage you to do so. The atmosphere created during the Crawford Fund’s Scholar Program and at the conference is stimulating, nurturing, and motivational. The opportunities to learn from, and chat to, people working in all the different facets of RAID are truly eye-opening. It was an enthralling experience for me.

The Crawford Fund have played a significant role in shaping my career and ambitions. In 2016 the South Australian committee supported my internship at the United Nations Food and Agriculture Organisation, Rome, Italy. During this time, I became very interested in the development and analysis of evidence-based policy. After completing my PhD, I pursued a policy analyst position at the Australian Academy of Science and have been working in science-policy, evidence-based policy development, for a year now. Participation in the 2019 Crawford Fund Scholar Program has made it clear to me that evidence-based policy is imperative for sustainable development, for RAID. My newly extended network confirmed to me that my ambitions and interests in working on science-policy for RAID are needed and I am determined to make an impact.



## **PLANT HEALTH AUSTRALIA SPONSORED SCHOLAR**

**Joanne Lee**

**Mentor:** Helen Scott-Orr, *Crawford Fund NSW Committee*

We have all heard about climate change but take a moment to consider the agriculture, energy, water, climate change nexus. Not just one calamity, but multiple ones, building upon each other. The Crawford Fund's annual conference this year covered speakers and case studies dedicated to discussing this environmental interconnection. In 2009 Sir John Beddington coined the term "the Perfect Storm" and predicted that by 2030, food shortages, scarce water and insufficient energy resources would threaten to unleash public unrest, cross-border conflicts and mass migration as people fled from the worst-affected regions. The intent behind the 2019 conference was to reflect on this dire prediction.

The conference speakers, while describing the scientific issues we face, presented their facts in a positive and uplifting way. The unified story was that human endurance and ingenuity should prevail in the face of the perfect storm. And more importantly, the perfect storm is not coming, it's already here! Until politically we accept this, nationally we can't move forward. However, there is plenty already happening at a community level and with the developing countries Australia has partnered with.

The Sir John Crawford Memorial Address was presented by Professor Ross Garnaut who worked with Sir John in development economics. He provided an insightful talk making many references to his report presented to the Australian Prime Minister and Australian Premiers in 2008, *The Garnaut Climate Change Review* (Cambridge University Press 2008). He reflected that good policy has been poisoned by political discourse over the last nine years. That said progress in the electricity sector, mainly due to the renewable energy target, has provided some positivity in light of incoherent policy. Australia has exceptional resources for lower carbon energy and Professor Garnaut was hopeful Australia could emerge as the world's energy superpower. The memorial address was followed by the networking dinner.

The Annual Parliamentary Conference was held the following day. Personally, the highlight of the day was the presentation by Sarah Barker, MinterEllison. As a corporate lawyer she had a fresh perspective on why private companies, who are driven by money, already care about climate. Australian listed companies are following overseas models when it comes to considering climate change related risks in their governance, risk management and financial reporting. In short, they don't want to be fined by directors and auditors for not having a contemporary understanding of climate-related financial risks in line with the Recommendations of the Taskforce for Climate-related Financial Disclosures from 2020.

In addition to the conference I was lucky enough to be awarded a Crawford Fund Scholarship which enabled me to attend an additional two half days of activities either side of the Crawford conference. With the help of an experienced mentor I was able to mingle with like-minded individuals across a broad range of fields such as research, veterinary science, policy, science communication and engineering who all shared a passion for international agricultural development. In short, the discussions and networking broadened my view on agriculture opportunities and global climate security. Lastly, I am thankful to the Crawford Fund and Plant Health Australia for providing me with the opportunity to attend the 2019 Crawford Fund Conference.

