



THE UNIVERSITY OF
SYDNEY

Dr Michael Spence AC
Vice-Chancellor and Principal

30 April 2020

Senator the Hon David Fawcett
Chair
Joint Standing Committee on Foreign Affairs, Defence and Trade
Australian Parliament

Submission made via the Parliament of Australia website

Dear Senator Fawcett,

Inquiry into strengthening Australia's relationships with countries in the Pacific region

Thank you for the opportunity to make a submission to the Committee's inquiry into strengthening Australia's relationships with countries in the Pacific region.

The University of Sydney is one of Australia's leading and most internationally engaged universities. Recognised globally for its research and educational excellence, the University pursues its charitable activities for the benefit of Australia and the wider world. Consistent with this mission, our academics have provided education, training, research, knowledge-generating and relationship-building opportunities to citizens and organisations from the Pacific region for many decades. These arrangements commenced formally in the 1970s with Colombo Plan scholars and have continued more recently through the Australia Awards program.

Within the original Colombo Plan's mission to raise the living standards of people in the region, the University initially concentrated on educating promising individuals to enable them to develop their countries' resources effectively and to build, deliver and sustain services in areas such as health, education and public administration. More recently, we have utilised funding from the Australia Awards program to expand the skills and networks of emerging Pacific Islander leaders who will be responsible for managing their countries' technological, economic, social and political development.

While our graduate courses in public health and education have made significant impacts, our more recent partnership programs in agriculture, physics and veterinary science have addressed the region's growing need for critical attention to climate change, sustainable economic development and environmental management. Our School of Physics, for example, with its research theme of Integrated Sustainability Analysis, has provided training in managing sustainability issues, drawing on expertise from a variety of disciplines across the University.

Since the New Colombo Plan (NCP) was launched in December 2013, we have secured funding under the Mobility Program and our students have won NCP scholarships as fellows and scholars. While we acknowledge the tremendous opportunities the NCP provides our students and staff, we also strongly endorse the Australian Government's focus on providing future leaders from the Pacific region, with affordable access to high-quality tertiary education in Australia through the Australia Awards program.

We note that the Australian Government's development policy recognises that tertiary education is an important component of any investment in development. In Semester 1 of this year, we have Australia Awards scholarship-sponsored students from Fiji, Kiribati, Papua New Guinea, Samoa, the Solomon Islands, Tonga and Vanuatu enrolled in courses across most of our faculties and schools.

In our submission (**Attachment A**), we highlight some current and recent projects in the Pacific region, led by Associate Professor Corinne Caillaud in our School of Health Sciences and Professor Manfred Lenzen in our School of Physics. They address the second and third terms of reference for the Committee's inquiry.

You will also find details about the work of Professor Kristine Macartney from our School of Medicine and Associate Professor Navneet Dhand from our School of Veterinary Sciences in the Asia-Pacific region in our submission to DFAT's new international development policy in the Indo-Pacific (**Attachment B**). Both of these academics have featured recently in pandemic news coverage for their work, respectively, on the spread of COVID-19 in classrooms, and the training of a regional veterinary workforce to prevent a future pandemic arising from diseases that jump from animals to humans.

With specific reference to *Strengthening climate and disaster resilience in the Pacific* in the **Pacific Step-up policy**, Associate Professor Adam Kamradt-Scott's recent research has implications for Australia's capacity to respond to disease outbreaks such as COVID-19. Associate Professor Kamradt-Scott is from our [Centre for International Security Studies](#) and specialises in global health security and international relations. His research and teaching explores how governments and multilateral organisations cooperate and interact when adverse health events such as pandemics occur, as well as how they respond to emerging health and security challenges.

Other academics from within the School of Public Health with Pacific region projects currently funded under the Australia Awards program include Professor Joel Negin (Fiji), Dr Anne-Marie Thow (Pacific coasts) and Professor Merrilyn Walton (Bougainville).

Please note that due to the COVID-19 crisis we have experienced some difficulties consulting with our academic community about this inquiry. The information provided above and in our attached submissions therefore represents only a fraction of the University's relevant expertise and current activities underway that seek to build and strengthen people-to-people links between Australia and its neighbours in the Pacific.

Nevertheless, we trust this input is helpful. We would be delighted to make some of our experts available to the Joint Standing Committee to share their insights about the Pacific and the policy measures the Australian Government could take to further strengthen relations across the region. If the Committee considers that assistance useful and requires anything further from the University of Sydney, please do not hesitate to contact Mr Tim Payne, Director, Higher Education Policy and Projects in my office in the first instance (tim.payne@sydney.edu.au, 02 9351 4750).

Yours sincerely,

(signature removed)

Michael Spence

Attachments

- A** Submissions drawing on advice from academics in our School of Physics and the School of Health Sciences
- B** The University of Sydney submission to DFAT's new international development policy, February 2020

ToR #2 - Exploring prospects to strengthen and broaden Australian engagement in the Pacific Step-up, through non-government and community-based linkages, and leveraging interest groups such as the Pacific diaspora

Associate Professor Corinne Caillaud from the School of Health Sciences is currently involved in three Pacific region projects addressing food production, nutrition, lifestyle and health in the context of climate change and socio-economic transition.

Associate Professor Caillaud is the Australian lead on the European 'Horizon 2020' funded *Family Farming, Lifestyle and Health in the Pacific* ('FALAH') project, which consists of a network of international research teams operating in the Pacific region who have a common interest in food security and its direct or indirect links with the environment, nutrition, lifestyle and health. The aim of the project is to "promote and revitalise family farming in order to improve the health of populations in the Pacific and ensure food security in the context of rapid social and economic transformations and climate change, the effects of which are particularly harmful to the populations of the Pacific Islands".

Associate Professor Caillaud is also the lead on a multi-disciplinary University project node on *Pacific's Children and adolescents' health and wellness*. This project targets the high prevalence of obesity in the Pacific which threatens the development, health and wellness of approximately 1.5 million young people. This project proposes a new approach to the problem taking into account young people's lifestyle, health, knowledge, views and attitudes while also considering family and community contexts and the systems within which they are embedded.

This project differs from others as it aims to make a unique ground-breaking contribution through:

- (1) the depth and breadth of the disciplinary expertise,
- (2) the implementation of a systems approach to the problem in the Pacific,
- (3) the design of a digital framework for the assessment of key variables, and
- (4) engagement and co-design with adolescents.

Associate Professor Caillaud is also the Australian lead on an IMMANA (UK/US) research grant - *Digital and scalable assessment of important aspects of Pacific family farming, lifestyle and health* - that has been shortlisted for the final round of assessment. The proposed project aims to develop a digital platform supporting the collection and analysis of information on family farming, nutrition, physical activity and health in New Caledonia, Fiji, Vanuatu and the Solomon Islands.

These countries are currently under the threat of rapidly changing environments essentially driven by climate change and socio-economic transition, that are transforming local food systems, consumption practices and traditional livelihoods. As a consequence, conditions for production and access to healthy food are changing, affecting in complex ways diet and physical activity, two well recognised factors of healthy lives. The great potential of the digital platform is that it will be a powerful tool to empower communities to make informed decisions, to help governments identify opportunities for actions and to inform future policies with regards to family farming practices and nutrition with the aim to support people to live healthy lives.

Associate Professor Caillaud has nominated three main areas where Australia could strengthen relationships with the Pacific region, noting that education and sport are both measures highlighted in *People connections in the Pacific* in the Australian Government's **Pacific Step-up policy**.

One key principle in seeking to strengthen and broaden Australian engagement in the Pacific Step-up is engagement with communities in the region including the diaspora living in Australia to provide impactful and sustainable programs that will have both a distinct impact on communities and provide opportunities for Australia. Here we could consider in particular, regional and remote Australia. Further, in the context of climate change and pandemics, consideration needs to encompass how any programs which are developed and implemented can also serve an assessment of needs in emergency situations.

1. Health and health care (including digital health)

The University can contribute through the major health areas of **antibiotic resistance** and **non-communicable diseases**.

Antibiotic resistance is a well-recognised issue across the region with priorities for:

- prevention and management of infections in communities
- creation of a surveillance network about prescription of antibiotics and resistance
- collaboration with communities and traditional healers.

Non-communicable diseases, in particular obesity, is also a pressing issue in the Pacific, as this makes the affected populations even more vulnerable to pandemics.

In both these areas, the University is well-placed to contribute through education and training through micro-credentialing that will provide opportunities for interested people in communities to gain expertise and credentials. This will help build local capacity and potentially lead some individuals to higher education and research. The University would also be well-placed to establish research networks in the region.

This model/program would need financial support to be sustainable and be provided ongoing support and training through support networks.

The model/programs would also need to consider local language/s because communication is a crucial component of the health professional / patient relationship, as well as how to better connect traditional and Western medicine.

Health has historically and continues to provide opportunities in building research capacity. Research collaborations will be essential to develop ways of collecting and analysing health data to inform policies and community leaders.

2. Education

One issue in some remote areas is school attendance by children. There appears to be a need for co-design of primary school level educational solutions that enable all children to attend school while continuing to contribute to the essential activities of their families and communities. These activities are often linked to family farming responsibilities. Schools also offers a unique place to build health and physical literacy through specific educational programs.

Support networks could be developed with educators facing similar challenges across the region.

3. Sport

There are many opportunities to develop athletes in the region. While there are already many talented rugby players in the Pacific Islands, there is currently very limited support to help these players/athletes manage their lives once their career in sport comes to an end. This is unfortunate because they can have a positive influence on youth as role models and through contributing their expertise to the communities.

Programs could be developed to help them build a career as educators and assist in promoting and increasing participation in physical activity, exercise and sport by children and adolescents in communities.

Training and support could be achieved through micro-credentials, coaching and potentially supporting the creation of small businesses in relation to sport.

The use of technology to support many of the above initiatives is crucial, therefore, there would be a need for inter-government assistance in helping to develop internet coverage and infrastructure in remote areas to facilitate communication, education and training.

ToR #3 - Measures to ensure Step-up initiatives reflect the priority needs of the governments and people of Pacific island countries

The School of Physics at the University of Sydney is the leading physics department in the country, with outstanding staff and students undertaking world-leading teaching and [research](#).

One of the research themes in the School is [Integrated Sustainability Analysis](#), where experts from across the University tackle sustainability issues. This research is led by Professor Manfred Lenzen (Chair of Sustainability Research) and aims to develop applications for environmental and broader sustainability issues, bringing together expertise in environmental sciences, economics, technology and social science.

Until recently, the ISA team had been conducting professional training programs for community leaders from Pacific Islands within the [Sustainable Islands Program](#). This program had been funded through DFAT's Australia Awards program, until funding was put on hold, and then discontinued.

This was a shame as the program was very popular with a substantial waiting list of interested participants; had received a lot of positive feedback and from which emerged a number of research publications. These studies have included:

1. Sustainable development opportunities in small island nations

For small island developing states, such as the Cook Islands, which face a myriad of challenges due to their size and physical isolation, we examined how sustainable business approaches can lead to beneficial economic, social and environmental outcomes. This study found that sustainable scenarios for local businesses would have an overall positive impact on the Cook Islands, leading to an increase in local wages and domestic stimulus, a decrease in imports and in relation to transport, a significant decrease in greenhouse gas emissions.

2. Sustainable island businesses: a case study of Norfolk Island

Conventional measures aimed at tackling the energy and waste issues of island communities focus on technological solutions, such as the introduction of renewable energy sources. There exists a history of technology implementations on small islands that have failed because of a lack of continuing skills and financial resources needed for ongoing operation and maintenance. Despite these experiences, what has received little attention so far are measures aimed at achieving island-friendly solutions by reducing their material metabolism, for example, by recycling and re-use. The two case studies presented in this work show that conservation, efficiency and reductions of the overall material metabolism of economic activity can be as effective as purely technologically driven changes. Both case studies demonstrated exceptional sustainability performance in terms of material flow and greenhouse gas emissions.

3. Cultural and socio-economic determinants of energy consumption on small remote islands

In this cross-country analysis of four small and remote islands, we integrated multiple dimensions of socio-economic demographic data, such as population, land area, remoteness, tourist arrivals and earnings, export earnings, financial support, average incomes, fuel and electricity prices, penetration of renewable energy sources, and motor vehicle usage; we compared these characteristics with per capita use of energy carriers such as electricity, petrol and diesel. From these characteristics, we identified key determinants of energy consumption in the islands. Whereas we focused on energy, our analysis can also apply to emissions of carbon and energy-related pollutants. Our results indicate that cultural and social contexts are at least as relevant for policymaking as economic and technological aspects. We suggest that in small island developing States there is scope for policymaking to at the same time: reduce economic vulnerability due to dependence on imported fossil fuels; reduce environmental impact; and progress sustainable development. Such progress can be implemented through peer-to-peer learning programs facilitated by targeted international cooperation and partnerships.

These publications provide the evidence that these types of practical and policy-making measures should be included in Pacific Step-up initiatives as they reflect the Pacific governments and peoples' concern about energy management, climate change and sustainable economies.



Attachment B

Duncan Ivison

Deputy Vice-Chancellor (Research)

19 February 2020

Commonwealth Department of Foreign Affairs and Trade
Barton ACT 2600

By email: development.submissions@dfat.gov.au

Call for submissions: new international development policy

Thank you for the opportunity to make a submission to Australia's new international development policy, which aims to drive the Government's international development efforts in support of security, stability, prosperity and resilience in the Indo-Pacific.

The University of Sydney has a proud and long history (more than 100 years) of contributing to social and economic development in Australia, the Indo-Pacific region and beyond, through our agriculture, veterinary science, health, education, law and business disciplines, as well as through our work in many other fields. Our longstanding capacity building activities have improved community wellbeing and environmental sustainability in many developing countries with significant societal and economic impact.

We note that the challenges ahead for biosecurity, food security, climate change, disaster response and management, and political stability in the Indo-Pacific are significant. The University unreservedly endorses the attainment of education and generation of knowledge, and consequently, the value of systematic **investment in education** in realising long-term benefits for other countries. We have noted a fall in scholarships and international student mobility from the region in recent years, particularly in health disciplines. This has been detrimental in terms of our ability to build capacity and strong and lasting regional relationships and partnerships.

We therefore strongly encourage the Government to increase its support for Australia Awards scholarships in health and education for emerging leaders from Indo-Pacific countries. The University has historically educated many coursework and research students in public health (and other disciplines) on Colombo Plan and AusAID scholarships. The reciprocal benefits of these inclusion programs have been immeasurable, for example, within our Master of Global Health program, domestic students have learnt from the international students – often high-achieving individuals who work in the health systems in their local communities – as the exposure to their insight and experiences has greatly supplemented their theoretical grounding. Those international students have returned to their communities, usually into senior leadership positions due to their Australian postgraduate qualifications. They are then able to drive meaningful change through the development of robust health policies and programs. These outcomes all have a long-lasting development benefit in the Indo-Pacific.

In addition to the work of our [School of Public Health](#) teaching health education and research to Indo-Pacific nationals, we have many other schools, centres and institutes that are pursuing strategies to strengthen our disciplinary excellence and expertise, and to encourage interdisciplinary approaches to development projects in the Indo-Pacific region.



These include the:

- [Marie Bashir Institute for Infectious Diseases and Biosecurity](#)
- [Sydney School of Geosciences](#)
- [Sydney School of Veterinary Science](#)
- [Sydney Institute of Agriculture](#)
- [Sydney Southeast Asia Centre \(SSEAC\)](#)

Biosecurity and population health

The Marie Bashir Institute for Infectious Diseases and Biosecurity is leading cross-disciplinary research in emerging and re-emerging infectious diseases across Australia and the Asia-Pacific. Due to rising rates of antimicrobial resistance, investigators from chemistry, biological sciences, medicine, geography, pharmacology, agriculture and veterinary science are helping to ensure the availability of effective antimicrobial therapies into the future. One current project highly relevant to the Indo-Pacific is to identify new tuberculosis drugs from natural products.

Another of our academics - Professor Kristine Macartney from the Sydney Medical School - is an immunisation expert and as part of the Australian Regional Immunisation Alliance (ARIA), will be conducting regional consultation and analysis in low-coverage countries (Papua New Guinea, Timor-Leste, the Solomon Islands and other Pacific Island countries) to consolidate knowledge on immunisation coverage gaps and underlying factors and strengthening activities. ARIA experts will then collaboratively support implementation of selected tailored activities to improve immunisation coverage in target areas, ensuring integration with other infectious disease surveillance programs and broader health system strengthening, leveraging from planned new vaccine introduction-related activities.

Our public health academics and paediatric clinicians also support increased focus and funding for health research and testing interventions. This would enable health professionals to test models that have the potential to increase implementation and dissemination of evidence-based interventions in health care systems in Australia and our region. Our experts including Professor Louise Baur, Professor Mu Li, Professor Ben Marais and Professor Joel Negin have all either led health education and inclusion programs, or research on tuberculosis, perinatal health and nutrition, with partners in the Asia-Pacific. They note that research funding could be directed towards the rising prevalence of noncommunicable diseases in the Asia-Pacific region.

Their work complements that of colleagues like Professor Angus Dawson, Professor of Bioethics and Director of [Sydney Health Ethics](#), who has published widely on the ethics of public health. We cannot emphasise enough how research and action on health, public health, and whole-of-health systems must be central to the Government's chosen priorities of 'security, stability, prosperity and resilience in the Indo-Pacific'. While investment in education has long term benefits to countries and relationship building, nothing else is possible unless there is good population health.

Finally, on the current global health sector emergency response to COVID-19, other colleagues have recently made a breakthrough with government researchers by [obtaining a genetic sequence of the coronavirus](#) and [growing live samples for vaccine experimentation](#).



Disaster Management

The Sydney School of Geosciences is a dynamic group of disciplines made up of geology, geography, geophysics, marine and environmental science. The school tackles key issues facing society including climate change, resource management and sustainability. Academics involved in [Asia-Pacific Natural Hazards and Disaster Risk Research](#) are interested in a wide range of natural and technological hazards and their work spans the interface between the human and earth environments/sciences - exploring the characteristics of natural hazards (distributions, frequencies & magnitudes) and their impacts on people, communities and human systems.

The goals of their work are to:

1. enhance community resilience
2. reduce losses from natural disasters
3. develop appropriate disaster risk reduction strategies.

Professor Dale Dominey-Howes is an expert in Hazard and Disaster Risk Sciences and has previously won funding to aid vulnerable communities in Southeast Asia to move from a reactive response to inevitable disasters to pre-planned management strategies. More recently, Professor Dominey-Howes has been sought out for commentary on the catastrophic bushfires on Australia's east coast.

In light of the current health security issues, we would also like to highlight Professor Adam Kamradt-Scott's recent research which examines civil-military cooperation in health and humanitarian crises, and has implications for Australia's capacity to respond to disease outbreaks such as COVID-19. Professor Kamradt-Scott is from the [Centre for International Security Studies](#), and specialises in global health security and international relations. His research and teaching explores how governments and multilateral organisations cooperate and interact when adverse health events such as disease outbreaks, epidemics and pandemics occur, as well as how they respond to emerging health and security challenges.

Animal health - infectious diseases and the veterinary workforce

Our School of Veterinary Science is recognised internationally as a leading provider of veterinary science education and a key contributor to world's best practice in the care and welfare of animals and the protection of human health.

By way of example, Professor Navneet Dhand is involved in a multi-university project to strengthen the veterinary workforce in Asia-Pacific for infectious disease detection and response. This project will build capacity of the animal health workforce in Asia-Pacific countries to detect and respond to disease outbreaks and control diseases impacting health security. The component led by Professor Dhand and this University, will (a) develop quality veterinary epidemiology eLearning training modules and case studies; (b) use these modules to train veterinarians in Laos, Cambodia, Indonesia, Vietnam, Myanmar, Philippines, PNG and Timor-Leste to increase the capacity of the animal health workforce to respond to disease threats; (c) organise workshops to improve the availability of skilled local facilitators and mentors; and (d) strengthen networks between existing field epidemiology training programs and institutions within and between countries.

Food security

In the Indo-Pacific, competing pressures on soil, water, nutrients, and space for agricultural production are only expected to increase as a result of population growth, economic development, and climate and environmental change. Achieving an optimal and sustainable level of food safety and animal welfare will not only require the application of new knowledge



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and technology, but innovation in partnership models and more effective collaboration between agribusiness, governments and universities. Over-and-under-nutrition are endemic problems not only in our immediate region but across the globe, and agribusiness can help solve some of these problems.

In recognition of these trends and the scale of the challenges, the Sydney Institute of Agriculture is pursuing strategies to strengthen our disciplinary excellence, sustain and build expertise, and encourage interdisciplinary approaches.

For example, our Sydney Southeast Asia Centre (SSEAC) oversees and coordinates our substantial expertise relevant to Southeast Asia, including the Indo-Pacific countries of Indonesia and Timor-Leste, and coordinates our extensive engagement with these countries. A list of current research being developed by SSEAC can be viewed at <https://sydney.edu.au/sydney-southeast-asia-centre/our-research.html>.

Several of our staff are involved in projects that contribute to Australia's overall development presence in the Indo-Pacific. In Indonesia and Timor-Leste, many of our relevant projects are concentrated in SSEAC's economic and social development cluster. The University also has a number of current international development projects across mainland Southeast Asia, including in Myanmar, Laos, Cambodia and Vietnam.

Given that Australia has both a security and humanitarian interest in ensuring political, social and economic stability in the region, projects aimed at building skills, economic independence, and raising education standards will no doubt be in our national interest. Moreover, partnerships that deliver improved agricultural capacity and processes, and strengthen nutrition security, will contribute to economic development in the region, ensuring that sustainability is a core consideration in future economic growth.

We would like to see the new international development policy include the above target areas, and have accordingly highlighted some areas of expertise and relevant projects we currently have underway. If it would assist the Department, we would be delighted to make some of our experts available to discuss the key factors for success and failure of development projects, and the key actions the Australian Government could take to further improve outcomes. If the Department requires anything further from the University of Sydney, please do not hesitate to contact Mr Tim Payne, Director, Higher Education Policy and Projects in my office in the first instance (tim.payne@sydney.edu.au, 02 9351 4750).

Yours sincerely,

(signature removed)

Professor Duncan Ivison
Deputy Vice-Chancellor, Research