

2018-2019

Annual Report



DRAFT



AAUN AUSTRALIA AFRICA
UNIVERSITIES NETWORK

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The University of Melbourne
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The University of Ghana, Ghana
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Makerere University, Uganda
The University of Malawi, Malawi
The University of Mauritius, Mauritius
The University of Nairobi, Kenya
The University of Pretoria, South Africa
The University of Zambia, Zambia
Tshwane University of Technology, South Africa

WITH THANKS TO OUR KNOWLEDGE PARTNERS AND SPONSORS

Without this support, AAUN would not be able to carry out its mission to foster research and education collaboration and leadership across areas of priority for Australia and Africa, marshalling expertise from both continents to address the mutual challenges we face.

SPONSORS

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A MESSAGE FROM THE CO-CHAIRS



Professor John Hearn,
University of Sydney
AAUN Chair, Australia



Professor Tawana Kupe
University of Pretoria
AAUN Chair, Africa

The international policy frameworks with which we work, including the SDGs 2030, Africa Agenda 2063, Australia's Indo-Pacific Priorities, and the Belt and Road Initiative of China, provide us with guidance and potential resources, but leave us responsible for our intellectual and practical engagement for success. This year the disruptors in geopolitics have been significant, reminding us to be clear and concise in our mission.

AAUN flies under the lowering clouds of geopolitics and above the rising clouds of bureaucracy and risk aversion, to focus on higher education and research teamwork and diplomacy. We address mutual challenges of Australia and Africa, with expert teams drawing on the talent of both continents. In our Fora, workshops and AGM in 2019, we agree our priorities, capacities and reach in our new Strategic Plan and Action Plan 2020–22.

The Membership of AAUN is at full strength. We look now to a careful and controlled expansion of regional and global partners, enhancing innovation, impact, resources and resilience. We are assessing the criteria for successful membership, performance and governance to lock in commitment and practical engagement.

The AAUN will continue to build teams with universities, business, government, international

agencies and NGO's to be fit for purpose in addressing each of the challenges. We do not duplicate what our individual partners do, building on these platforms and their synergies to achieve objectives beyond individual reach.

This year again, the Partnership Research and Development Fund (PRDF) competition has been our main instrument for catalytic seed funding, funding ten new research consortia bringing our total of multi-institutional programs to 53. The importance of creating communities of Australian African expertise will be evident with time.

It is a real pleasure to see that several of our partners have taken the initiative of establishing Australia Africa Centres or university wide programs, with far sighted intercontinental priorities that sometimes seem a low priority for government. In this regard, we forge forward and do not depend on government resources, while working closely with our governments to influence education and research policy options and diplomacy.

We thank all those who give their time to work with AAUN in any capacity, including our knowledge partners, sponsors and our dedicated Secretariat in Sydney and Pretoria. We are open for your ideas and feedback.

AAUN GOVERNANCE

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Associate Professor Grace Liu, Sydney

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Marjorie Lewis-Jones, Sydney

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Western Sydney University
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Professor Barnabas Nawangwe,
Makerere University, Uganda
Professor Dhanjay Jhurry,
University of Mauritius, Mauritius
Professor Luke Evuta Mumba,
University of Zambia, Zambia

AAUN SECRETARIAT – PRETORIA AND SYDNEY

We are delighted to welcome our new AAUN Co-Chair for Africa, Professor Tawana Kupe, who succeeds Professor Cheryl de la Rey as Rector and President of the University of Pretoria. We thank Professor Frans Swanepoel who served as interim Co Chair and continues as Deputy Co Chair, and Dr Desirée Tesner-Smith who leads the secretariat. This year we also recognise Professor Dhanjay Jhurry, President of the University of Mauritius, and Bodita Romano, who coordinated the highly successful AAUN Africa Forum in Mauritius 22–23 July 2019.

In Sydney, Professor John Hearn continues as AAUN Co-Chair for Australia. Associate Professor Grace Mingyi Liu took on duties as AAUN General Manager incorporating her earlier role as research development manager. Marjorie Lewis Jones continues as Editor of our Annual Report, and Ros Ong as consultant accountant. We recognise the support of Dr David Mickler (UWA, and Director AfREC) in the local organisation of the AAUN Australia Forum and AGM in Perth 1–3 September. All secretariat members in Pretoria and Sydney are part-time appointments.

RESEARCH

THE PARTNERSHIP AND RESEARCH DEVELOPMENT FUND (PRDF)

is the vital lever with which AAUN brings together researchers across its network. The PRDF aims to catalyse new research collaborations that address significant challenges facing both Australia and Africa. Each grant is worth approximately AUD 10,000 and may be used to fund exploratory research, targeted workshops, planning events, faculty exchanges and forming collaborative networks, among other activities. This section includes a small selection of these collaborations.

RESEARCH HIGHLIGHT:

ENABLING A FOOD-PHOSPHORUS-SANITATION SUSTAINABILITY NETWORK

More than a ton of organic waste like cabbage leaves, banana peels and over-ripe tomatoes is generated each day at the largest market in Blantyre in Malawi. A local composting facility turns it into rich, organic compost farmers and businesses can use. The facility also treats human waste and harvests its nutrients, including phosphorus – necessary for increased plant yields and sustained growth.

Core researchers in this AAUN-funded project visited the Malawi facility in January 2019 and saw first-hand how food waste, sanitation management and agriculture are being productively linked.

'Many African countries are well placed to benefit from similar food-phosphorus-sanitation projects,' says PI Dr Dana Cordell

(University of Technology Sydney).

'The research network we're building will drive projects that advance food and human waste management in Africa to benefit farmer livelihoods, crop yields and local employment. Our aim is to improve food and nutrition security without jeopardising environmental health.'

A workshop at the University of Malawi gave project researchers the chance to hear from smallholder farmer groups, entrepreneurs, local councils and other stakeholders about their visions for improving food-waste management systems by 2030. Next steps to expand the Australia-Africa knowledge network are on track and include a second workshop for the private sector and the development of business models to improve the food-sanitation nexus in Malawi.



OUTCOMES

- Stakeholder workshop at the University of Malawi and field trip to an organic composting management facility in Blantyre (January 2019)
- Article published in *The Conversation* (February 2019)

RESEARCH HIGHLIGHT:

IMPROVED FOOD SECURITY AND BIODIVERSITY OUTCOMES GO HAND IN HAND

A rising and unsustainable demand for food globally along with the unprecedented loss of biodiversity that's threatening the security of the world's food supplies make this project vital.

Two questions lie at its heart: Do native predators improve crop yields in agricultural landscapes? Can sustainable agricultural intensification occur in croplands without negative effects on biodiversity?

AAUN's catalytic funding enabled planning to commence in Africa where improving small farmers' productivity and ability to counter environmental threats is crucial to food security.

The team's ultimate aim is to run an international research program to probe the predator-crop-yield nexus on a global scale.

Focus workshops and exploratory research in South Africa and Uganda in June 2019 helped establish a cohesive, international research team that can formulate a research program ready to submit to funding bodies.

Key features of the program include: the involvement of early career researchers and PhD students; the use of cutting edge analytic techniques; and the employment of novel technologies – including camera trapping and drone technology using infrared cameras

and spectral imaging to determine predator presence/density, soil moisture and crop productivity.

PI Associate Professor Matt Hayward (University of Newcastle) says, 'When major funding is secured, this program will provide research training to students, improved collaborations for our research leaders, a wealth of scientific publications, and increased knowledge for land use planners, policy makers, farmers and biodiversity conservationists.

'Expansion to countries in Asia and South America would further extend our investigation's impact and reach.'

OUTCOMES

- Successful workshops and site visits in South Africa and Uganda (June 2019)
- Refined methodology to ensure national and international consistency
- Grant application drafted for submission to AUSAid and other funders (late 2019)



RESEARCH HIGHLIGHT:

AAUN-FLORET: FUTURE LEGUMES RESEARCH, EDUCATION AND TRAINING PROGRAMME – LINKING CLIMATE CHANGE AND NUTRITIONAL NEEDS TO AGRICULTURE

The challenge driving this collaborative project is how to grow and safeguard enough nutritional crops to feed the world's nine billion inhabitants by 2050 in the face of climate change.

Future Legumes Research, Education and Training (FLoRET) is a network of nine universities shaping an international, graduate research and training programme with an initial focus on legumes as sustainable, high-nutrient crops.

At Murdoch University an online Graduate Certificate in Plant Biosecurity is up and running and several Food Security Masters students have elected to do their research component within the FLoRET research themes. FLoRET is also now being included in the three major research institutes at Murdoch University that focus on food, health, and sustainability.

At the University of Cape Town (UCT), FLoRET will be hosted by the African Climate Development Institute, which adds the crucial climate dimension to the project.

PI Professor Janet Bornman (Murdoch University) said FLoRET's collaborative, cross-disciplinary pathways for linking nutrition, climate and agriculture were unique. They also mirrored the diverse disciplines required by today's graduates, decision-makers and farmers to manage the complexity of agri-food security nationally and globally.

'The enthusiasm for the training programme is encouraging, and we're working to ensure it's sustainable,' she said.

'Ultimately, we'll know FLoRET has taken root when we see an increased uptake of climate-tolerant, nutritious crops in local communities.'

OUTCOMES

- Interactive planning workshops held at the University of Cape Town, November, 2018
- PI met with Dr Peter Johnston (UCT) and Professor Eric Danquah (University of Ghana) (November 2018)
- PI presented at the International Conference on Food and Nutrition Security in Africa, in Ghana (October 2018)
- Funding initiatives under way with first phase application to the Green Climate Fund
- Developed marketing material (2018), and applications pending to Australian Research Council and industry, as well as international bodies (ongoing)



RESEARCH HIGHLIGHT:

AQUACULTURE PRODUCTION AND SUSTAINABLE LIVELIHOODS IN AFRICA: LESSONS FROM UGANDA AND KENYA

Small-scale aquaculture makes a significant contribution to food security, poverty alleviation and socioeconomic development. Small fisheries are also a major source of animal protein in many parts of the world.

The critical work women do in these fisheries and their economic contribution to fishing households and enterprises is not well documented, which can compound their disempowerment.

This study is exploring how small-scale artisanal fish-farming projects can improve the lives of women in Kenya and Uganda—and especially those in the lowest socio-economic categories.

Led by PI Associate Professor Richard Vokes (The University of Western Australia), researchers from Nairobi University, Makerere University and the Department of Aquaculture, National Agricultural Research Organization in Uganda, have conducted fieldwork in East Africa.

Team members have visited small-scale fish farms in eight districts in Uganda and commercial fishing settlements on Lake Victoria, Lake Edward and Lake George. They've also run in-depth focus groups with more than 150 women who are small-scale artisanal fish farmers in three districts in Uganda and three in Kenya.

'In phase two, we will develop gender-sensitive models for establishing new ponds, and for providing extension services at existing sites,' said Dr Vokes. 'We'll then apply these models and other findings to improve the women's nutritional security, grow their incomes, and empower their domestic decision-making.'

OUTCOMES

- Completed research visits to small-scale and commercial fish farms in Uganda (September–October 2018)
- Conducted in-depth focus group discussions with small-scale artisanal fish farmers (women) in Uganda and Kenya (March–May 2019) and completed data analysis
- Workshop at UWA in Perth—identified potential Australian partners and ongoing funding, and drafted research applications for larger projects (July 2019)



RESEARCH HIGHLIGHT:

EMPOWERMENT IN THE WORKPLACE: AN EXPLORATORY STUDY OF WOMEN IN AFRICA

In March 2019, 45 female African activists from 15 African countries called on world leaders to play their part in the fight against gender injustice.

'You promised to achieve gender equality and empower all women and girls by 2030, but at the current rate of progress, this will take 108 years. This is unacceptable. We need genuine progress, not grand promises,' the women declared.

This timely research project is investigating the role and status of women in the workplace in Africa draws together a strong research team across five countries in Africa (South Africa, Kenya, Nigeria, and Uganda).

Through surveys and interviews, the team is probing the extent to which women are included or excluded in the workplace, and barriers to be overcome. It is also exploring opportunities for training, inclusion and gender mainstreaming as *enablers* for women to take their place in society; add value to the economy; enhance family wellbeing through added earnings; and be empowered to assert their rights to equal employment.

'We've built a sound gender studies research network and are gathering significant data to stimulate thought and discussion in the area, and

inform our gender awareness training module pilot for "Women in the Workplace," said PI Professor Prem Ramburuth (University of New South Wales).

'Our next goal now is to extend the project to more countries and employment sectors across Africa, and we have received several requests to share our research for implementation in other developing countries and regions of the world.'

OUTCOMES

- Completed 72% of surveys and interviews in Africa across sectors including education, health, business, tourism and hospitality, government, and agribusiness/farming (August 2019)
- Presentation at the 26th International Association for Applied Management Conference, UK, on *Empowerment in the Workplace: Women in Emerging Economies* (July 2019)
- Progress with 'Women in the Workplace' training module for workplace empowerment



RESEARCH HIGHLIGHT:

COMMUNITY-BASED SOCIAL NETWORK FOR MITIGATING HIDDEN HUNGER

Hidden Hunger is a challenging health and wellbeing issue in Africa where the population do not get enough nutrients in their daily diet. More than 30 per cent of preschool children in Africa are stunted, which represents a chronic form of undernourishment in early life and leads to irrecoverable physical and mental development problems.

This research team, comprising 16 researchers from four countries (Australia, South Africa, Nigeria and Kenya), proposed a solution to address hidden hunger using a mobile-based social network. The mobile app, called Ustawi, is an information system where people get connected and see each other's activities related to mitigation of hidden hunger including food survey, locally grown crops and crop maps in their communities.

Project Everest as the industry partner in the project has been conducting a field test for the app in communities in Malawi. PI Associate Professor Bahman Javadi (Western Sydney University) notes that Malawian mothers were motivated to make changes to their diet but had found no avenues to help them achieve this. The Ustawi app can offer them the knowledge required – including access to tailored recommendations about crop types to grow; connections with other growers to supply

crops with the micronutrients they need; and information to diversify their diet.

'The social network we're building gives mothers and others the chance to combat hidden hunger and to find strategies to mitigate it in their families and communities. We're seeking funding partners to extend the project.'

OUTCOMES

- Workshop to review project progress in South Africa (July 2019)
- Field testing of mobile app in Malawi (December 2018-February 2019)
- Publishing a paper about the project framework in INTERSOL 2019 in Egypt (February 2019)
- Presenting the project outcomes in the World Summit on the Information Society (WSIS) Forum, Switzerland (April 2019)
- Launching the project website at <http://ustawi.scem.westernsydney.edu.au/> (September 2018)



RESEARCH HIGHLIGHT:

FOOD SAFETY RISK PROFILING AND MONITORING OF LISTERIA MONOCYTOGENESIS IN ENVIRONMENTAL, RETAIL AND DOMESTIC SETTINGS IN AFRICA AND AUSTRALIA

The Listeriosis outbreak that hit South Africa at the end of 2017, and continued well into 2018, led to 200 deaths and over 1,000 infections. It also resulted in the destruction of 4,162 tons of polony and other processed meats. In Australia in 2018, the foodborne pathogen *Listeria monocytogenes* (*Listeria*) caused seven deaths and a miscarriage and was traced to the consumption of Australian rockmelons.

This team of researchers from Curtin, Ghana, Murdoch, Makerere, Mauritius, Nairobi and Pretoria universities is asking: 'What risk does *Listeria* pose to other African nations—and especially those where ensuring food safety and security is most challenging?

PI Professor Elna Buys (University of Pretoria) met with (Lead Collaborator) Dr Thab Habib at Murdoch University in Perth in late 2018 to plan the project—including the involvement of a postdoctoral researcher.

The team is using molecular biology and epidemiology to provide reliable information that can bolster its chances of securing funding for a major collaborative study and guide policy makers in food safety and public health.

'South Africa was ill prepared to deal with what was the biggest Listeriosis outbreak in the world, with harsh food safety lessons to be learnt by government and industry,' said Dr Buys. 'What's needed now is sound research like ours that can inform a risk-based approach to food safety, which will prevent further outbreaks across Africa and globally.'

OUTCOMES

- PI and Lead Collaborator met in Australia to plan the project (September to November 2018)
- Conference presentations in Australia (September and November 2018)
- Secured funding for one postdoctoral researcher, who visited South Africa to conduct the African part of the study (August 2019)
- Journal articles, conference presentations and application for major project funding completed or envisaged



RESEARCH HIGHLIGHT:

AAUN SEED FUNDING IS WORTH ITS SALT! AAUN PROJECTS DELIVER NEW EVIDENCE AND IMPACT FOR PEOPLE AND COMMUNITIES.

Professor Karen Charlton reports from the University of Wollongong on the public health impact of catalytic funding that AAUN provided in 2013 for an African-based project 'to reduce the risk of hypertension in sub-Saharan Africa through the development of population-wide salt-reduction strategies'.

The study measured sodium (Na) and iodine in 24-hour and spot urinary collections in adult cohorts, asking if lower salt intake is associated with a suboptimal iodine status.

Professor Charlton said: 'this study was needed because South Africa's mandatory legislation was predicted to decrease population-level salt intake, reduce annual deaths from cardiovascular diseases, and save millions in public and household health expenditure'.

But, as salt is the vehicle for iodine fortification, any successful campaign to reduce salt intake could result in reduced iodine intake. "We concluded that the iodine status of populations undergoing salt reduction strategies must be monitored to prevent re-emergence of iodine deficiency, which remains the largest preventable cause of brain damage and mental impairment worldwide, resulting in miscarriages, stillbirths, impaired psychomotor development and behavioural problems in children.

'It is significant that the WHO and World Health Assembly targets to reduce non-communicable diseases include a 30 per cent reduction in population salt intake by 2025, while to prevent iodine deficiency disorders, the WHO has also endorsed universal salt iodisation for humans and animal diets. 'Our study shows that salt reduction strategies and salt iodisation should always be considered in tandem.'

OUTCOMES

- Professor Charlton spoke in three sessions related to salt intakes, reduction and excretion at The International Conference on Non-Communicable Diseases (February 2019)
- Paper published in BMJ Open on how South Africa's mandatory salt reduction policy affects its salt iodisation program
- The research has attracted significant additional assets and external grants



NEW RESEARCH 2019 PRDF

In the 2019 round, we received 44 expressions of interest and 14 applications to the Partnership and Research Development Fund. Of these, the ten projects below were awarded funding. For a full summary of the rest of AAUN's funded activities, please refer to page 14.

ECONOMIC DEVELOPMENT, HEALTH AND NUTRITION FOR SUSTAINABLE DEVELOPMENT

This project's multidisciplinary, cross-country research team will develop a program that investigates health, nutrition and economic development reforms or features shaping sustainable development goals in Australia and Africa. Led by Dr Janet Dzator (The University of Newcastle), the collaboration offers the opportunity to identify differences and share data and experiences that will inform policy towards sustainable solutions in six partner countries and elsewhere.

AUSTRALIA-AFRICA MACADAMIA PLANT PROTECTION RESEARCH NETWORK

This project enables African researchers from the newly established Macadamia Protection Programme at the University of Pretoria to visit Australia to forge close working relationships with the established Australian research program. Led by Professor Andre Drenth (The University of Queensland), the collaboration aims to boost the African research program to benefit macadamia production in Africa and to help both continents reduce crop pests and disease.

HIGH VALUE DEHYDRATED PRODUCTS FROM TRADITIONAL VEGETABLES IN SOUTH AFRICA AS A LOW-CALORIE MEAL REPLACEMENT WITH HEALTH BENEFITS

Solar drying traditional South African vegetables such as night shade, pumpkin leaves and cowpea leaves is a first step in this novel research collaboration between Tshwane University of Technology (TUT) and the University of Queensland (UQ) led by Professor Dharini Sivakumar (TUT). Goals include developing a low-calorie meal replacement and testing solar drying as an economical and environmentally friendly technology for use in rural communities.

TRANSITIONING TO A SUSTAINABLE FUTURE THROUGH STEM TRAINING AND RESEARCH

This collaboration aims to grow research and research training in the area of environmental sustainability and transitioning in the face of climate change. Led by Professor Tim Roberts (The University of Newcastle / UON), the innovative STEM outreach programs of UON will be offered to Kerugoya and Nairobi Universities as a way of increasing enrolments in science, engineering and technology degree programs.





OPPORTUNITIES FOR ADDRESSING DISASTER AND CLIMATE CHANGE-RELATED DISPLACEMENT IN AFRICA UNDER THE GLOBAL COMPACTS FOR MIGRATION AND REFUGEES

Dr Tamara Wood (The University of New South Wales) leads this project/workshop, which aims to advance research and evidence on disaster and climate change displacement in Africa; contribute to the formulation of policy recommendations for Africa; and develop networks for ongoing collaboration. A goal is to build a new team of legal scholars across Australia and Africa who can act as advocates for the issue.

DEVELOPMENT, DIPLOMACY AND THE DIASPORA: DEEPENING ENGAGEMENT BETWEEN AFRICAN-AUSTRALIANS, THE DIPLOMATIC CORPS AND THE AFRICAN UNION'S AGENDA 2063

Led by Dr David Mickler (The University of Western Australia), this project will identify existing and potential contributions by the African diaspora in Australia to both the African Union's Agenda 2063 and to Australia-Africa relations. It explores how such diaspora contributions could be more effectively utilised and supported. Workshops in Perth and at Addis Ababa University will strengthen the project's impact on scholarship and policy.

COLLECTIVE ACTION FOR SUSTAINABLE DEVELOPMENT: THE CASE OF SMALLHOLDER DAIRY COOPERATIVES IN ODA COUNTRIES

The ultimate goal of this project is to identify and disseminate best practice in the organisation and management of dairy cooperatives in developing countries. The multidisciplinary team, led by Dr Amin Mugera (The University of Western Australia), will focus on Kenya and Ghana and then compare these countries with India – where smallholder dairy cooperatives are already highly developed. A Nairobi-based workshop will review findings.

FOOD INSECURITY AND NUTRITION OF AFRICAN REFUGEE CHILDREN PRIOR TO RESETTLEMENT

Early career researcher, Tina Lavin (The University of Western Australia), leads this multidisciplinary research team as it works to gain a better understanding of the nutrition of African refugee children as result of food insecurity. Researchers from Australia, Africa, the USA and Canada will review literature, establish future research priorities, and share current methods used to address food insecurity in refugee populations in sub-Saharan Africa. [66 words] can act as advocates for the issue.

WIND-BORNE SOIL EROSION AND THE NUTRIENT AND MICROBIAL CHARACTERISTICS OF DUST IN MAJOR SOUTHERN HEMISPHERE SOURCE AREAS

This partnership between the southern Hemisphere's two main dryland and dust producing regions – southern Africa and Australia – provides an opportunity to collaborate and compare a range of dryland geomorphologies and marginal agricultural lands. Led by Dr Andrew Dansie (The University of New South Wales), the team will share knowledge and expertise that will help these regions prepare for a better future and prioritise climate change adaptation strategies.

INTEGRATING URBAN GREEN INFRASTRUCTURE AND FOOD SECURITY FOR ECONOMIC DEVELOPMENT IN AFRICAN CITIES

This scoping project, led by Dr Alec Thornton (The University of New South Wales Sydney), will explore urban green space as vital infrastructure for building urban food systems as drivers of economic and community development in African cities. The team will develop survey tools at a planning workshop at Makerere University and conduct grassroots research in Kampala, Nairobi and Lusaka.

AAUN RESEARCH PROJECTS — SUMMARY

Year	Project Title	Principal Investigator(s)	AAUN Partner
2019	Australia-Africa macadamia plant protection research network.	Professor Andre Drenth, University of Queensland	University of Pretoria
2019	Collective Action for Sustainable Development: The Case of Smallholder Dairy Cooperatives in ODA Countries	Dr Amin Mugeru, University of Western Australia	University of Nairobi, University of Ghana
2019	Development, diplomacy and the diaspora: Deepening engagement between African-Australians, the diplomatic corps and the African Union's Agenda 2063	Dr David Mickler, University of Western Australia	
2019	Economic development, health and nutrition for sustainable development	Dr Janet Dzator, University of Newcastle	Makerere University, University of Botswana, University of Sydney
2019	Food Insecurity and Nutrition of African Refugee Children Prior to Resettlement	Tina Lavin, University of Western Australia	University of Ghana, University of Ibadan, University of Pretoria, Curtin University, University of Western Australia
2019	High value dehydrated products from traditional vegetables in South Africa as a low-calorie meal replacement with health benefits.	Professor Dharini Sivakumar, Tshwane, University of Technology	University of Queensland, University of Pretoria
2019	Integrating Urban Green Infrastructure and Food Security for Economic Development in African Cities	Dr Alec Thornton, University of New South Wales	
2019	Opportunities for addressing disaster and climate change-related displacement in Africa under the global compacts for migration and refugees	Dr Tamara Wood, University of New South Wales	University of Cape Town, University of Pretoria, University of Nairobi, Makerere University
2019	Transitioning to a sustainable future through STEM training and research	Professor Tim Roberts, University of Newcastle	University of Nairobi
2019	Wind-borne soil erosion and the nutrient and microbial characteristics of dust in major Southern Hemisphere source areas	Dr Andrew Dansie, University of New South Wales Sydney	University of New South Wales, University of Pretoria, University of Cape Town
2018	AAUN-FLoRET: Future Legumes Research, Education and Training programme – Linking climate change and nutritional needs to agriculture	PI Professor Janet Bornman, Murdoch University	The University of Cape Town, University of Ghana, University of Pretoria, University of Mauritius, University of Addis Ababa, University of Western Australia
2018	Aquaculture production and sustainable livelihoods in Africa: Lessons from Uganda and Kenya	PI Associate Professor Richard Vokes, University of Western Australia	Makerere University, University of Nairobi
2018	Community-based social network for mitigating hidden hunger	Dr Bahman Javadi, Western Sydney University	University of Pretoria, University of Ibadan, University of Nairobi
2018	Empowerment in the workplace: An exploratory study of women in Africa	PI Professor Prem Ramburuth, University of New South Wales	Western Sydney University, University of Pretoria, University of Ibadan, Makerere University

AAUN RESEARCH PROJECTS — SUMMARY

Year	Project Title	Principal Investigator(s)	AAUN Partner
2018	Enabling a food-phosphorus-sanitation sustainability network	Dr Dana Cordell, University of Technology Sydney	University of Malawi- The Polytechnic University of Zambia
2018	Food safety risk profiling and monitoring of <i>Listeria monocytogenes</i> in environmental, retail and domestic settings in Africa and Australia	Professor Elna Buys, University of Pretoria	Murdoch University University of Nairobi University of Ghana Makerere University University of Mauritius
2018	Improved food security and biodiversity outcomes go hand-in-hand	Associate Professor Matt Hayward, University of Newcastle	University of Pretoria Makerere University
2016	Development of millet-based functional food products for the prevention and management of obesity and diabetes	Professor Vijay Jayasena, Western Sydney University	University of Ghana, University of Ibadan, University of Zambia
2016	Education leadership for knowledge society development	Associate Professor Mohammad Santally, University of Mauritius	Makerere University, Curtin University
2016	Food composition data for animal-source foods in sub-Saharan Africa	Professor Hettie Schonfeldt, University of Pretoria	University of Nairobi, University of Sydney
2016	Food security and antibiotic resistance in chicken processing industry in Australia and Africa	Dr Ranil Coorey, Curtin University	University of Ghana, Makere University, University of Nairobi, University of Pretoria
2016	Future legumes: Linking climate change and nutritional needs to agriculture principles	Professor Richard Harper, Murdoch University	University of Cape Town, Curtin University
2016	Minimising waste through value addition and preservation of fresh produce in Nigeria and Kenya	Professor Robyn McConchie University of Sydney	University of Ibadan
2016	Mobile-based information system for nutrition-driven agriculture	Professor Athula Ginige, Western Sydney University	University of Ibadan, University of Nairobi, University of Pretoria
2016	New plant breeding methods for sustainable use of genetic resources and security of food production	Professor Wallace Cowling, University of Western Australia	University of Mauritius, University of Pretoria, University of Sydney
2016	Urbanisation and its impact on peri-urban water and food security in Africa	Professor Basant Maheshwari, Western Sydney University	Makerere University, University of Nairobi, University of Sydney
2015	Academics without doctorates: under-qualification of academics in South Africa, Mauritius and Australia and strategies and policies to address the issue	Dr Mignonne Breier, University of Cape Town, Dr Lorraine Towers University of Sydney	Monash University, University of Mauritius, University of Pretoria
2015	Agro-diverse farming systems in Africa: Potential for improving food and nutritional security in the context of climate variability and change	Dr Peter Johnston, Cape Town, Professor Janet Bornman, Curtin and Professor Richard Warrick, Curtin	University of Ibadan, University of Pretoria, University of Western Australia
2015	Integrated whole-of-grain utilisation of cereal-legume composite for extruded and other foods targeted at specific consumers' nutrition, health and wellbeing needs.	Professor Kolawole Falade, University of Ibadan	Curtin University, University of Pretoria,

AAUN RESEARCH PROJECTS — SUMMARY

Year	Project Title	Principal Investigator(s)	AAUN Partner
2015	Monitoring and modelling of food security practices from retail to home in Australia and Africa	Dr Ranil Coorey, Curtin University	University of Ghana, Makerere University, University of Nairobi, University of Pretoria
2015	Phase 2: Investigating the nutritional value of locally harvested and processed mopane worms. An analysis of the value chain for indigenous edible insects and their potential role in mother and child nutrition in sub-Saharan Africa: focus on Mopane	Professor Mavis Mulaudzi, University of Pretoria	University of Zambia, University of Sydney
2014	21st century skills for educators: Rapid e-learning tools to develop interactive learning materials	Associate Professor Mohammad Issack Santally, University of Mauritius	Makerere University, Curtin University
2014	Analysis of the value chain for indigenous edible insects and their potential role in mother and child nutrition in eastern and southern Africa: Focus on Mopani	Professor Mavis Mulaudzi, University of Pretoria	Makerere University, University of Zambia, University of Sydney
2014	Assessing the benefits of agro-biodiversity in the context of climate variability and change	Dr Peter Johnston, Cape Town, Professor Janet Bornman, Curtin and Professor Richard Warrick, Curtin	University of Ibadan, University of Pretoria, University of Western Australia
2014	Developing and retaining the next generation of academics and researchers	Associate Professor Mbulungeni Madiba, University of Cape Town	University of Mauritius, University of Pretoria, Monash University, University of Sydney
2014	Development of sweet potato postharvest handling technologies for improved safety and quality of fresh and processed forms	Dr George Abong', University of Nairobi	Makerere University, University of Queensland
2014	Enhancing community farming systems via efficient soil-water-nutrient management regimes	Associate Professor Inakwu Odeh, University of Sydney	University of Nairobi, University of Ibadan, University of Ghana
2014	Estimation of rock size distributions using image analysis	Dr Anthony Amankwah, University of Ghana	University of Pretoria, Curtin University
2014	Integrated design of highly palatable extruded foods for nutrition, health and wellbeing using sustainable grains and legume fractions	Professor Kolawole Falade, University of Ibadan	University of Pretoria, Curtin University
2014	Master of biosafety joint development project	Associate Professor Andrew Drinnan, University of Melbourne	University of Ghana, University of Nairobi,
2014	Mining for a healthier community	Dr Helen Macdonald, University of Cape Town	University of Mauritius, University of Melbourne, University of Queensland
2014	A study of the experiences of Ghana, Kenya and Mauritius with special economic zones (SEZ): Imperatives of law and economics	Dr Emmanuel Laryea, Monash University	University of Ghana, University of Nairobi, Murdoch University

AAUN RESEARCH PROJECTS — SUMMARY

Year	Project Title	Principal Investigator(s)	AAUN Partner
2014	A study of the experiences of Ghana, Kenya and Mauritius with special economic zones (SEZ): Imperatives of law and economics	Dr Emmanuel Laryea, Monash University	University of Ghana, University of Nairobi, Murdoch University
2014	Surveillance and monitoring of food security for Africa: Proposal development	Dr Ranil Coorey, Curtin University	University of Ghana, University of Pretoria, University of Nairobi, Makerere University
2014	Where does your food come from? Food supply in the context of trade, agriculture and nutrition	Dr Joel Negin, University of Sydney	University of Pretoria, Makerere University
2013	Building an AAUN coalition to support improved nutrition and health of children under 5, pregnant and lactating mothers	Associate Professor Robyn Alders, University of Sydney, Professor A Oelofse, University of Cape Town, Professor Mavis Mulaudzi, University of Pretoria	University of Nairobi, University of Queensland, University of Wollongong, Makerere University, Griffith University, University of Melbourne, University of Western Australia, University of Ibadan, Curtin University
2013	Effectiveness of photosensitisation in controlling aflatoxins in maize	Associate Professor Angus Morrison-Saunders, Murdoch University	University of Pretoria, Makerere University
2013	Harnessing the benefits of agro-biodiversity for sustained food security in the context of climate change and variability	Dr Peter Johnston, University of Cape Town	University of Malawi, Curtin University, University of Pretoria, University of Ibadan, University of Melbourne, University of Western Australia.
2013	Improved productivity, postharvest handling, safety and biosecurity of cowpeas/bambara groundnuts: A value chain analysis in eastern, western and southern Africa	Dr Casper Madakadze, University of Pretoria and Dr Amin Mugeru, University of Western Australia	University of Cape Town, Murdoch University, University of Ibadan, University of Pretoria, Makerere University
2013	Reducing hypertension in sub-Saharan Africa through salt reduction strategies	Associate Professor Karen Charlton, University of Wollongong	University of Ghana, University of Newcastle
2013	Reducing hypertension in sub-Saharan Africa through salt reduction strategies	Associate Professor Karen Charlton, University of Wollongong	University of Ghana, University of Newcastle
2013	Value chain analysis: Improved nutrition and health of children under 5 years and pregnant and lactating mothers via quality extruded foods with leaf and legume proteins	Associate Professor Kolawale Falade, University of Ibadan	University of Pretoria, Curtin University

NOTE: This PRDF Research Program lists the Australian PI's. The full list of African and Australian PI's and partners for each program are available on the AAUN website.

AAUN EVENTS 2018–2019

AAUN offers opportunities for researchers, educators and university leaders to establish new alliances, opportunities, programs and projects through fora and workshops in Australia and Africa.

PLACEHOLDER

AAUN AUSTRALIA AGM 2019

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AAUN FORUM MAURITIUS 22–23 JULY 2019

The Forum, hosted by the University of Mauritius with 100 international experts, explored the theme “From Small Island States to the World”. Representatives from academia, business and government, covered teamwork and opportunities in higher education, the blue economy, priorities for joint research, and the practical instruments for implementation. With a focus on the Indian Ocean Rim, lead issues identified were in closing the skills gap and the sustainable development of universities and researchers for rapid impact and economic development. There were two frontier workshops, on digital technologies and on technological innovation in food and nutrition security for SME’s. All those attending enjoyed the distinct forum dinner and wished only for more time to enjoy the gorgeous island environment of Mauritius.



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WESTERN SYDNEY 2019

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NEW AAUN AFRICA CENTRES

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STRATEGIC PLAN 2020–2022

The AAUN is the only consortium of universities between Australia and Africa, established to inject teamwork, vigour and innovation in research, education and mobility, while addressing mutual challenges through equal partnerships and governance. AAUN flies between the lowering layers of geopolitics and the rising layers of bureaucracy, establishing effective diplomacy and friendship in higher education and research.

This strategic plan covers and sets targets for the next three years to our tenth year since launch in 2012. The Network, in consultation with its Councils in Australia and Africa, has identified five focus areas of “Security”:

- **Environment, Agriculture, Food and Nutrition**
- **Public Health in Non-Communicable Disease**
- **Higher Education and Research Capacity**
- **Sustainability in mining and extractive communities**
- **Public Sector, employment and economic development**

The AAUN has learned over the past seven years to overcome many of the intellectual, communications, practical and logistical obstacles in working together, building teams with capacity to innovate and impact, and to enable the ambitions of established and early career researchers. Based on our capacity and intercontinental reach, we will drive further development and success with:

- **Relevance to international policy frameworks, including the Sustainable Development Goals (2015-30), the Africa Agenda (2015-63) and the Australian International and Indo-Pacific Strategies (2017-30). We work closely with our knowledge partners and sponsors (DFAT, ACIAR, NRF-SA, International Agencies WHO, OECD)**
- **Finding solutions to the challenges of communications and IT, distance and mobility, resources.**
- **Building alliances and critical mass with cognate networks and groups including ARUA, IORA, RUFORUM, NGO's, Alumni and African diasporas.**
- **Forming strategic research and education links with a few, selected global Universities with mutual objectives and benefits.**



MAKERERE



UNIVERSITY

UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD



UNIVERSITY OF MAURITIUS



Curtin University



UNIVERSITY OF GHANA



UNIVERSITY OF IBADAN



Murdoch
UNIVERSITY



VISION

Strategic higher education and research partnerships achieving distinct, innovative and sustainable solutions to challenges facing Australia and Africa.

MISSION

To strengthen and enhance targeted Australia-Africa partnerships through a network of collaborative research and education initiatives. AAUN will improve capacity and connectivity of academic talent across the two continents. By working with Universities and research institutions, business and government, AAUN will contribute sustainable solutions to mutual challenges.

VALUES

Innovation

Grow and support a culture of discovery and innovation.

Collaboration

Foster open and supportive teamwork for global benefit.

Equity

Promote equal, inclusive partnerships in education and research.

Sustainability

Deliver evidence-based options for policy development.



OBJECTIVES AND STRATEGIES

SCALE UP AUSTRALIA AFRICA INSTITUTIONAL RESEARCH PARTNERSHIPS

Partners – expand carefully from 10 to 15 on each continent and a few (5) global partners for mutual benefit in capacity, exchange, impact and resources.

Program – build sustainable teams and programs from 53 –70. Hold 2 major annual Fora (Australia and Africa) each year, and up to ten project workshops.

People – develop individuals and teams to lead innovation and impact.

Research – build new capacity and reach in climate change, blue economy.

Resources – attract further investment to the Partnership Research and Development Fund from governments and international agencies.

STRENGTHEN THE ACADEMIC AND LEADERSHIP CAPACITY OF AAUN PARTNERS

Mobility – Expand two-way mobility to build capacity and opportunity

Scholarships – enable the Australian Awards, support returning scholars, and engage alumni groups.

Leadership – assist with University development in academic leadership and exchange, focusing on research leaders and early career researchers.

Gender – ensure fair access, inclusion and advancement at all levels.

Assessment – establish regular monitoring and support for quantitative and qualitative measures that assist individuals and teams to achieve objectives.

BRING AN EVIDENCE-BASED, INFLUENTIAL VOICE FOR POLICY DEVELOPMENT

Develop – policy briefs and options in key areas of expertise. Study global policy frameworks and events that are relevant to AAUN development.

Engage – with industry, government and civil society through joint events and actions to meet Australia Africa challenges. Implement a significantly enhanced communications, media and social media program.

PROVIDE AN INTELLIGENCE AND ADVISORY PORTAL FOR EXPERTISE ON AUSTRALIA AFRICA ISSUES

Establish – a prominent voice in intelligence, information, communications and media, with briefs as an advisory portal for sectoral developments.

Mentor – set up a portal to connect mentors and students in facilitating mobility and sustained success between participating individuals and institutions.

AAUN FUTURE DIRECTIONS ACTION PLAN 2020

Each year we bring our annual report for the past year, current strategic plan and future directions for the next year to the AAUN Council and Community. This is essential consultation in bringing together ideas and innovation from our research and education communities. The actions here are proposed for adoption at the AGM on 2 September 2019. The actions focus on 2020 in implementing the Strategic Plan 2020–2022.

1. PARTNERSHIP (1)

AAUN will expand its partnership from 10 to 15 members on each continent by 2020, providing greater reach, capacity and talent for our research and education programs. The criteria for membership must be formally signed, including payment of subscription, commitment for 5 years in first instance and 1-year notice of withdrawal. Commitment to engage is essential, including a representative member of Council, an on-campus coordinator, participation in Fora and workshops, promotion on campus within and between partners, enabling mobility and experience for staff and students – aligned with partner university international strategies.

2. PARTNERSHIP (2)

At AGM 2018, it was agreed to explore carefully the proposal to invite up to five global partners, who could bring new and relevant education and research capacity to AAUN. The two-way benefits must be clear and include the above criteria. Facilitation is required in joint proposals to agencies such as the EU, GRFUK, Development agencies, Foundations and Philanthropy. Any such initiative must not dilute or distract from the Australia Africa brand and distinction of AAUN.



3. GOVERNANCE

The AAUN has worked from the start as an equal partnership of leading research Universities, with mirror-image steering groups and small, part time secretariats based in Sydney and Pretoria. As there has been a 2019 leadership change in Pretoria, and funding to 2021 has been achieved in both Africa and Australia, we propose to leave the arrangements until AGM 2020 when further change may be considered. More importantly, with legal and accountant advice, I will bring an option to the AGM that it is time AAUN incorporate in Australia as a not for profit educational organisation. This would allow a business number and bank account, with greater transparency, control and economic efficiency than at present. Our steering groups would become a Council.

4. RESEARCH AND EDUCATION

AAUN has adopted a set of programs and topics since 2012 that reflects only a small part of the expertise of its members and is related to the areas of funding and the priority interests of government and agencies. We can establish a small working group to (i) review progress and impact of the existing 53 programs initiated by the PRDF; (ii) conduct a high level survey of the strengths and ambitions of our partners; (iii) determine the maximum areas of benefit to established and emerging researchers; and (iv) take a reality check on the appropriate levels of engagement with policy frameworks including the SDGs, Belt and Road Initiative, Africa Agenda 2063, Australian International and Indo Pacific policies. The realities of funding should also be considered.

5. ASSESSMENT

As a prelude/adjunct to the above review, we will carry out an assessment of AAUN activities and impact 2013-19 (7 years), using both quantitative and qualitative approaches. The conventional quantitative approaches are easier – albeit requiring careful management of variables in membership, participation and leadership. I have explored this part of the assessment with Natalie Mast, until recently with the University of Western Australia. The qualitative assessment, which again needs to be appropriate to research impact with Australia-Africa characteristics, can be a survey that elicits the past experience, benefits and obstacles, and the future aspirations and priorities of AAUN.



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WESTERN SYDNEY SYMPOSIUM

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PRETORIA 2020
AAUN AFRICA

PLACEHOLDER
PERTH 2020
AAUN AUSTRALIA

AAUN AUSTRALIA AFRICA

UNIVERSITIES NETWORK



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 IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD



Curtin University



UNIVERSITY OF GHANA



UNIVERSITY OF IBADAN

MAKERERE



UNIVERSITY



UNIVERSITY OF MALAWI



UNIVERSITY OF MAURITIUS



THE UNIVERSITY OF MELBOURNE



Murdoch
 UNIVERSITY



THE UNIVERSITY OF NEWCASTLE AUSTRALIA



UNIVERSITEIT VAN PRETORIA
 UNIVERSITY OF PRETORIA
 YUNIBESITHI YA PRETORIA



THE UNIVERSITY OF QUEENSLAND AUSTRALIA



THE UNIVERSITY OF SYDNEY



UNSW AUSTRALIA



UTS UNIVERSITY OF TECHNOLOGY SYDNEY



Tshwane University of Technology
We empower people



THE UNIVERSITY OF WESTERN AUSTRALIA

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