Sydney Vietnam Engagement



World-class, multi-disciplinary collaborations in research, education and capacity building



We recognise and pay respect to the Elders and communities – past, present, and emerging – of the lands that The University of Sydney's campuses stand. For thousands of years, they have shared and exchanged knowledge across innumerable generations for the benefit of all.

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"With Australia being a leading partner, as countries are facing challenges in implementing the UN sustainable development goals in 2030, it is even more necessary for Vietnam and Australia to boost bilateral co-operations ... to realise our common goals and aspirations."

HE Mr Bùi Thanh So'n,

Vietnam Minister of Foreign Affairs Australia Vietnam Innovation Symposium, The University of Sydney, 2023

Message from the Vice-Chancellor & President

Vietnam and Australia have worked side by side to drive social and economic progress in our two nations, in pursuit of peace, stability, resilience and prosperity across the Asia Pacific, for half a century, since diplomatic relations were established.

As Vice-Chancellor and President, I am very proud of the role The University of Sydney has played in this historic regional relationship. For more than three decades, our researchers and educators have collaborated with their peers in Vietnam on projects that have improved living and working conditions, created exciting new business opportunities, and delivered valuable guidance for policy making.

This engagement has led to breakthroughs in areas that include treatments for tuberculosis, diagnostic approaches for breast cancer, management of natural resources, and innovations in agriculture and aquaculture. It has helped strengthen institutional capacity in Vietnam with new courses and qualifications, professional development in emerging disciplines, and state-of-the-art research facilities such as the One Health pathology lab at Hue University. It continues to drive student exchanges that allow hundreds of young people from both Vietnam and Australia to benefit from opportunities to live and study abroad.

In 2023, the University established the Sydney Vietnam Institute as a focal point for this deep and expanding engagement. The Institute already has connections with 44 partners across Vietnam, and has been awarded more than \$30 million in funding.

On behalf of the University, I offer heartfelt thanks to the organisations and individuals that have been part of this work over so many years, including national and regional government agencies in Vietnam and Australia, highly valued peer researchers across both countries, pioneering partners in business and trade, and deeply insightful local communities.

In these pages, we have assembled evidence of the enormous impact produced by our collaborations to date. This is the foundation on which we are building a powerful, bilateral co-operation for the future – one that will deliver benefits to our citizens and to our neighbours across the region, for many years to come.

Professor Mark Scott AO

The University of Sydney Vice-Chancellor & President



Message from the Editors

The University of Sydney was one of the first educational institutions in Australia to engage in research and education in Vietnam, and to host Vietnamese students and researchers. Collaborations commenced in the early 1990s, and have continued to grow over the years.

Over the past decade, thousands of Vietnamese students have successfully graduated from undergraduate, postgraduate, and higher degree research courses at The University of Sydney, with many returning home and making important contributions to the ongoing development of Vietnam. The University of Sydney has also run programs, both in Vietnam and in Sydney, to support the ongoing professional development of Vietnamese academics, practitioners, and national, regional and local government departments.

The research conducted over the years by researchers from The University of Sydney and their Vietnamese partners has had profound and transformational impact on the Vietnamese economy and society. Research-driven advances in agriculture, medicine and health, sciences, business and commerce, economics and policy, and the arts, are now directly benefiting the people of Vietnam.

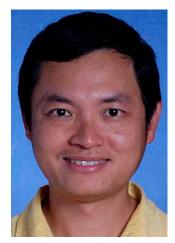
This booklet is testament to the diverse and impactful collaborations between The University of Sydney academics and colleagues in Vietnam over the past three decades—and yet it features only a selection of these partnerships. There are many more examples of excellent research and education conducted by colleagues, but the depth, breadth and volume of this scholarly engagement is too large to be contained in a publication of this format.

The University of Sydney's commitment to maintaining and expanding our research work with and for Vietnam is stronger than ever. The establishment of the Sydney Vietnam Institute represents a new chapter in this long-standing and highly productive bilateral engagement and will offer unprecedented opportunities for the mutual benefit of Vietnam and Australia.

We are delighted to share these stories with you, and look forward to ever deeper ties between Sydney and Vietnam through the Sydney Vietnam Institute.

Professor Tiho Ancev and **Professor Daniel Tan** *Editors*





Message from the Sydney Southeast Asia Centre

Introduction

A spirit of collaboration and impact has underpinned The University of Sydney's growing engagement with Vietnam over more than three decades. University academics have formed close partnerships across Vietnam in a wide range of areas – spanning business and innovation, healthcare, science, agriculture, the environment, technology, social sciences, the arts and policy-making.

This new knowledge helps to drive innovation and make a difference to the lives of people across Vietnam and the region. Our approach is grounded in mutual respect, a desire for deep cross-cultural understanding and a shared commitment to serve those in need in local communities.

The establishment of the Sydney Vietnam Institute will take these important academic collaborations to a new level. Having a research institute on the ground, in Vietnam's major cities, will enable greater depth and breadth of engagement. It will also allow us to support the next generation of thought leaders from both countries.

In this booklet, you will witness the power of research and educational partnerships to address challenges critical to Vietnam and the region. You will also see the incredible scope and diversity of the collaborations between our two countries. Our partnerships span from jazz and the creative arts to social entrepreneurship and child health. They also bring together expertise from multiple perspectives to tackle complex problems. Such multi-disciplinary approaches are critical to addressing many of the challenges facing Southeast Asia in the twenty-first century. I highly recommend these insightful case studies and eagerly anticipate the expanding influence of our partnerships in Vietnam in the coming years.

Professor Greg Fox

Director (interim), Sydney Southeast Asia Centre, The University of Sydney



Engagement & Collaboration

The strengths of our long-standing, ground-breaking partnership

The University of Sydney is a world-class institution with comprehensive capability for research, education and capacity building. Over the past three decades, we have drawn on our own expertise and resources, and those of a wide range of academic, government, industry and community partners in Vietnam, for the shared purpose of finding solutions to the challenges we face together.

Four distinctive strengths underpin our success to date, and our prospects for a profoundly valuable and productive future.

Long-term relationships

For more than 30 years, The University of Sydney academics have been collaborating on educational and research projects with colleagues in Vietnam. Over that time, important and enduring relationships have been built with individuals, institutions and government agencies in Vietnam.

Geographical reach

The University's engagement in Vietnam extends well beyond the metropolitan centres of Ho Chi Minh City and Hanoi to reach more than 20 provinces in the north, south, and central regions of the country. In agriculture and health, in particular, we have proven capacity to conduct research in rural and remote areas.

National agenda, regional benefit

The projects we undertake respond to the needs and priorities identified by our community, academic and government partners in Vietnam. The lessons learned deepen the connections between our two nations, and generate insights and innovations that can have applications right across Southeast Asia and the Pacific.

Disciplinary depth and breadth

The best and brightest from across the faculties of Medicine and Health, Science, Arts and Social Sciences, Business, Law, Engineering and Computer Science, Architecture, and Design and Planning contribute to the University's engagement in Vietnam. This will expand further with the Sydney Vietnam Institute which will support research and educational collaboration from across the University. This broad disciplinary base provides us with a strong and robust foundation from which to tackle the complex challenges of our time.



Above: NSW Minister the Hon. Anoulack Chanthivong speaking at Australia Vietnam Innovation Symposium, 2023. **Right:** Prof Greg Fox welcomes the Vietnamese Ambassador, H.E Nguyen Tat Thanh to open the Vietnam Symposium, 2022. **Below:** The Consul General of Vietnam in Sydney, H.E. Nguyen Dang Thang at the Australia Vietnam Innovation Symposium, 2023.







Strategic focus

Expanding knowledge, driving innovation, and delivering better outcomes in key areas

The University of Sydney is committed to working alongside Vietnamese researchers, practitioners, decision-makers and communities to address problems critical to the ongoing growth and development of Vietnam and the surrounding Mekong region.

In the early days of engagement, projects in the agricultural sciences and economics were the focus, reflecting the Vietnamese economy's high reliance on agriculture and primary industries at that time. Since then, the engagement has grown larger and more diverse, and the outcomes of our joint learnings have had positive impacts on economic growth, environmental sustainability, and community health and wellbeing in both rural and metropolitan Vietnam.

We have also helped develop and promote the careers of individual Vietnamese researchers; raised the profile of Vietnam's academic institutions internationally; and become a critical part of the nation's research and policy development infrastructure. The depth and breadth of our activities are focussed in the six areas described below. Look for these icons on the following pages as a guide to the key objectives of each of the case studies.



Innovation

Responding to complex challenges with viable and visionary solutions



Engagement

Creating relationships between people, communities, businesses and governments



Partnership

Forging alliances to pursue better outcomes for Vietnam, Australia and the region

Learning

Fostering communities of learning that thrive across borders

Capacity building

Sharing knowledge, skills, and experiences for a stronger, more resilient region

Impact



Improving lives, enriching communities and building a better future

Section 01

Medicine & Health

Powerful collaborations easing the burden of infectious and chronic diseases



Working in close collaboration with government and academic partners in Vietnam, and responding to health priorities identified by the Vietnamese government, The University of Sydney is having profound impacts on the capacity of the Vietnamese health system, and on health outcomes for individual patients.

While we maintain our focus on infectious diseases and their contribution to suffering and inequality in Vietnam and across the region, we are increasingly driven to address the emerging challenge of chronic and non-communicable diseases. Recent successes include the trial of interventions aimed at reducing the burden of lung diseases; and the roll-out of an online training program to improve breast cancer detection.

Changing global policy for the treatment of drug-resistant tuberculosis



Tuberculosis is the leading infectious cause of death globally, and in Vietnam. Drug-resistant tuberculosis is particularly challenging to treat, and requires months of toxic treatment. Vietnam is ranked among the high-burden countries for drug-resistant TB. The VQUIN study is a clinical trial that evaluated the effectiveness of an antibiotic to prevent multi-drug resistant tuberculosis (MDR-TB).

The VQUIN Trial recruited household members of patients with drug-resistant TB, and provided them with six months of antibiotic therapy. The active drug was compared with an identical placebo tablet. The study was conducted in ten provinces between 2016 and 2022, enrolling 2,042 patients.

The VQUIN study team also collaborated closely with researchers at the Desmond Tutu Centre in South Africa, which conducted a similar trial focused on children and adolescents. Together, the two trials showed that levofloxacin halved the incidence of TB with infection in people of all ages. It also reduced costs to the health system.

The study has already had significant policy impacts. In January 2024, the Vietnam National Tuberculosis Program introduced new guidelines recommending this newly proven treatment. The World Health Organization has also issued a rapid communication in response to the trial, which recommends this preventive antibiotic for people around the world.

The study was conducted in collaboration with the Vietnam National Tuberculosis Program, and its network of hospitals across the country, and demonstrated the powerful impact that research can have on clinical practice. The new policies will save the lives of people at risk for drug-resistant tuberculosis around the world.



"The VQUIN Trial has filled an important evidence gap in global guidelines, and ensures that people at high risk of drug-resistant TB can be protected against this devastating infectious disease."

Professor Nguyễn Việt Nhung,

Dean, Faculty of Medicine, University of Medicine and Pharmacy, Vietnam National University, Hanoi

Funders

National Health and Medical Research Council (NHMRC)

Partners

Vietnam National Tuberculosis Program Woolcock Institute of Medical Research District and Provincial Health Facilities in 10 provinces

Project leads

Professor Greg Fox Professor Nguyễn Việt Nhung Professor Nguyễn Thu Anh Professor Guy Marks

Case study Online training platform for better detection of breast cancer



Breast cancer is the most common cancer for Vietnamese women, with over 10,000 new cases diagnosed annually. Survival rates are lower than they could be, primarily because the disease often goes undetected until advanced stages, making effective treatment more difficult.

Poor detection rates were likewise identified in Australia some years ago leading to the development of the BreastScreen Reader Assessment Strategy (BREAST), an evidence-based training program designed to improve the diagnostic efficacy of radiologists and breast imaging specialists. A 2019 evaluation of the BREAST program suggested that it improved cancer detection rates in Australia by 30 percent between 2010 and 2019.

BREAST workshops were held with radiologists throughout Vietnam between 2016 and 2017. Informed by learnings from these workshops, The University of Sydney medical education technology start-up DetectedX built VIETRAD, an online training platform designed to meet the needs of Vietnamese radiologists. VIETRAD gives radiologists the opportunity to test their skills on thousands of high-quality mammograms, sourced from Vietnam and Australia. The readings entered by the user are instantly analysed and benchmarked, and insightful feedback is provided.

The Health Strategy and Policy Institute (HSPI) of the Vietnamese Ministry of Health, supported by The University of Sydney team, has now implemented VIETRAD in over 20 hospitals in the northern, southern and central regions, reaching hundreds of radiologists and breast physicians. Findings from the project indicate significant improvements in breast cancer diagnosis, generating a profound impact on individuals, communities, and the Vietnamese healthcare system.



"Now doctors and researchers can access this advance system no matter where they are and improve their capability to detect breast cancer from reading mammograms."

Professor Trần Văn Thuấn, Deputy Minister, Vietnam Ministry of Health

Funders

Aus4Innovation, Australian Department of Foreign Affairs and Trade (DFAT)

Partners

Bach Mai Hospital Da Nang Oncology Hospital Hanoi Oncology Hospital Health Strategy and Policy Institute (HSPI) Hung Vuong Hospital Vietnam National Cancer Hospital

Project leads

Professor Patrick Brennan Dr. Phuong D (Yun) Trieu Dr. Trần Thị Mai Oanh

Battling neonatal superbugs in Southeast Asia and the Pacific



Serious infections in babies (neonatal sepsis) are responsible for 1.3 million deaths worldwide each year. In the context of rising antimicrobial resistance (AMR), these infections are becoming increasingly difficult to treat.

In 2022, the Neonatal Sepsis in Southeast Asia and the Pacific (NeoSEAP) project was launched to study the impact of AMR among hospitalised newborn babies in Vietnam. Working in close collaboration with partners at Da Nang Women and Children's Hospital and Tam Tri University Hospital, NeoSEAP researchers have collected important data on the causes of infections in babies, and the prevalence of AMR among vulnerable populations in Vietnamese communities.

The NeoSEAP data is also contributing to major international projects investigating the burden of AMR in resource-constrained healthcare settings, including the Global Research on Antimicrobial Resistance Project.

In 2023, NeoSEAP collaborators from Vietnam presented some of the research findings at the World Society of Paediatric Infectious Diseases conference, and participated in a research workshop with other clinician researchers working in paediatric infectious diseases. "Collaboration on the NeoSEAP project research with The University of Sydney has been important for our Tam Tri hospital system – it has helped exchange clinical experience and research with public hospitals within our country, and has developed the research capabilities of our medical staff; and provided us with opportunities to contribute to medical research to reduce neonatal sepsis and AMR."

Dr Nguyễn Xuân Hương,

Director, Centre for Research and International Collaboration, Phan Chau Trinh University, Vietnam



Funders

National Health and Medical Research Council (NHMRC)

Partners

Da Nang Women and Children's Hospital, Vietnam Phan Chau Trinh University, Vietnam Tam Tri University Hospitals, Vietnam

Project lead

Dr Phoebe Williams Dr Nguyễn Xuân Hương Dr Trần Hoàng Medicine & Health



Chronic obstructive pulmonary disease (COPD) is the third leading cause of death worldwide, and the seventh leading cause of ill health. Vietnam has high rates of lung diseases including both COPD and asthma, due in part to high smoking rates and poor air quality.

Despite the high prevalence of lung disease in the country, gaps in the health system mean that people are often diagnosed late, and access to care can be a challenge. Many people end up needing regular hospital visits, placing a significant burden on the country's health system.

Launched in 2017, the Vietnam COPD, Asthma and Prevention of Smoking study (VCAPS) tested the effectiveness of an integrated package of health sector interventions, focussed particularly on help with smoking cessation and ongoing disease management at the primary health care level.

Supported by rigorous scientific investigation and close cooperation between researchers and medical professionals, VCAPS interventions were trialled in 56 health facilities across Hanoi, Thanh Hoa, An Giang, and Ca Mau and Ho Chi Minh City. The study provided training for health care workers to enable quick counselling on smoking cessation, and established a smoking 'quitline' for support during the cessation process.

In all, over 3,000 patients with lung disease and more than 2,000 smokers benefitted directly from participating in the study. The study showed that the VCAPS approach is feasible, significantly reducing flare-ups of asthma and COPD as well as reducing smoking rates in the community.



"Our primary health care has many difficulties in managing COPD and asthma. We don't have enough devices for diagnosis, we don't have enough medications and we don't have rehabilitation. That's why this project is important to help health care providers to provide proper care and treatment for patients."

Dr Vu Van Giap, Vice Director, Bach Mai Hospital

Funders

National Health and Medicals Research Council (NHMRC) Global Alliance for Chronic Diseases (GACD)

Partners

Bach Mai Hospital, Hanoi Local Departments of Health Hanoi Lung Hospital Hanoi Medical University University of Medicine and Pharmacy, Ho Chi Minh City Vietnam Steering Committee on Smoking and Health (VINACOSH) Woolcock Institute of Medical Research

Project leads

Professor Greg Fox Professor Ngô Quỳ Châu Ms Phạm Ngọc Yến Professor Guy Marks

Building capacity for regional co-operation on infectious disease control



Fungal infections are often overlooked in Vietnam, yet they cause major health challenges. Researchers from The University of Sydney have undertaken pioneering work to help develop and strengthen local research capacity in the area of fungal infections. Working in partnership with Vietnamese colleagues, the team established joint research laboratories with Hanoi Medical University and Pham Ngoc Thach University, and commenced a series of laboratory training workshops, so far attended by representatives from more than 40 institutions and organisations.

In collaboration with their Vietnamese peers, the researchers have produced multiple academic papers, shedding light on Vietnam's status as a global hotspot for antifungal resistance, and drawing attention to the high burden of chronic pulmonary aspergillosis, and its negative impact on efforts to control tuberculosis. With philanthropic support, they secured funding for an early-career researcher from Vietnam to complete a three-year mycology research training fellowship, empowering local scholars to lead the charge in fungal disease research.

The team also worked alongside colleagues from the Vietnamese Ministry of Health to engage the next generation of scientists. In 2023, they piloted a citizen science project, engaging over 100 high school students in supporting their fungal pathogen surveillance activity, while igniting a passion for science.

With support from the Australian Department of Foreign Affairs and Trade (DFAT), the team has expanded lab networks across Southeast Asia, bolstering the impact of regional research efforts. The next step will be the publication of a comprehensive roadmap for the development of 'One Health' research capacity in the region, deepening our understanding of the social, ecological and environmental determinants of infectious diseases and their impacts on both human and animal health.



Funders

Australian Department of Foreign Affairs and Trade (DFAT) National Health and Medical Research Council Sydney Southeast Asia Centre Sydney Infectious Diseases Institute WIMR Foundation

Project leads

Associate Professor Justin Beardsley Dr Dương Nữ Trà My

Agriculture, Food & Environment

Collective problem-solving for healthy and sustainable growth

Agricultural and industrial development have accelerated in Vietnam in recent decades, bringing with them substantial economic benefits, and transforming both local communities and the nation. However, they are also having impacts on the health and wellbeing of the environment and on the population, compounded and aggravated by climate change.

The University of Sydney researchers are partnering with communities, industry and government in Vietnam to help ensure a healthy balance is maintained, that resources are managed sustainably and profitably, and that the lessons learned are shared with the world.



Pioneers of supply chain sustainability in Vietnam's Central Highlands



Robusta coffee was the crop that established the Central Highlands of Vietnam as a significant source of globally traded commodities, closely followed by pepper. The rapid expansion since the 1990s has been based almost entirely on the success of innovative smallholder farmers.

Over the past couple of decades, many of the private-sector wholesalers sourcing coffee and pepper from the region for global consumption have developed supply chain sustainability strategies aimed at addressing the ethical concerns of consumers, supporting development outcomes in rural areas, and ensuring the long-term supply of crucial commodities. Although successful on a farmby-farm basis, these strategies have not been able to address some of the fundamental sustainability issues affecting the region, including deforestation.

In response, international development agencies, businesses, and local agents including governments have been working together to address those bigger issues. These broad-based, collaborative activities have been described as a 'landscape approach' to sustainability.

Since 2019, experts from The University of Sydney's School of Geosciences have been working with the Vietnamese Institute of Policy and Strategy for Agriculture and Rural Development (IPSARD), the Western Highlands Agriculture and Forestry Science Institute (WASI), and the World Agroforestry Centre (ICRAF) to lead an evaluation of these approaches to inform global developments in supply chain sustainability.



"Our research findings will be fed into key decision-making processes within the Vietnamese government, and among trading partners and development agencies. Ultimately, our goal is to improve livelihoods in this diverse region where smallholder farmers are struggling, despite the soughtafter commodities they produce."

Associate Professor Jeff Neilson, *The University of Sydney*

Funders

Australian Centre for International Agricultural Research (ACIAR)

Partners

Institute of Policy and Strategy for Agriculture and Rural Development (IPSARD) Western Highlands Agriculture and Forestry Science Institute (WASI) World Agroforestry Centre (ICRAF)

Project leads

Associate Professor Jeff Neilson Dr Phan Việt Hà

Agriculture, Food & Environment



Foundational projects of The University of Sydney in Vietnam were led by Professor Philip Hirsch from The University of Sydney School of Geosciences. In the 1990s, the team worked alongside scientists from the Commission for Science and Technology and the Centre for Resource and Environmental Studies in Hanoi to investigate the impact of the Hoa Binh hydropower plant in north-western Vietnam on the local landscape and the livelihoods of local communities, mostly ethnic minorities including Muong and Thai. That work helped set the long-term agenda for the critical assessment of large-scale hydropower projects in Vietnam, which have since multiplied in number and impact.

In the decades since, the team has marshalled established researchers as well as undergraduates and PhD candidates from both The University of Sydney and a range of institutions and agencies within Vietnam, to investigate the local environmental and economic impacts of large scale environmental transformations across the country.

- In the 1990s and early 2000s, the team worked with collaborators from Can Tho University to investigate the local impacts of the environmental transformation of the Mekong Delta in Vietnam's south.
- In a project completed in 2022, researchers examined the changes to local landscapes and livelihoods in Vietnam's north-western highlands and Central Highlands. These changes were primarily associated with hydropower developments, but also took in the rapid agrarian changes related to booms in rubber and other crops, as well as the occupational diversification driven by the partial de-agrarianisation of livelihoods in the regions.
- This work has also included research into coastal livelihoods and natural resource management in the mangrove-shrimp culture of the Mekong Delta provinces.



Funders

Australian Research Council (ARC) Australian Centre for International Agricultural Research (ACIAR) World Conservation Union (IUCN)

Partners

Australian Mekong Resource Centre Commission for Science and Technology Centre for Resource and Environmental Studies Can Tho University Hanoi National University of Education Australian Mekong Resource Centre

Project leads

Professor Philip Hirsch Professor Nguyễn Viết Thịnh

Marine aquaculture research: limiting the growth of antimicrobial resistance



Located in Quảng Ninh province in northern Vietnam, Hạ Long Bay is a UNESCO World Heritage Site and a popular destination for global travellers, making tourism one of the main contributors to the local economy. Marine aquaculture is the other big economic driver, with species including Asian sea bass and barramundi grown in cages along the coastline.

However, these aquaculture operations are vulnerable to outbreaks of a bacteria belonging to the genus *Vibrio*, a pathogen that can cause significant damage in human populations, and also represents a risk to aquatic organisms. Losses associated with vibriosis can have a devastating effect on the livelihoods of rural farmers in northern Vietnam, and the local economy.

Treatment with antimicrobials has typically been the first response to vibriosis, but repeated and excessive use of antimicrobials is driving an increase in antimicrobial resistance (AMR), challenging both aquatic and human health.

Experts from The University of Sydney have been sharing knowledge, skills and resources with their counterparts at Hue University of Agriculture and Forestry (HUAF) to enable the Vietnamese team to grow and identify Vibrio species in their own labs. The collaborative team is now developing a collection of isolated bacteria specimens to enable an extensive whole-genome sequencing project. This project is expected to provide new insights into Vibrio and other bacterial species affecting fish health in Vietnam. It will also open the door to new areas of investigation and disease control that do not rely on antimicrobial treatments. "By deepening our understanding of bacterial fish diseases and developing new ways to treat them, we can help build a viable and sustainable aquaculture sector that contributes, economically and socially, for generations to come."

Dr. Nguyễn Ngọc Phước, *Hue University of Agriculture and Forestry*



Funders

Sydney Southeast Asia Centre (SSEAC)

Partners

Hue University of Agriculture and Forestry (HUAF)

Project leads

Dr Francisca Samsing Pedrals Dr Nguyễn Ngọc Phước

IMAGE: COURTESY OF SYDNEY VIETNAM ACADEMIC NETWORK

Agriculture, Food & Environment

Multi-faceted responses to invasive pathogens in the Mekong Delta



Vietnam is among the global top-ten producers of tilapia, one of the most farmed fish species in the world. Intensification of tilapia farming has been made possible by improvements in tilapia genetics and nutrition, but it has been followed by the emergence of infectious diseases.

Streptococcus agalactiae, also known as group B Streptococcus (GBS) is a particularly problematic fish pathogen, often occurring at a late stage of production and resulting in significant financial and environmental losses. It is also a human pathogen, as demonstrated by a foodborne outbreak of invasive human GBS disease in Singapore in 2015.

Researchers from The University of Sydney and the Hue University of Agriculture and Forestry, along with local Mekong Delta fish farmers and academic collaborators from the University of Glasgow and the Moredun Research Institute in the UK, have been working together since 2016 to investigate the epidemiology of GBS in aquaculture, explore the impacts of environmental conditions on the disease, develop point-of-care diagnostics to detect GBS in tilapia populations, and evaluate potential vaccine candidates.

Work to date has generated valuable insights, including a deeper understanding of the different strains of GBS that are active in different parts of the region, impacting approaches to vaccine development, and introducing the possibility of protecting localised farms from additional GBS incursions through biosecurity measures. The models established have provided further insight into the environmental contributors to the spread of GBS, including aquacultural run-off and climate-related increases in water temperature. These developments will impact how GBS is detected and managed in the Mekong and across Southeast Asia in the future.



Funders

Global Challenges Research Fund Networking Grant

Partners

Hue University of Agriculture and Forestry (HUAF)

Project leads

Professor Ruth Zadoks Associate Professor Nguyễn Ngọc Phước



Section 03

Business & Innovation

Building the foundations of a thriving regional business community



The Sydney Business School from The University of Sydney collaborates with researchers and members of the business community across Vietnam to explore how innovative business practices can help address key regional challenges including urbanisation, economic transformation, sustainability and social equality. The Sydney Business School is especially focussed on fostering connections at every level—including students, researchers, and businesspeople—to ensure the future prosperity and sustainability of the business community in both Australia and Vietnam.

Boosting the operations of social enterprises in Vietnam



Community-led social enterprises are often the biggest contributors to economic, social and environmental development in remote and rural areas. However, they can struggle to get the expert help they need to ensure that good intentions translate into viable, sustainable, and productive businesses.

Since 2011, the Sydney Business School and the VNU University of Economics and Business have been collaborating on the Remote and Rural Enterprise (RARE) program. This program matches the best and brightest business students from both countries with the most passionate and promising social enterprises. To date, the program has supported almost 70 community-led organisations in Australia, and some 40 organisations in Vietnam.

In 2023, a combined team of 31 students spent two weeks in Hanoi providing hands-on business support to four local social enterprises. Among them were Tohe, a business focussed on providing spaces where disadvantaged children can learn and create; and KOTO, an organisation that offers atrisk and disadvantaged youth a two-year hospitality training program, and then connects them with job opportunities in Ho Chi Minh City and Hanoi.

The social enterprises featured in RARE projects benefit from the practical assistance provided by students, including marketing plans and materials, and reports on business opportunities such as franchising and internationalisation. The students, meanwhile, gain from invaluable real-world experiences of collaboration, brainstorming and problem-solving.



"The students worked earnestly and provided us many deliverables which are very valuable for us."

Ms. Thu Nguyễn, *CEO, Tòhe*

Funders

New Colombo Plan Mobility Program, Australian Department of Foreign Affairs and Trade (DFAT)

Partners

Vietnam National University VNU University of Economics and Business

Project leads

Mr. Jared Harrison Dr. Linh Nguyen **Business & Innovation**

Institutional partnerships for the benefit of students in Vietnam and Australia



The Sydney Business School is taking steps to foster parallel cohorts of business students in Australia and Vietnam, creating opportunities for learning and relationship-building that will benefit the business community for decades to come.

In 2023, the Sydney Business School launched undergraduate articulation agreements with two of Vietnam's leading business schools—the VNU International University and the VNU University of Economics, both located in Ho Chi Minh City. Under these agreements, high-calibre students who complete two years of study at one of these partner universities can transfer to The University of Sydney, receiving credit for the first year of the Bachelor of Commerce (BCom) degree. After two more years of study in Sydney, students will receive a BCom from The University of Sydney, as well as the commensurate qualification from the Vietnamese partner university.

These arrangements are being promoted by the Business School through its Academic Ambassadors for Business (AAB) program, delivering demonstration classes, master classes and guest lectures to students online, as well as on the ground in Vietnam.

In one of the first visits by the AAB team, international business expert, Dr Sandra Alday, and business analytics specialist, Dr Firouzeh Taghikhah, teamed up with representatives from the partner universities to meet with more than 500 high school students and undergraduates in Hanoi and Ho Chi Minh City. "As Academic Ambassador, I contribute to building education bridges with Vietnam universities and high schools. It has been a privilege to collaborate with educational partners to facilitate learning workshops for students. The students and educators bring curiosity, energy and new perspectives, sparking lively discussions and fresh teaching and research ideas."

Dr Sandra Alday, *The University of Sydney*

Partners

Academic Ambassadors for Business (AAB), The University of Sydney Sydney Future Students, The University of Sydney VNU International University VNU University of Economics and Business

Project leads

Associate Professor Minh-Ngoc Tran Professor John Shields Dr Sandra Alday



Education & Leadership

Supporting high-quality educational and capacity-building opportunities across the region

The University of Sydney has longstanding education and capacity-building collaborations with many leading Vietnamese universities and public institutions. These partnerships and mentoring programs aim to cultivate excellence in educational institutions across our region, build a strong and productive academic community, and cultivate future leaders across the region.



Strengthening health security capacity in Vietnam



Over the past decade, The University of Sydney has hosted a large number of visiting Fellows from Vietnam to Australia under the Australia Awards Fellowship Program. In 2023, 15 emerging leaders from Vietnam took part in an 8-week program focussed on 'Strengthening Health Security Capacity in Vietnam'.

The Fellows represented a variety of multidisciplinary organisations including the Vietnam Ministry of Health, University of Medicine and Pharmacy, Ho Chi Minh City; Hue University of Agriculture and Forestry; Hanoi University of Pharmacy; Can Tho University of Medicine and Health, and others.

The prestigious Fellowship was sponsored by the Australian Department of Foreign Affairs and Trade (DFAT) and delivered by the University's Sydney Vietnam Academic Network. Facilitators included Professors Greg Fox, Joel Negin, Thu-Anh Nguyen, Tiho Ancev, David Guest, Ben Marais, Daniel Tan, Ruth Zadoks, Associate Professor Justin Beardsley and Ms Leanne Howie. The program was managed by Ms Xing Jin.

The program embraced a 'One Health' approach, recognising the interconnectedness of human health, animal health, and the environment. Its overarching goal was to strengthen collaborations in health security between Australia and Vietnam while building capacity within Vietnam's healthcare workforce. This aligns with the priority areas of both the Vietnamese Ministry of Health and DFAT, focusing on 'Health and Health Security'.

The program included several field trips to Australian laboratories, hospitals, and field stations, providing valuable insights for the development of reports to be shared with their home institutions. Fellows also participated in the Australia-Vietnam Innovation Symposium held at the University.



Funders

Australian Department of Foreign Affairs and Trade (DFAT) The University of Sydney

Partners

Sydney Local Health District Vietnam Ministry of Health University of Medicine and Pharmacy, Ho Chi Minh City Hue University of Agriculture and Forestry (HUAF) Hanoi University of Pharmacy Can Tho University of Medicine and Health

Project leads

Professor Greg Fox Associate Professor Justin Beardsley Professor Joel Negin Ms Xing Jin

Case study: Learning, growing and innovating together in the discipline of pharmacy



The University of Sydney has a deepening relationship with the Hanoi University of Pharmacy (HUP) through an education-based collaboration between HUP and the Sydney Pharmacy School (SPS).

A dual-degree program agreement between the two institutions was signed in January 2024, making it possible for students to receive a Bachelor of Pharmacy from both institutions, and a Master's qualification from The University of Sydney, by completing three years of study at HUP and three-and-a-half years at the SPS in Sydney.

The two universities have also jointly applied for funding from the DFAT New Colombo Plan to allow The University of Sydney undergraduates to join HUP students in Hanoi for a two-and-a half-week program focussed on public health and systems approaches to combatting anti-microbial resistance in Vietnam.

HUP has also undertaken collaborative research projects with The University of Sydney academics in the area of antimicrobial resistance (AMR). Together with the National Institute of Hygiene and Epidemiology, the VRESIST project developed and evaluated new guidelines for the control of AMR within local hospitals. The project drew upon experience in Australia and Vietnam. As a result, national guidelines were approved by the Ministry of Health for scale-up across the country.



"The Vietnamese health sector underwent a transformation in the late 1980s with the introduction of market-oriented mechanisms. As a result, privately owned community pharmacies have become a key source of health advice as well as medications for many people across the country. Now is the time to bolster the education and training of the next generation of Vietnamese pharmacists."

Dr Hien Duong

Funders

Australian Department of Foreign Affairs and Trade (DFAT)

Partners

Hanoi University of Pharmacy (HUP) Sydney Future Students, The University of Sydney National Institute of Hygiene and Epidemiology, Hanoi

Project leads

Dr Hien Duong Professor Bandana Sain Ms Dinh Thi Hien Van Professor Cao Hung Thai Ms Pham Ngoc Yen Dr Jaslyn Doshi Professor Nguyen Thu Anh Dr Shukry Zawahir Professor Greg Fox

Aiding and promoting occupational therapy education in Vietnam



Occupational therapy aims to support people with health conditions to participate fully in everyday life. It is well-established as a health profession in Australia, but in Vietnam it is still viewed as an emerging field. For many years, the education of undergraduates in Ho Chi Minh City and Hanoi has been led by just five Vietnamese-qualified occupational therapists.

Professors Lynette Mackenzie and Anne Cusick, members of the University's Sydney Vietnam Academic Network (SVAN), are working closely with their Vietnamese counterparts to enhance teaching approaches for occupational therapy in Vietnamese universities. They are developing Masterslevel teaching which will provide students with the further training they need to become outstanding clinicians, researchers and educators. Their goal is to gain World Federation of Occupational Therapists approval for Vietnam's education programs.

The group is also supporting a national network of occupational therapists in Vietnam. The first-ever national occupational therapy conference was held in July 2023.

This work is helping to raise awareness of Occupational Therapy as a health discipline within Vietnamese hospitals, many of which do not currently employ occupational therapists.



Partners

Medical Committee Netherlands-Vietnam University of Medicine and Pharmacy, Ho Chi Minh City Hai Duong Medical Technical University, Hanoi

Project leads

Professor Lynette Mackenzie Professor Anne Cusick Dr Pham Dung Lê Thanh Vân Đạt Phạm Ngọc

World-class education in agricultural economics and finance



In 2009, the Vietnamese Government expanded the range of courses available in Vietnamese universities by adopting and adapting existing programs from Australia, the US and elsewhere.

As part of a World Bank initiative, the Faculty of Agriculture and Environment at The University of Sydney and the College of Economics at Hue University collaborated to develop an international, English-language, agricultural economics-finance degree. Academics from Hue worked closely with their Sydney colleagues on the adaptation of coursework, introducing relevant examples from Vietnam and other regional countries where possible, and incorporating local institutional materials.

The Bachelor in Agricultural Economics and Finance at Hue University was launched in 2011 with a cohort of 48 students. The students were selected competitively and recruited nationally from throughout Vietnam.

More than a decade later, this course continues to attract students from across Vietnam and neighbouring countries, and makes a valuable contribution to the educational landscape across Southeast Asia. "Vietnam has been a success in terms of agricultural development. Since the early 1990s, it has been moving steadily to become a major force on the global food market. The country has emerged as one of the world's leading exporters of agro-food commodities, ranking among the top five global suppliers of fish, rice, coffee, tea, cashew nuts, black pepper, rubber, and cassava. In 2019, Vietnam was a major supplier in more than eight key global food value chains."

World Bank. 2020. Vietnam: Improving agricultural interventions under the new National Target Programs.

Funders World Bank

Partners University of Economics, Hue University

Project leads

Professor Alan Randall Associate Professor Mai Văn Xuân

Arts & Social Sciences

A humanities-based approach to relationship-building and societal impact

The University of Sydney's Faculty of Arts and Social Sciences (FASS) is home to a diverse range of disciplines, united in the belief that a humanities-based approach can help establish crosscultural understanding, and provide valuable insights into some of the most pressing problems faced by our region.



Cultivating the connections between creativity, culture, and innovation



Since 2015, Associate Professor Jane Gavan has led a series of projects in Vietnam that bridge the gap between creative industries, manufacturing, and the museum sector, focusing on sustainable innovation and cultural engagement. The 2019 'Manufacturing Creativity' initiative, in partnership with UNESCO, introduced creative practices into the Vietnamese manufacturing sector, highlighting the importance of creativity for social and environmental sustainability. This project aligns with UNESCO's sustainable development goals by promoting innovative practices and reducing waste within industry.

In the museum sector, Gavan's current work includes the Food and War, Stories of Strategies of Survival exhibition, which explores the role of food in the survival strategies of Vietnamese people during times of conflict, offering insights into cultural and community resilience. The Coconut as Cultural Space project collaborates with local design students and communities in Bến Trein in the Mekong Delta to create sustainable designs from coconut materials, connecting traditional craftsmanship with modern design techniques.

These projects enhance curatorial and creative capacities within Vietnam's public museum communities and aim to build capacities for curatorial engagement between Vietnam and Australia, fostering community involvement and international collaboration. Through her research, Gavan contributes to the development of sustainable cultural and economic practices, enhancing the dialogue between creativity, culture, and innovation.



"Our collaboration with Jane as cultural advisor particularly with the 'Coconut Space project' have advanced curatorial practices, fostering a dialogue between Vietnamese and Australian communities. Her innovative approach has transformed how we engage with sustainable design and art, enhancing crosscultural collaboration and setting a new standard for communityinvolved curatorial work."

Dr Phạm Lan Hương, University of Culture and Heritage, Ho Chi Minh City

Funders

Sydney Southeast Asia Centre

Partners

Museum of War Remnants, Ho Chi Minh City Museum of Ho Chi Minh City, Ho Chi Minh City University of Culture and Heritage, Ho Chi Minh City University of Architecture, Ho Chi Minh City

Project leads

Associate Professor Jane Gavan Ms Thảo Xuân Ms Đoàn Thị Trang

Economic policy for Vietnamese agriculture



Since 2018, researchers from The University of Sydney have been collaborating with academic and government partners in Vietnam on a set of three projects focussed on the evaluation and improvement of economic policy for Vietnam's agricultural sectors.

Led by Professor Ancev, the team's first two completed projects have generated significant impact. The first, an examination of existing economic policies, prompted a revision of the mainstay policy for agricultural investment support. The second involved extended contributions to the development of Vietnam's new *Strategy for Sustainable Agriculture and Rural Development 2021–2030*.

The third and ongoing project, due for completion at the end of 2025, aims to evaluate the combined effects of economic policies in agriculture over the past 30 years, and to apply those findings to the development of an evidence-based approach to economic policymaking for agriculture in Vietnam in the years ahead.



"While agriculture's contribution to GDP is declining in Vietnam, it is still a very significant sector and employs a sizable proportion of the labour force. The opportunities, threats and challenges facing Vietnam's agriculture demand an aspirational, well-calibrated, yet achievable strategy for the decade ahead."

Professor Tiho Ancev, *The University of Sydney*

Funders

Australian Centre for International Agricultural Research (ACIAR)

Partners

Department of Agricultural Economy, Ministry of Planning and Investment Institute for Policy and Strategy for Agriculture and Rural Development Vietnam National University of Agriculture

Project leads

Professor Tiho Ancev Vũ Hoàng Yến Dr. Trương Thị Thu Trang



Arts & Social Sciences

Harmony in improvisation: celebrating a decade of jazz fusion



Since 2022, an ensemble of leading jazz students from the Sydney Conservatorium of Music has travelled to Hanoi every autumn to spend a week in residence at the Vietnam National Academy of Music. Led by pianist and lecturer Dr. Steve Barry, the students collaborate with peers at the Academy through a series of masterclasses, rehearsals, and student-led workshops to explore and further advance their various shared and culture-specific modes of creative practice.

In 2023 the exchange culminated in a sold-out show in the Academy's 800-seat concert hall, in celebration of the 50th anniversary of Australia-Vietnam diplomatic relations and the 10th anniversary of the Academy's jazz department. The performance was broadcast on Vietnam's largest TV network, VTV1. Each year, the Conservatorium students have also performed their original music at notable local jazz clubs in Hanoi, including the famed Binh Minh Jazz Club, founded by the 'godfather' of jazz in Vietnam, Quyền Văn Minh.

This initiative provides a fascinating pivot point for diverse research avenues. It offers a unique case study for investigating the impact of cultural exchange on music pedagogy. This collaboration opens up sociomusicological inquiries into how jazz, as a historically adaptive and culturally integrative genre, serves not just as a musical style but also as a conduit for social and diplomatic connection, reflecting broader patterns of cultural negotiation and exchange.

The research explores the emergence of hybrid musical forms that arise from the synthesis of Vietnamese and Western musical traditions, considering how such cross-cultural encounters shape performance practices and audience perceptions. The premiere of a co-created work featuring Vietnamese and Western instruments at the opening of the Sydney Vietnam Institute serves as a practical and symbolic culmination of these varied research interests, providing tangible evidence of the initiative's artistic and cultural impact. "From the street food to the back of a Grab bike, Hanoi is a city that lives and breathes improvisation. That spirit that is reflected in the passion and commitment to teaching, learning and the growth of community we've found in and around the National Academy - and the quality of artistry coming out of the city's rapidly expanding scene. We look forward to continuing to celebrate the unique synthesis of styles and influences that sits at the intersection of Australian and Vietnamese approaches to jazz and improvisation."

Dr Steve Barry, Sydney Conservatorium of Music



Partners

Vietnam National Academy of Music

Project leads

Dr Steve Barry Nguyễn Tiến Mạnh

Digital media: finding common ground, across borders



The University of Sydney is contributing to a vibrant bilateral creative community, composed of students, researchers and an innovative group of practitioners.

In 2023, Dr Jonathon Hutchinson from the Discipline of Media and Communications visited Van Lang University to compare and share perspectives and insights into digital media with Vietnamese peers. During the visit, Dr Hutchinson delivered a keynote presentation to the Faculty of Design. This visit has set the scene for future research, teaching and learning opportunities with Van Lang University.

While in Ho Chi Minh City, Dr. Hutchinson met with local creatives, online content creators and creative agencies. One of these agencies, Happiness Saigon, works alongside local foodie influencers, who are active on Instagram and YouTube.

This group of influencers were able to provide an inside perspective on the creative digital media industry of Vietnam. Beyond formal settings and semi-structured interviews that were conducted, these influencers showcased their work in practice at some of their favourite food places in Ho Chi Minh City. These interactions helped to shed light on the unique characteristics of Vietnamese social media, and how they are shaping and creating conversations across the country.

The experiences from the visit were thoroughly documented and the research/creative outputs to date include an academic paper in Journal of Media International Australia, a feature documentary, and a series of short, shareable videos designed specifically for social media.



"In my recent visit to Ho Chi Minh City, I was lucky to build strong ties with both academia and industry. I was invited to present a keynote at Van Lang University, which has spurred on more collaborative research and a strong interest to exchange Faculty members and students between Sydney and Ho Chi Minh City."

Dr. Jonathon Hutchinson, *The University of Sydney*

Partners

Happiness Saigon Van Lang University

Project leads

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Produced by the Sydney Vietnam Academic Network, The University of Sydney. The editorial committee wishes to acknowledge the support of the Sydney Southeast Asia Centre and the Faculty of Medicine and Health in the production of this booklet.

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ISBN: 978-0-646-89655-7

