

PNG IMPACT

RESEARCH • INNOVATION • SOCIETY

2019 Conference Program & Abstracts

3-4 December 2019

Co-hosted by the University of Papua New Guinea and James Cook University
At UPNG, Waigani Campus



THE UNIVERSITY OF PAPUA NEW GUINEA



JAMES COOK
UNIVERSITY
AUSTRALIA

UPNG-JCU Twinning Partnership
Collaborating to advance life in the tropics



PNGAus Partnership

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Welcome from the

PNG IMPACT CO-CONVENORS

Dr Anna Joskin and Distinguished Professor Stewart Lockie

Conference Program Committee

The University of Papua New Guinea

Dr Anna Joskin

Associate Professor Victor Temple

Professor Simon Saulei

Dr Joyce Rayel

Ms Edith Monagi

Mr Nicholas Mirou

James Cook University

Distinguished Professor Stewart Lockie

Associate Professor Jeff Warner

Dr Theophilus Iyke Emeto

Dr Jennifer Gabriel

Local Arrangements Committee

Dr Anna Joskin

Mr Gabriel Porolak

Mr Isaac Manu

Mr Jim Robins

Mr Raymond Samson

Ms JoAnne Kutapai

Ms Joycelyn Mark

Mr Don Rauweu

Mr Matthew Kippot

Mr Teio Same

Mr Vele Kila

Mr Ravu Geno

Ms Grace Guaigu

Mr Isaac Manu

UPNG-JCU Twinning Partnership Team and conference support

Dr Jennifer Gabriel

Ms Vyvyen Wong

Mr Gabriel Porolak

ABOUT PNG IMPACT

Research and education across all disciplines are essential to realizing global and national commitments to sustainable development. Knowledge, design and innovation are as important to governance, peace, safety, health and environmental integrity as they are to economic growth and poverty alleviation. As ICT, energy and bio-technologies transform the ways in which people interact, move and work, worldwide, new opportunities are emerging, both to utilize and to protect, PNG's unique human and natural endowments.

Capitalizing on these opportunities will require more than simply doing more research. At **PNG IMPACT**, speakers and delegates will consider how research can be designed, coordinated and communicated to deliver more societal benefit. Recognizing that no one approach is relevant across all disciplines and issues, case studies will be presented from a diversity of perspectives, with ample time dedicated to dialogue and networking.

PNG IMPACT will:

- Showcase a cross-selection of active research projects, across the sciences, social sciences and humanities, delivering significant societal benefits for PNG.
- Promote dialogue concerning how research and research policy can best support aspirations for a safe, inclusive and sustainable society.
- Provide a platform for network-building among researchers, research institutions and research stakeholders who are active in PNG.

The conference sub-themes for 2019 are:

HEALTH AND SOCIETY

- **Maternal health and medical innovations**
- **Health service delivery and social wellbeing**
- **Public health and clinical diagnosis of health**
- **Social and cultural dimensions of health**

DEVELOPMENT IN PNG

- **Governance and nation building**
- **Community and economic development**
- **Rural entrepreneurship and inclusive growth**
- **Human resources development**

NATURAL AND PHYSICAL SCIENCES

- **Ecology**
- **Wildlife conservation and management**
- **Mangroves and fisheries**
- **Technology and protected areas**

EDUCATION IN PRACTICE

- **Technology Enabled Learning**
- **Education: access and impact**
- **Education: curriculum and innovation**
- **Inclusive research**

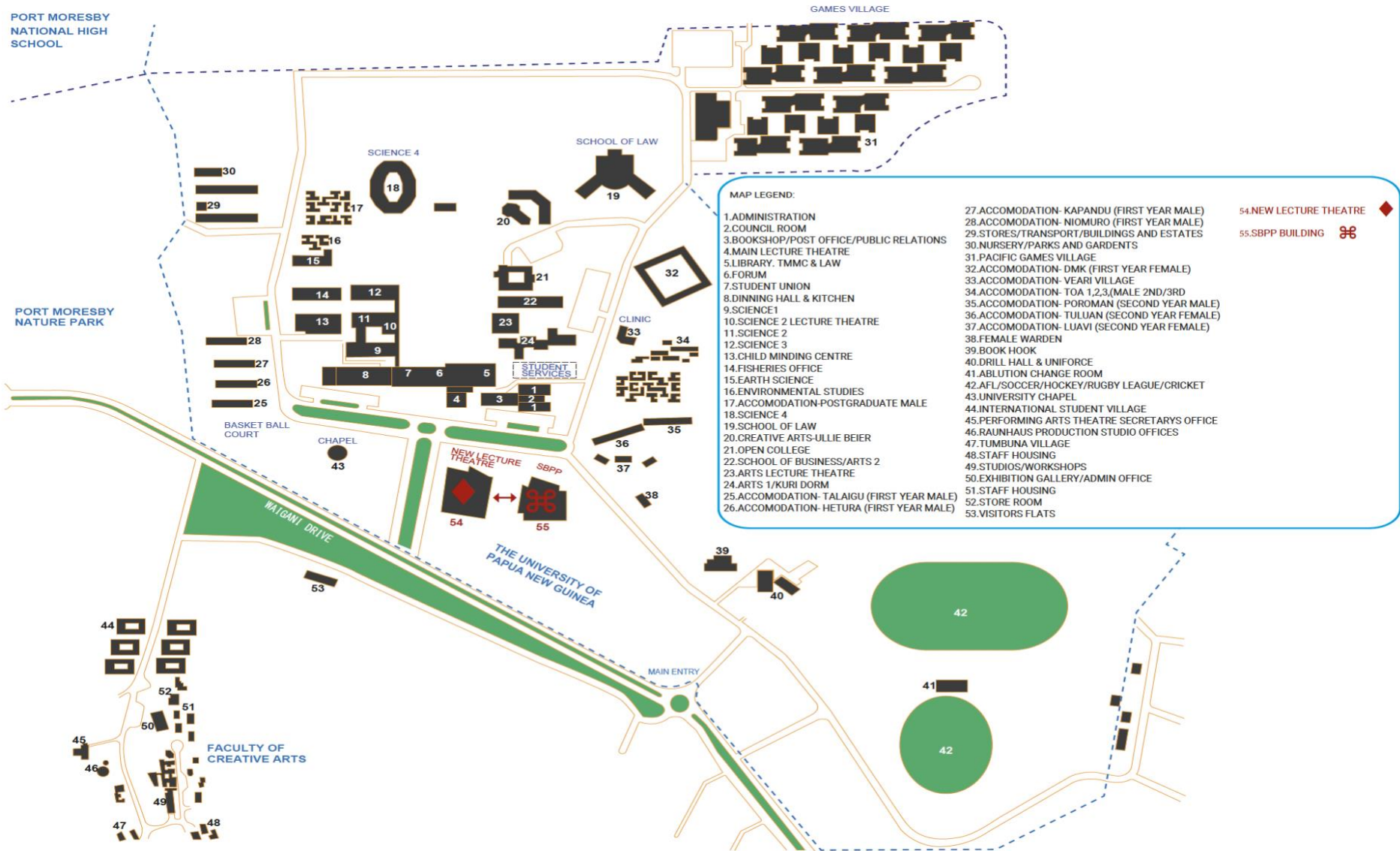
SOCIAL SCIENCES AND LIVELIHOODS

- **Livelihoods and community development**
- **Political ecology of natural resources**
- **Social dimensions of natural disasters**
- **Cultural heritage and community identity**

UPNG-JCU TWINNING PARTNERSHIP GDRM GRADUATE DIPLOMA OF RESEARCH METHODS

- **Contemporary research at UPNG**

MAP OF THE UNIVERSITY OF PAPUA NEW GUINEA



KEYNOTE AND PLENARY SPEAKER PROFILES



Mr Bruce Davis is the Australian High Commissioner to Papua New Guinea. Until recently, Mr Davis was Vice-President of the Asian Development Bank. He has also served overseas as Australian Ambassador to Ireland and as Deputy Secretary General of the Pacific Islands Forum. Mr Davis was Director-General of the then Australian Agency for International Development (AusAID) from 1999 until 2009. Mr Davis holds a Bachelor of Arts in History and Political Science from the University of Queensland. He received the Public Service Medal in 2004 and became a Member of the Order of Australia in 2009 for service to international relations through leadership of AusAID and the development and reform of Australia's overseas aid programs.



Dr Kilala Devette-Chee is a Senior Research Fellow and Program Leader of the Universal Basic Education Research Program at the Papua New Guinea National Research Institute in Port Moresby (PNG NRI). She holds a PhD in Educational Linguistics and Masters in English Language teaching from the University of Canberra and Post Graduate Diplomas in Linguistics & Applied Linguistics from the Australian National University. She also has a Certificate in Knowledge Co-Creation Programs on Capacity Development for the Analyses of Education, Policy Making and its Effects from the University of Hiroshima, Japan and Chiang Mai University in Thailand. Her vast experience in education has enabled her to be part of the Global Network of Partners in Education where she is the South Pacific Female Representative in the Asia South Pacific Association for Basic and Adult Education's (ASPBAE) Executive Council and is the Vice Chair of the PNG Education Advocacy Network that advocates for action towards inclusive and equitable quality education and promotes lifelong learning for all.



Professor Paul Fleming is an academic health promotion specialist. His career began in high school teaching and quickly progressed onto health promotion. As a health promotion specialist, he has held senior roles in health promotion field work, including the Training and Professional Development Manager for the Health Promotion Agency of Northern Ireland. It was in this role that he was seconded to the University of Ulster to establish a Masters' in Health Promotion. He has held leadership roles at Ulster and Southampton Universities, UK, and the University of Canterbury, New Zealand where he was Pro Vice-Chancellor for Science. Professor Fleming holds a PhD from the University of Ulster and has a strong publishing record of academic journal articles, book chapters and has co-written two text books on health promotion.



Robert Igara is the Chancellor of Interim Council of the University of Papua New Guinea. Among his many leadership roles, he served in the Papua New Guinea national public service from 1976 – 2002 in various capacities including as the Secretary of the Department of Prime Minister & National Executive Council and subsequently as Chief Secretary to Government from 1997 – 2002, Secretary Department of Trade & Industry, Director of the Office of International Development Assistance of the Department of Finance & Planning, as First Assistant Secretary Department of Foreign Affairs & Trade including as Counsellor in Papua New Guinea High Commissions in Suva, Fiji and Canberra, Australia.



Professor Frank Keith Griffin is the Vice Chancellor of UPNG. He holds a Bachelor of Science, a Post Graduate Diploma in School Counselling (PGDSc), a Masters in Science (MSc) and a Doctor of Philosophy (PhD). He has held positions including Executive Dean of the School of Natural and Physical Sciences, Regional Coordinator for the SPREP's Waste Management program in the Pacific Region, Research Officer and Lecturer. He specializes in Synthetic Organic Chemistry, Environmental Chemistry and General Chemistry. His expertise lies in policy development on environmental issues, institutional change management processes, academic course development and program management including monitoring and evaluation.



Dr Anna Joskin is the 2019 PNG IMPACT Conference Co-convenor, and, currently the Acting Dean of Research & Post-Graduate Centre at UPNG with a PhD in 'Education'; an MA in 'English Language Teaching' and a Post-Graduate Diploma in 'TESOL'. Additionally, Anna has a Graduate Certificate in teaching 'Science Communication', and, a 'Bachelor of Education' (1997), and an 'Advance Diploma' & 'Diploma' in teaching language & literature in PNG secondary schools. This year, 2019 provides Anna with 33 years of experience as an educator in the contexts of teaching English as a subject in high and secondary schools, a primary teachers' college, a private secondary school, and currently, at UPNG.



Dr Evelyn Lavu has vast experience in service delivery, teaching, research and leadership in various organizations in her career in Papua New Guinea. She is a Haematologist and a Public Health doctor and heads the Central Public Health Laboratory (CPHL) with the National Department of Health. In PNG she has led in improving diagnosis of human immunodeficiency virus, malaria, tuberculosis (TB) and vaccine preventable diseases measles and rubella. Her current interest in research is collaboration with Australian researchers with funding from the Australian National Medical Research Council (NHMRC) include drug resistance conferring mutations in drug resistant TB (DR-TB) in PNG and transmission pathways of TB in PNG, a public health infection of concern. Others include PI in Human Papilloma virus (HPV) in Cervical cancer. Recently she started her research in drug resistant conferring mutations and *Mycobacterium tuberculosis* lineages in Papua New Guinea as part of her PhD program.



Distinguished Professor Stewart Lockie is the Director of JCU's Cairns Institute. He began his research career investigating the evolution and impacts of environmental policy in agriculture. This has since been extended to studies of biodiversity conservation, environmental standards, markets in ecosystem services, food security, coastal management, resource development, management of natural and industrial hazards etc. His work is multidisciplinary, high impact and focussed on critical issues associated with global social and environmental change. Professor Lockie is involved in numerous leadership activities both within and external to the University including a President of the International Sociological Association's Research Committee on Environment and Society and a member of the International Council for Science's Committee for Scientific Planning and Review.



Dr Andrea Lynch is an experienced educator having worked within the Australian school and higher education sectors. Andrea has undertaken multiple roles in higher education and has led the Teaching Quality component of the UPNG-JCU Twinning Partnership funded by the Australian Government. Andrea's whole-of-institution approach for supporting student learning and transition to university was nationally recognised in 2016 through an Australian Award for University Teaching, Programs that Enhance Student Learning. Andrea also serves on the Executive of the Australian Association for Language and Learning and has a key role in the International Consortium for Academic Language and Learning Development's evaluation committee.



Honourable James Marape, MP is the Prime Minister of Papua New Guinea. He graduated with a Bachelor in Arts Degree from the University of Papua New Guinea (UPNG) in 1993, and holds a Post Graduate Honours Degree in Environmental Science in 2000 from the UPNG. Previously held the position as Minister for Finance until 11th April 2019. He is the 8th Prime Minister for the Independent State of Papua New Guinea, Minister for Sports, 3rd Term in this Parliament.



Professor Teatulohi (Lohi) Matainaho is the Chairman and Chief Executive Officer of the PNG Science and Technology Council. He completed his PhD in Pharmacology. He has been Professor of Basic Medical Sciences and Pharmacology and served as Dean of Research at UPNG. As the Chief Science Advisor, he is tasked with coordination of scientific and technological advice to Government and informing on the vital role of research and innovation in achieving social, health, economic and environmental outcomes.



Dr William Pomat fulfils several roles in his academic life including the Deputy Director of Science and Research at PNGIMR, heads the Environmental and Emerging Disease and Infection and Immunity Units as well as oversees the running of PNGIMR's Institutional Review Board (ethics). He is Honorary Research Fellow at Telethon Kids Institute, Adjunct Professor at Kirby Institute and at JCU's Australian Institute of Tropical Health and Medicine. Dr Pomat brings a strong record of effectively collaborating with international partners to conduct high quality research under very challenging conditions. He has published in high impact journals to positively impact policy, particularly in the area of immunization and microbiology.



Professor Maxine A. Whittaker, MBBS, MPH, PhD, FAFPHM is the Dean of the College of Public Health, Medical and Veterinary Sciences and Deputy Director of the Australian Institute for Tropical Health and Medicine at James Cook University and Co-Director of the WHO Collaborating centre on Vector Borne and Neglected Tropical Diseases. She was previously a Programme Director of the Australian Initiative on Control and Elimination of Malaria/Pacific Malaria Initiative Support Centre, co-Secretariat of the Asia Pacific Elimination Network and has lived in several African, Asian and Pacific countries, including Papua New Guinea. Her research interests include operational and health services and medical anthropology, with a primary focus on infectious diseases including malaria, sexual and reproductive health, health seeking behaviour and quality of care.

CONFERENCE PROGRAM

DAY ONE - TUESDAY 3 DEC - PNG IMPACT CONFERENCE

7:30–9:00	<i>Registration desk open & music and dancing</i>				
9:00-10:30	OPENING PLENARY SESSION Chair: Professor Frank Griffin, UPNG VC				
9:00–9:05	Prayer with Reverend Daryl Boyd. National Anthem and pledge				
9:05–9:15	Conferencing opening and acknowledgements by PNG IMPACT Co-conveners Dr. Anna Joskin and Distinguished Professor Stewart Lockie				
9:15–9:30	A welcome to the University of Papua New Guinea by the UPNG Chancellor, Mr Robert Igara				
9:30–10:15	A welcome to Papua New Guinea from the Hon. Prime Minister James Marape				
10:15–10:30	Supporting higher education and research capacity in PNG by the Australian High Commission representative				
10:30–10:55	Morning tea				
<i>Please make your way to the next session</i>					
11:00–12:30	PLENARY SESSION 2 Chair: Professor Paul Fleming, UPNG PVC RESEARCH IMPACT				
11:00–11:30	Conceptualising Research Impact by Distinguished Professor Stewart Lockie				
11:30–12:00	<i>Professor Teatulohi Matainaho</i>				
12:00–12:30	<i>Professor Frank Griffin</i>				
12:30–1:25	Lunch				
<i>Please make your way to the next session</i>					
1:30–3:00	PARALLEL SESSIONS 1				
SESSION 1A NLT Health & Society	SESSION 1B UG02 Development	SESSION 1C UG07 Education in Practice	SESSION 1D LG02 Health & Society	SESSION 1E LG04 Social Science	SESSION 1F LG05 GDRM
3:00-3:25	Afternoon tea				
<i>Please make your way to the next session</i>					
3:30-5:00	PARALLEL SESSIONS 2				
SESSION 2A NLT Health & Society	SESSION 2B UG02 Development	SESSION 2C UG07 Education in Practice	SESSION 2D LG02 Health & Society	SESSION 2E LG04 Social Science	SESSION 2F LG05 GDRM
<i>End of Day One</i>					

DAY TWO - WEDNESDAY 4 DEC - PNG IMPACT CONFERENCE

8:00-9:00	<i>Registration desk opens</i>				
9:00-10:30	PLENARY SESSION 3			Chair: Professor Maxine Whittaker	
	HEALTH AND HUMAN SERVICES				
9:00-9:30	Reflections on National Public Health Policy and the impact of research supporting PNG National Health Plan 2011-2020 by <i>Professor William Pomat, Director, Papua New Guinea Institute of Medical Research (IMR)</i>				
9:30-10:00	Transmission of drug resistance Tuberculosis in Papua New Guinea by <i>Dr Evelyn Lavu, National Department of Health</i>				
10:00-10:30	<i>Dr Kilala Devette-Chee, Papua New Guinea National Research Institute</i>				
10:30-10:55	Morning Tea				
<i>Please make your way to the next session</i>					
11:00-12:30	PARALLEL SESSIONS 3				
SESSION 3A NLT Health & Society	SESSION 3B UG02 Natural & Physical Sciences	SESSION 3C UG07 Education in Practice	SESSION 3D LG02 Education in Practice	SESSION 3E LG04 Social Science	SESSION 3F LG05 GDRM
12:30-13:25	Lunch				
<i>Please make your way to the next session</i>					
13:30-15:00	PARALLEL SESSIONS 4				
SESSION 4A NLT Health & Society	SESSION 4B UG02 Natural & Physical Sciences	SESSION 4C UG07 Education in Practice	SESSION 4D LG02 Education in Practice	SESSION 4E LG04 Social Science	SESSION 4F LG05 GDRM
3:00-3:25	Afternoon tea				
<i>Please make your way to the next session</i>					
3:30-5:00	CLOSING PLENARY SESSION			Chair: Professor Father Jan Czuba	
3:30-3:50	The Impact of Researching Higher Education Teaching Practice: Reflections from the UPNG-JCU Twinning Partnership by <i>Dr Andrea Lynch, UPNG-JCU Twinning Partnership</i>				
3:50-4:30	Reflections on impact of research for Higher Education, Panel on Scholarship of Teaching and Learning				
4:30-5:00	Closing remarks & synopsis			By Professor Paul Fleming, UPNG PVC	
<i>End of 2019 PNG IMPACT Conference</i>					

DAY ONE - PARALLEL SESSIONS ONE – TUESDAY [1:30PM TO 3:00PM]

	SESSION 1A - NLT HEALTH AND SOCIETY	SESSION 1B - UG02 DEVELOPMENT IN PNG	SESSION 1C - UG07 EDUCATION IN PRACTICE	SESSION 1D - LG02 HEALTH AND SOCIETY	SESSION 1E - LG04 SOCIAL SCIENCE AND LIVELIHOODS
1:30-1:45	1 Prof. Maxine Whittaker. <i>What can be Done About the Continued Preventable Maternal Deaths in PNG?</i>	1 Dr Torres Woolley. <i>Social Return on Investment Impact Evaluations: The Gold Standard Methods for Monetaring the Value of Social and Economic Benefits from a Community Development Project</i>	1 Dr Bienvenido Abad. <i>Human-Computer Interaction: From Learning to Utilization: A View in Enga Province, PNG</i>	1 Mrs Nayma Sultana. <i>Assessment of Cardiovascular Risk Factors in Apparently Healthy Adults in the NCD PNG and Their Association with Behavioural Factors</i>	1 Ms Primas Kapi. <i>A Critical Examination of CBOs and Capacity Building in PNG</i>
1:45-2:00	2 Ms Donna Hovey. <i>Neonatal Nurses - The Potential Impact for Small and Skin Newborns</i>	2 Mr Teddy Winn. <i>Investigating the Corruption in PNG Through the Patron-Client Structure: The Citizen's Perceptions</i>	2 Dr Kainaro Kravia. <i>Using a Transformative Paradigm Research Approach to Investigate G&C Services in PNG Schools</i>	2 Ms Loto Losenamo. <i>Men's Perception of Pregnancy. A Study of Views of Lufa Men in PNG</i>	2 Ms Melissa Riven. <i>Assessing the Awareness and Prevalence of Gender-Based Violence Among Female Students in UPNG</i>
2:00-2:15	3 Sister Lucy Mahabi. <i>Psychological preparedness and support during labour for pregnant women in the Eastern Highlands</i>	3 Mr Joelson Anere. <i>What is the Impact of PNG's Leadership on the PIF, MSG, and Donor Partners if "Take Back PNG and Work the Pacific" was Adopted as a Foreign Policy</i>	3 Mr Michael Pepen. <i>Re-designing Student Learning Experiences in a Satellite Study Campus with the Possible Use of the Commonwealth of Learning (COL) APTUS Device.</i>	3 Ms Monica Sungu. <i>The Impact of Coliform Bacteria in Restricted Drinking Water Sources in PNG: A Mixed Community-Based Study in Angabanga, Central Province</i>	3 Mrs Geejay Milli. <i>A Study of UPNG Students Perceptions of Gender Imbalance and the Bride Price System in PNG</i>

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2:15-2:30	4 Mr David Kisambo. <i>Assessment of Anaemia and Iron Status Amongst Pregnant Women in NCD - A Clarion Call</i>	4 Mr Pes Wilson. <i>An Assessment of National Settlement Situation in PNG</i>	4 Dr Bienvenido Abad. <i>The Use of Moodle e-Learning Platform in PNG</i>	4 Ms Rachel Payne. <i>Integrating Sports and Hygiene Promotion in Papua New Guinean Primary Schools: A Behaviour Change Study</i>	4 <i>Discussion</i>
2:30-2:45	5 Ms Joanna Sumbis. <i>Investigating Iodine Status Among Non-Pregnant and Pregnant Women Residents in Kotidanga Kerema District, Gulf Province PNG</i>	5 Ms Wilma Molus. <i>Roles and Challenges of Women Vendors in Informal Settlements in PNG</i>	5 Mr Shaik Jainul-Abideen. <i>Delivery of ICT courses in Open College Using Technology Enabled Learning (TEL)</i>	5 <i>Discussion</i>	5 Mr Bomai Witne. <i>Understanding Sorcery Accusation Related Violence: The Experience of the Yuri People of Gumine District of Simbu Province in PNG</i>
2:45-3:00	6 Ms Donna Hovey. <i>The Impact of Low-Dose High-Frequency Helping Babies Breathe Training in PNG</i>	6 Mr Michel Guka. <i>Will Special Temporary Measure (Reserve Seats) Work in Papua New Guinea? Lessons from Rwanda</i>	6 Mr Isaac Manu. <i>Bringing University Education to Students Through the Use of Technology</i>	6 <i>Discussion</i>	6 <i>Discussion</i>

DAY ONE - PARALLEL SESSIONS TWO – TUESDAY [3:30PM TO 5:00PM]

	SESSION 2A - NLT HEALTH AND SOCIETY	SESSION 2B - UG02 DEVELOPMENT IN PNG	SESSION 2C - UG07 EDUCATION IN PRACTICE	SESSION 2D - LG02 HEALTH AND SOCIETY	SESSION 2E - LG04 SOCIAL SCIENCE AND LIVELIHOODS
3:30-3:45	1 Ms Rose Mayaune. <i>Incidence of Substandard Amoxicillin Oral Dosage Forms in the NCD of PNG. Part1: Survey Protocol and Product Inspection</i>	1 Dr Vijayanandh Rajamanickam. <i>Use of technologies in agriculture</i>	1 Mr Russel Kitau (Snr). <i>A Case Study on the Challenges, Opportunities and Lessons Learnt for National Research and Policy Implementation in PNG</i>	1 Dr David Inaho. <i>Rugby League Related Deaths in PNG. A Retrospective Study</i>	1 Mr Ponsie Yasaro. <i>Processes and benefits of Marine-Protected Area and its Application to Local Context</i>
3:45-4:00	2 Dr Sherryl Robertson. <i>Incidence of Substandard Amoxicillin Oral Dosage Forms in the NCD of PNG. Part2: Physiochemical Compliance</i>	2 Ms Vincianna Andrew. <i>Q-SEEDLING Training for Smallholder Nursery Productions in the Highlands</i>	2 Mr Teio Same. <i>Seeking Development of an Academic Library Consortium in PNG</i>	2 Dr Sailas Tumu. <i>Assessment of Oral Health Knowledge and Care Practices of Grades 7 and 8 Students of Two Urban Primary Schools in Kundiawa in Simbu Province</i>	2 Ms Fiona N'Drower. <i>Collaborative and Inclusive Participation at the Local Level</i>
4:00-4:15	3 Mr Jayson Wau. <i>Prevention of Insect Borne Diseases in PNG Through Local Repellent Production from Essential Oils</i>	3 Dr Ramakrishna Akkinapally. <i>Rural Entrepreneurship for Inclusive, Equitable and Sustainable Growth in PNG</i>	3 Mrs Ruth Pape. <i>Assessment in rubrics in Health Science Education at the School of Medicine and Health Sciences UPNG</i>	3 Dr Albert Gudapati. <i>Quality of Life-Regional Disparities: An Empirical Study with Reference to South Pacific Developing Countries</i>	3 Mr Kirt Hainzer. <i>Case Study of an International Farmer to Farmer Knowledge Exchange tour</i>

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4:15-4:30	4 Dr Karen New. <i>Nurturing Care, Nutrition and Neurodevelopment</i>	4 Mrs Dorothy Luana. <i>Transforming Rural Farmer Opportunities into Cash - One Woman's Effort</i>	4 Mrs Francisca Varpit. <i>Reasons for Plagiarism Among Bachelor of Medical Laboratory Students at UPNG</i>	4 Mr Russell Kitau (Jnr). <i>The challenges, opportunities and lessons learnt in implementing Public-Private Partnership for better health service delivery in PNG: A case study</i>	4 A/Prof. Susan McIntyre-Tamwoy. <i>Intangible Cultural Heritage Bringing Culture, Nature and People Together to Build Sustainable Local Communities</i>
4:30-4:45	5 Mr Issac Ramson. <i>A Study to Determine the Cause of Work-Related Low Back Pain and Musculoskeletal Discomfort Experienced by Industry Workers in PNG</i>	5 Ms Joy Deguara. <i>PNG Agricultural Women Capacity Building. A People to People Perspective.</i>	5 Mr Tuai Erape. <i>Is the DHERST Online Grade 12 Students Selection for Higher Education Institutions (HEIs) Fair in the Distribution of Access That is Inclusive of All Provinces?</i>	5 A/Prof David McLaren. <i>How does male circumcision protect against HIV in PNG?</i>	5 A/Prof. Simon Foale. <i>Whose Biodiversity? Using Research on Local Language Names of Marine and Terrestrial Fauna to Mediate Value and Sovereignty of Nature in a Proposed World Heritage Site in the Nakanai Ranges, New Britain</i>
4:45-5:00	6 Mrs Numa Vera. <i>Knowledge, Attitude and Behaviour Towards Antimicrobial Resistance in the Pacific Islands Countries</i>	6 Mr Raymond John. <i>Foreign Employment and Implications for Human Resource Development in Papua New Guinea</i>	6 Mr Joshua Goa. <i>Exploratory study Behind Factors Contributing to Social Work Students' Low-Quality Essay Writing.</i>	6 Discussion	6 Mr Bensolo Ken. <i>A Framework for Mitigating and Offsetting Impacts on Biodiversity from Industrial Development in PNG</i>

DAY TWO - PARALLEL SESSIONS THREE – WEDNESDAY [11:00PM TO 12:30PM]

	SESSION 3A - NLT HEALTH AND SOCIETY	SESSION 3B - UG02 NATURAL & PHYSICAL SCIENCES	SESSION 3C - UG07 EDUCATION IN PRACTICE	SESSION 3D - LG02 EDUCATION IN PRACTICE	SESSION 3E - LG04 SOCIAL SCIENCE AND LIVELIHOODS
11:00-11:15	1 Ms Deborah Panao. <i>Knowledge, Attitude, and Practices in Sexual and Reproductive Health (SRH) Among Secondary School Children in the National Capital District, PNG.</i>	1 Prof Simon Saulei. <i>The Status of Papua New Guinea's Tropical Rainforests Under Unstable Environmental Conditions.</i>	1 Mrs Naomi Faik-Simet. <i>Exploring Buai as a Resilient Indigenous Method for Creative Learning</i>	1 Mr Gabriel Cherake. <i>Teaching Ethics at UPNG: The Formative Assessment Approach</i>	1 Dr Clara Chin. <i>Population Demographics of and Ethical Attitudes Towards Free Roaming Dog Populations in Port Moresby</i>
11:15-11:30	2 Dr Michelle Redman-MacLaren. <i>Social and Cultural Determinants of Sexual Health in Papua New Guinea: A Critical Poetic Inquiry</i>	2 Ms Leontine Baje. <i>Sustainable Management of Shark Resources of PNG: Socioeconomic and Biological Characteristics of the Fishery</i>	2 Dr Carola Emkow. <i>Indigenous Language Learning and Teaching: An Intercultural Program in the Highlands of PNG and Guatemala</i>	2 Mrs Etuparo Buka. <i>A Reflection on Constructive Alignment in UPNG Undergraduate Medical Education Course</i>	2 Assoc. Prof. Lara Lamb. <i>Hindsight: Repatriating Photographs and Film in the Gulf of PNG</i>
11:30-11:45	3 Ms Agnes Mek. <i>"Olgeta Samting Senis": Extraction, Gender & Sexual Economy in Hela Province, Papua New Guinea</i>	3 Mr Kenneth Cornilius. <i>Application of Community Mapping in Mine-Impacted Communities in PNG: The Case of Mt. Kare Gold/Silver Project Area in Enga Province</i>	3 Dr Vincent Backhaus. <i>Working Towards a Community of Knowledge's - ONETALK</i>	3 Mr Aundo Aitau. <i>Students' View on Editing Skills Lessons Taught in Creative Writing Course in UPNG</i>	3 Ms Anna Safi. <i>Documentation of Tauwade Language of Goilala in Central Province, PNG</i>

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11:45-12:00	4 Ms Rachael Tommbe. <i>Strongim Meri Lida: Strengthening Women Leaders as First Responders to Sexual Health and Wellbeing Issues in PNG</i>	4 Mrs Jean Thomas. <i>Mobile Phone App for PNG's Protected Areas</i>	4 Dr Rachel Aisoli-Orake. <i>Women in Higher Education: A Case of the Papua New Guinea University of Technology</i>	4. Mr John Kamasua. <i>Employment Challenges for UPNG Graduates</i>	4 Dr Daniela Vavrova. <i>Reflecting on Collecting: Creating Relationships Through Heritage Objects</i>
12:00-12:15	5 Ms Agnes Mek. <i>Young and Positive: Living with HIV in Papua New Guinea</i>	5 Dr Lilly Sar. <i>Dynamics of Indigenous Knowledge and Biodiversity Conservation in Rural Communities in Papua New Guinea</i>	5 Mrs John Wanis-Tapura. <i>Creating Place-Based Learning Experiences as a Curriculum Enactment Approach: Way Forward to Achieve PNG Vision 2050. [An Extract of a Progressive PhD Thesis at JCU]</i>	5 Mrs Sharon Torao-Pingi. <i>An Evaluation of the Effectiveness of Continuous Assessments & Feedback Strategies in Promoting Student Learning in a First Year Mathematics Course</i>	5 Discussion
12:15-12:30	6 Ms Francisca Varpit. <i>A Serological Survey of Selected PNG blood Donors for Hepatitis B and Related Co-Infections</i>	6 Discussion	6 Ms Susan Gasson. <i>A Collaborative Research Framework Approach to Creating a Sustainable Collaborative Research Culture in PNG</i>	6 Discussion	6 Discussion

DAY TWO - PARALLEL SESSIONS FOUR – WEDNESDAY [1:30PM TO 3:00PM]

	SESSION 4A - NLT HEALTH AND SOCIETY	SESSION 4B - UG02 NATURAL & PHYSICAL SCIENCES	SESSION 4C - UG07 EDUCATION IN PRACTICE	SESSION 4D - LG02 EDUCATION IN PRACTICE	SESSION 4E - LG04 SOCIAL SCIENCE AND LIVELIHOODS
1:30-1:45	1 Ms Carolyn Kawale. <i>Sociodemographic Factors Associated with TB Health Literacy Among the People of Suai LLG, Sinasina District, Chimbu Province</i>	1 Mr Jaspah Sua. <i>The Effects of Fungi, Herbivore and Predator on the Secondary Succession of Tropical Lowland Forest Vegetation of Madang Province</i>	1 Mr Jerome Oko. <i>An Investigation of Factors Affecting Grade 10 and 12 Mathematics Results in Port Moresby, PNG</i>	1 Mr Patrik Hikin. <i>Understanding Issues for Governance Deficits in Lower and Primary Schools in PNG</i>	1 Mr Brian Brunton. <i>Poverty, Greed and Dysfunctionality: Legal Analysis of Forest Clearance Authorities in PNG</i>
1:45-2:00	2 Mr Gigil Marme. <i>Parents' Perspective of Social Determinants Affecting Childhood Immunization in Oro Bay Rural in Ijivitari District of Oro Province</i>	2 Mr Gibson Aubona. <i>The Effect of Corn-Based Microplastic Beads on the Life History Traits of Chironomus Riparius (Non-Biting midge)</i>	2 Dr Francis Pulsan. <i>Does a Problem-Based Learning MBBS Curriculum Prepare Resident Medical Officers for Paediatric Practice in Papua New Guinea</i>	2 Mrs Eva Wangihama. <i>Agriculture as a Subject in the Primary School Curriculum</i>	2 Ms Kylie Sesuki. <i>Community Reactions and Attitudes to Livelihoods and Resource Mapping Research in Pomio, East New Britain PNG</i>
2:00-2:15	3 Dr Marie McAuliffe. <i>Primary Healthcare in PNG: JCU Nursing and Midwifery in Partnership with YWAM Medical Ships</i>	3 Dr Clyde Puilingi. <i>Tetrodotoxin Studies and Screening of Bioactive Compounds in Marine Organisms from Solomon Islands</i>	3 Mrs Jessica Wohiemani. <i>Reconsider Focus of English Teaching to Address the Current Decline in English Proficiency Standards in PNG</i>	3 Mrs Olga Temple. <i>Effect of Age of Onset (AO) of English Language Acquisition on the Academic Performance of University of Papua New Guinea Students</i>	3 Ms Barbara Ann Apisai. <i>Palm Oil and Contribution to Local Communities in East New Britain: Nucleus Estate vs Smallholder</i>

	SESSION 4A - NLT HEALTH AND SOCIETY	SESSION 4B - UG02 NATURAL & PHYSICAL SCIENCES	SESSION 4C - UG07 EDUCATION IN PRACTICE	SESSION 4D - LG02 EDUCATION IN PRACTICE	SESSION 4E - LG04 SOCIAL SCIENCE AND LIVELIHOODS
2:15-2:30	4 Dr Stephanie Deklin. <i>Undiagnosed Pre-diabetes and Diabetes in New Ireland Province: The Insidious Impact of Disease Burden in Healthcare Workers</i>	4 Dr Lawong Balun. <i>Study on the Carbon and Taxa Diversity of the Hall Sound Bay Mangrove in the Hall Sound Bay (HSB), Kairuku District, Central Province</i>	4 Mr Nehemiah Akia. <i>Enhancing Students' Essay Writing Skills: A Pilot Research Project.</i>	4 Ms Dora Kialo. <i>A PNGUOT Socio- Nethnographic Virtual Community of Practice Didactic</i>	4 Mr Fidelis Porika. <i>Land Grabbing: Implications on the Proposed Bootless Bay Marine Protected Area</i>
2:30-2:45	5 Ms Gill Mibus. <i>Difficulties Screening for Gestational Diabetes Mellitus in Low Resource Settings. What's the Impact?</i>	5 Discussion	5 Ms Helen Setu. <i>The Writing Needs of First Year Students at UPNG: A Needs Analysis</i>	5 Mr John Wanis Tapura. <i>PNG Education Yesterday, Today, and Tomorrow Place-Based Education Oriented Teacher Education and Assessment Perceptions in the 21st Century</i>	5 Assoc. Prof David King. <i>Analysis of past Natural Disaster Events in PNG as Analogues for Future Social Impact</i>
2:45-3:00	6 Prof. Usman Malabu. <i>Is Diabetes the Biggest Epidemic of the 21st Century in PNG? Data from New Ireland Province</i>	6 Discussion	6 Discussion	6 Discussion	6 Dr Michael Wood. <i>Creating a New Politics of Disaster? Ulawun Volcano in New Britain PNG</i>

GDRM PARALLEL SESSIONS – TUESDAY TO WEDNESDAY

TUESDAY SESSION 1F - LG05 - GDRM	TUESDAY SESSION 2F - LG05 - GDRM	WEDNESDAY SESSION 3F - LG05 - GDRM	WEDNESDAY SESSION 4F - LG05 - GDRM
1:30-2:00	3:30-4:00	11:00-11:30	1:30-2:00
1 Mr Dunstan Lawihin. <i>Academics' and supervisors' perspectives of the current fieldwork partnership between UPNG Social Work and Fieldwork Agencies</i>	1 Dr Shalon Taufa. <i>Accurate lung function testing in PNG requires validate reference equations to prevent misdiagnosis of chronic lung conditions</i>	1 Mr Michael Kabuni. <i>Political Clientelism: Relationship between Legislative and Executive, and the control of Constituency Development Funds between 2012 and 2017</i>	1 Ms Bethsheba Gima. <i>Understanding the Sociocultural Perspective of Gender Disparity in Mathematics Education in Papua New Guinea</i>
2:00-2:30	4:00-4:30	11:30-12:00	2:00-2:30
2 Mrs Vagi Waiin-Adu. <i>Migration of traditional plant medicines from the Mortlock Atolls of PNG to Port Moresby</i>	2 Mrs Evelyn Kua. <i>The Impact of Educational Facilities on Students' Achievement, Attitude and Behaviour</i>	2 Mr Glen Pumuye. <i>The effects of Sub judice role in the Papua New Guinea Parliament.</i>	2 Ms Shirley Lee. <i>Earthquakes in PNG and their representation in geoscience, narrative and cosmology</i>
2:30-3:00	4:30-5:00	12:00-12:30	
3 Dr Francis Pulsan. <i>Childhood malaria referral from primary and secondary health care services to a tertiary hospital: Port Moresby General Hospital, Papua New Guinea- a case study.</i>	3 Mr Sent Moke. <i>The Governance Issues Relating to PNG Capital Market Transformation: A Case Study Analysis.</i>	3 Mr Russel Yangin. <i>PNG Elections; a narrative of the 2017 general election and the concern for Electoral Integrity</i>	

Under the UPNG-JCU Twinning Partnership, the Graduate Diploma in Research Methods (GDRM) develops and supports research training, skills and activities and collaborative research projects. In these panels, the GDRM participants are presenting their research proposals.

LIST OF SPEAKERS

Surname	First name	Title	Abstract title	Session	Room	Day	Time
Abad	Bienvenido	Dr	Human-Computer Interaction: From Learning to Utilization: A View in Enga Province, Papua New Guinea	1C	UG07	Tue	1:30-1:45
Abad	Bienvenido	Dr	The Use of Moodle e-Learning Platform in Papua New Guinea	1C	UG07	Tue	2:15-2:30
Aisoli-Orake	Rachel	Dr	Women in Higher Education: A Case of the Papua New Guinea University of Technology	3C	UG07	Wed	11:45-12:00
Aitau	Aundo	Mr	Students' View on Editing Skills Lessons taught in Creative Writing Course at UPNG	3D	LG02	Wed	11:30-11:45
Akia	Nehemiah	Mr	Enhancing Students Essay Writing Skills: A Pilot Research Project	4C	UG07	Wed	2:15-2:30
Akkinapally	Ramakrishna	Dr	Rural Entrepreneurship for Inclusive, Equitable and Sustainable Growth in Papua New Guinea	2B	UG02	Tue	4:00-4:15
Andrew	Vincianna	Ms	Q-SEEDLING Training for Smallholder Nursery Productions in the Highlands	2B	UG02	Tue	3:45-4:00
Anere	Joelson	Mr	What is the Impact of Papua New Guinea's Leadership on the PIF, MSG, and Donor Partners if 'Take Back PNG' and 'Work the Pacific' was Adopted as a Foreign Policy?	1B	UG02	Tue	2:00-2:15
Apisai	Barbara Ann	Ms	Palm Oil's Contribution to Local Communities in East New Britain: Nucleus Estate versus Small Holder	4E	LG04	Wed	2:00-2:15
Aubona	Gibson	Mr	The Effect of Corn-based Microplastic Beads on the Life History Traits of Chironomus Riparius (Non-biting Midge)	4B	UG02	Wed	1:45-2:00
Backhaus	Vincent	Dr	Working Towards a Community of Knowledge's – ONETALK	3C	UG07	Wed	11:30-12:00

Surname	First name	Title	Abstract title	Session	Room	Day	Time
Baje	Leontine	Ms	Sustainable Management of the Shark Resources of Papua New Guinea: Socioeconomic and Biological Characteristics of the Fishery	3B	UG02	Wed	11:15-11:30
Balun	Lawong	Dr	Study on the Carbon and Taxa Diversity of the Hall Sound Bay Mangrove in the Hall Sound Bay (HSB), Kairuku District, Central Province	4B	UG02	Wed	2:15-2:30
Brunton	Brian	Mr	Poverty, Greed and Dysfunctionality: Legal Analysis of Forest Clearance Authorities in Papua New Guinea	4E	LG04	Wed	1:30-1:45
Buka	Etu	Mrs	A Reflection on Constructive Alignment in a UPNG Undergraduate Medical Education Course	3D	LG02	Wed	11:15-11:30
Cherake	Gabriel	Mr	Teaching Ethics at the University of Papua New Guinea: The Formative Assessment Approach	3D	LG02	Wed	11:00-11:15
Chin	Clara	Dr	Population Demographics of and Ethical Attitudes Towards Free Roaming Dog Populations in Port Moresby	3E	LG04	Wed	11:00-11:15
Cornilius	Kenneth	Mr	Application of Community Mapping in Mine-Impacted Communities in Papua New Guinea: The Case of Mt. Kare Gold/Silver Project Area in Enga Province	3B	UG02	Wed	11:30-11:45
Degaura	Joy	Mrs	PNG Agricultural Women Capacity Building – A People to People Perspective	2B	UG02	Tue	4:30-4:45
Deklin	Stephanie	Dr	Undiagnosed Pre-diabetes and Diabetes in New Ireland Province: The Insidious Impact of Disease Burden in Healthcare Workers	4A	NLT	Wed	2:15-2:30
Emkow	Carola	Dr	Indigenous Language Learning and Teaching: An Intercultural Program in the Highlands of Papua New Guinea and Guatemala	3C	UG07	Wed	11:15-11:30
Erapae	Tuai	Mr	Is the DHERST Online Grade 12 Student's Selection for Higher Education Institutions (HEIs) Fair in the Distribution of Access that is Inclusive of All Provinces?	2C	UG07	Tue	4:30-4:45

Surname	First name	Title	Abstract title	Session	Room	Day	Time
Faik-Simet	Naomi	Mrs	Exploring Buai as a Resilient Indigenous Method for Creative Learning	3C	UG07	Wed	11:00-11:15
Foale	Simon	A/Prof	Whose Biodiversity? Using Research on Local Language Names of Marine and Terrestrial Fauna to Mediate Value and Sovereignty of Nature in a Proposed World Heritage Site in the Nakanai Ranges, New Britain	2E	LG04	Tue	4:30-4:45
Gasson	Susan	Ms	A Collaborative Research Framework Approach to Creating a Sustainable Collaborative Research Culture in PNG	3C	UG07	Wed	12:15-12:30
Gima	Bethsheba	Ms	Understanding the Sociocultural Perspective of Gender Disparity in Mathematics Education in Papua New Guinea	4F	LG05	Wed	1:30-2:00
Goa	Joshua	Mr	Exploratory Study Behind Factors Contributing to Social Work Students' Low-Quality Essay Writing	2C	UG07	Tue	4:45-5:00
Gudapati	Albert Prabhakar	Dr	Quality of Life-Regional Disparities: An Empirical Study with Reference to South Pacific Developing Economies	2D	LG02	Tue	4:00-4:15
Guka	Michael	Mr	Will Special Temporary Measure (Reserve Seats) Work in Papua New Guinea? Lessons from Rwanda	1B	UG02	Tue	2:45-3:00
Hainzer	Kirt	Mr	Case Study of an International Farmer to Farmer Knowledge Exchange Tour	2E	LG04	Tue	4:00-4:15
Hikin	Patrick	Mr	Understanding Issues for Governance Deficits in Lower and Primary Schools in PNG	4D	LG02	Wed	1:30-1:45
Hovey	Donna	Ms	Neonatal Nurses - The Potential Impact for Small and Skin Newborns?	1A	NLT	Tue	1:45-2:00
Hovey	Donna	Ms	The Impact of Low-Dose High-Frequency Helping Babies Breathe Training in Papua New Guinea	1A	NLT	Tue	2:45-3:00

Surname	First name	Title	Abstract title	Session	Room	Day	Time
Inaho	David	Dr	Rugby League Related Deaths in Papua New Guinea. A Retrospective Study	2D	LG02	Tue	3:30-3:45
Jainul Abideen	Shaik Dawood Ansari	Mr	Delivery of ICT Course in Open College Using Technology Enabled Learning (TEL)	1C	UG07	Tue	2:30-2:45
John	Raymond	Mr	Foreign Employment and Implications for Human Resource Development in Papua New Guinea	2B	UG02	Tue	4:45-5:00
Kabuni	Michael	Mr	Political Clientelism: Relationship Between Legislative and Executive, and the Control of Constituency Development Funds Between 2012 and 2017	3F	LG05	Wed	11:00-11:30
Kamasua	John K	Mr	Employment Challenges for UPNG Graduates	3D	LG02	Wed	11:45-12:00
Kapi	Primas	Ms	A Critical Examination of CBOs and Capacity Building in PNG	1E	LG04	Tue	1:30-1:45
Kawale	Carolyn	Ms	Sociodemographic Factors Associated with TB Health Literacy Among the People of Suai LLG, Sinasina District, Chimbu Province	4A	NLT	Wed	1:30-1:45
Ken	Bensolo	Mr	A Framework for Mitigating and Offsetting Impacts on Biodiversity from Industrial Development in PNG	2E	LG04	Tue	4:45-5:00
Kialo	Jimela Dora	Ms	A PNGUOT Socio-Nethnographic Virtual Community of Practice Didactic	4D	LG02	Wed	2:15-2:30
King	David	A/Prof	Analysis of Past Natural Disaster Events in PNG as Analogues for Future Social Impact	4E	LG04	Wed	2:30-2:45
Kisambo	David	Mr	Assessment of Anaemia and Iron Status Among Pregnant Women in NCD - A Clarion Call	1A	NLT	Tue	2:15-2:30

Surname	First name	Title	Abstract title	Session	Room	Day	Time
Kitau (Snr)	Russel	Mr	A Case Study on the Challenges, Opportunities and Lessons Learnt for National Research and Policy Implementation in PNG	2C	UG07	Tue	3:30-3:45
Kitau (jnr)	Russell	Mr	The Challenges, opportunities and lessons learnt in implementing Public-Private Partnership for better health service delivery in PNG: A Case Study	2D	LG02	Tue	4:15-4:30
Kravia	Kainaro	Dr	Using a Transformative Paradigm Research Approach to Investigate Guidance & Counselling Services in Papua New Guinea (PNG) Schools	1C	UG07	Tue	1:45-2:00
Kua	Evelyn	Mrs	The Impact of Educational Facilities on Students' Achievement, Attitude and Behaviour	2F	LG05	Tue	4:00-4:30
Lamb	Lara	A/Prof	Hindsight: Repatriating Photographs and Film in the Gulf of Papua New Guinea	3E	LG04	Wed	11:15-11:30
Lawihin	Dunstan	Mr	Academics' and Supervisors' Perspectives of the Current Fieldwork Partnership Between UPNG Social Work and Fieldwork Agencies	1F	LG05	Tue	1:30-2:00
Lee	Shirley	Ms	Earthquakes in PNG and their representation in geoscience, narrative and cosmology	4F	LG05	Wed	2:00-2:30
Losenamo	Loto	Ms	Men's Perceptions of Pregnancy: A study of Views of Lufa Men in Papua New Guinea	1D	LG02	Tue	1:45-2:00
Luana	Dorothy	Mrs	Transforming Rural Farmer Opportunities into Cash - One Woman's Effort	2B	UG02	Tue	4:15-4:30
MacLaren	David	Dr	How does male circumcision protect against HIV in PNG?	2D	LG02	Tue	4:30-4:45
Mahabi	Lucy	Sister	Psychological Preparedness and Support During Labour for Pregnant Women in the Eastern Highlands	1A	NLT	Tue	2:00-2:15

Surname	First name	Title	Abstract title	Session	Room	Day	Time
Malabu	Usman	Prof	Is Diabesity the Biggest Epidemic of the Twenty-first Century in Papua New Guinea? Data from New Ireland	4A	NLT	Wed	2:45-3:00
Manu	Isaac	Mr	Bringing University Education to Students Through the Use of Technology	1C	UG07	Tue	2:45-3:00
Marme	Gigil	Mr	Parents Perspective of Social Determinants Affecting Childhood Immunization in Oro Bay Rural in Ijivitari District of Oro Province, Papua New Guinea	4A	NLT	Wed	1:45-2:00
Mayaune	Rose	Ms	Incidence of Substandard Amoxicillin Oral Dosage Forms in the National Capital District of Papua New Guinea, Part 1: Survey Protocol and Product Inspection	2A	NLT	Tue	3:30-3:45
McAuliffe	Marie	Dr	Primary Health Care in PNG: JCU Nursing and Midwifery in Partnership with YWAM Medical Ships	4A	NLT	Wed	2:00-2:15
McIntyre-Tamwoy	Susan	A/Prof	Intangible Cultural Heritage Bringing Culture, Nature and People Together to Build Sustainable Local Communities	2E	LG04	Tue	4:15-4:30
Mek	Agnes	Ms	"Olgeta Samting Senis": Extraction, Gender & Sexual Economy in Hela Province, Papua New Guinea	3A	NLT	Wed	11:30-11:45
Mek	Agnes	Ms	Young and Positive: Living with HIV in Papua New Guinea	3A	NLT	Wed	12:00-12:15
Mibus	Gill	Ms	Difficulties Screening for Gestational Diabetes Mellitus in Low Resource Settings. What's the Impact?	4A	NLT	Wed	2:30-2:45
Milli	Geejay	Ms	A study of UPNG Students Perceptions of Gender Imbalance and the Bride Price system in PNG	1E	LG04	Tue	2:00-2:15
Moke	Sent	Mr	The Governance Issues Relating to PNG Capital Market Transformation: A Case Study Analysis	2F	LG05	Tue	4:30-5:00

Surname	First name	Title	Abstract title	Session	Room	Day	Time
Molus	Wilma	Ms	Roles and Challenges of Women Vendors in Informal Settlements in Papua New Guinea	1B	UG02	Tue	2:30-2:45
N'Drower	Fiona	Ms	Collaborative and Inclusive Participation at the Local Level	2E	LG04	Tue	3:45-4:00
New	Karen	Dr	Nurturing Care, Nutrition and Neurodevelopment	2A	NLT	Tue	4:15-4:30
Oko	Jerome	Mr	An Investigation of Factors Affecting Grades 10 and 12 Students Mathematics Results in Port Moresby, PNG	4C	UG07	Wed	1:30-1:45
Panao	Deborah	Dr	Knowledge, Attitude, and Practices in Sexual and Reproductive Health (SRH) Among Secondary School Children in the National Capital District, PNG	3A	NLT	Wed	11:00-11:15
Pape	Ruth	Mrs	Assessment Rubrics in Health Science Education at the School of Medicine and Health Sciences, University of Papua New Guinea	2C	UG07	Tue	4:00-4:15
Payne	Rachel	Ms	Integrating Sports and Hygiene Promotion in Papua New Guineas schools: A Behaviour Change Study	1D	LG02	Tue	2:15-2:30
Pepen	Michael	Mr	Re-Designing Student Learning Experiences in a Satellite Study Campus with the Possible Use of the Commonwealth of Learning (COL) APTUS Device	1C	UG07	Tue	2:00-2:15
Porika	Fidelis	Mr	Land Grabbing: Implications on the Proposed Bootless Bay Marine Protected Area	4E	LG04	Wed	2:15-2:30
Puilingi	Clyde	Dr	Tetrodotoxin Studies and Screening of Bioactive Compounds in Marine Organisms from Solomon Islands	4B	UG02	Wed	2:00-2:15
Pulsan	Francis	Dr	Does a Problem-Based Learning MBBS Curriculum Prepare Resident Medical Officers for Paediatric Practice in Papua New Guinea?	4C	UG07	Wed	1:45-2:00

Surname	First name	Title	Abstract title	Session	Room	Day	Time
Pulsan	Francis	Dr	Childhood Malaria Referral from Primary and Secondary Health Care Services to a Tertiary Hospital: Port Moresby General Hospital, Papua New Guinea - A Case Study	1F	LG05	Tue	2:30-3:00
Pumuye	Glen	Mr	The Effects of Sub Judice Rule in Papua New Guinea	3F	LG05	Wed	11:30-12:00
Rajamanickam	Vijayanandh	Dr	Uses of Digital Technologies in Agriculture	2B	UG02	Tue	3:30-3:45
Ramson	Issac	Mr	A Study to Determine the Cause of Work-Related Low Back Pain and Musculoskeletal Discomfort Experienced by Industry Workers in Papua New Guinea	2A	NLT	Tue	4:30-4:45
Redman-MacLaren	Michelle	Dr	Social and Cultural Determinants of Sexual Health in Papua New Guinea: A Critical Poetic Inquiry	3A	NLT	Wed	11:15-11:30
Riven	Melissa	Ms	Assessing the Awareness and Prevalence of Gender-Based Violence Among Female Students in the University of Papua New Guinea	1E	LG04	Tue	1:45-2:00
Robertson	Sherryl	Dr	Incidence of Substandard Amoxicillin Oral Dosage Forms in the National Capital District of Papua New Guinea, Part 2: Physiochemical Compliance	2A	NLT	Tue	3:45-4:00
Safi	Anna	Ms	Indigenous Languages: Documentation of Tauwade Language of Goilala in Central Province, Papua New Guinea	3E	LG04	Wed	11:30-11:45
Same	Teio	Mr	Seeking Development of an Academic Library Consortium in Papua New Guinea	2C	UG07	Tue	33:45-4:00
Sar	Lilly	Dr	Dynamics of Indigenous Knowledge and Biodiversity Conservation in Rural Communities in Papua New Guinea	3B	UG02	Wed	12:00-12:15
Saulei	Simon	Prof	The Status of Papua New Guinea's Tropical Rainforests under Unstable Environmental Conditions	3B	UG02	Wed	11:00-11:15

Surname	First name	Title	Abstract title	Session	Room	Day	Time
Sesuki	Kylie	Ms	Community Reactions and Attitudes to Livelihoods and Resource Mapping Research in Pomio, East New Britain PNG	4E	LG04	Wed	1:45-2:00
Setu	Helen	Ms	The writing needs of first year students at UPNG: A needs analysis	4C	UG07	Wed	2:30-2:45
Sua	Jaspah	Mr	The Effects of Fungi, Herbivore and Predator on the Secondary Succession of Tropical Lowland Forest Vegetation of Madang Province	4B	UG02	Wed	1:30-1:45
Sultana	Nayma	Mrs	Assessment of Cardiovascular Risk Factors in Apparently Healthy Adults in the National Capital District, Papua New Guinea, and Their Association with Behavioural Factors	1D	LG02	Tue	1:30-1:45
Sumbis	Joan	Ms	Investigating Iodine Status Among Non-Pregnant Women Resident in Kotidanga Kerema District, Gulf Province, Papua New Guinea	1A	NLT	Tue	2:30-2:45
Sungu	Monica	Ms	The Impact of Coliform Bacteria in Restricted Drinking Water Sources in Papua New Guinea: A Mixed Community-Based Study in Angabanga, Central Province	1D	LG02	Tue	2:00-2:15
Tapura	John Wanis	Mr	PNG Education Yesterday, Today, and Tomorrow Place-Based Education-Oriented Teacher Education and Assessment Perceptions in the 21st Century	4D	LG02	Wed	2:30-2:45
Tapura	John Wanis	Mr	Creating Place-Based Learning Experiences as a Curriculum Enactment Approach: Way Forward to Achieve PNG Vision 2050. [An extract of a Progressive PhD Thesis at James Cook University]	3C	UG07	Wed	12:00-12:15
Taufa	Shalon	Ms	Accurate Lung Function Testing in PNG Requires Validated Reference Equations to Prevent Misdiagnosis of Chronic Lung Conditions	2F	LG05	Tue	3:30-4:00
Temple	Olga	Mrs	Effect of Age of Onset (AO) of English Language Acquisition on the Academic Performance of University of Papua New Guinea Students	4D	LG02	Wed	2:00-2:15
Thomas	Jean	Mrs	Mobile Phone App for PNG's Protected Areas	3B	UG02	Wed	11:45-12:00

Surname	First name	Title	Abstract title	Session	Room	Day	Time
Tommbe	Rachael	Ms	Strongim Meri Lida: Strengthening Women Leaders as First Responders to Sexual Health and Wellbeing Issues in PNG	3A	NLT	Wed	11:45-12:00
Torao-Pingi	Sharon	Mrs	An Evaluation of the Effectiveness of Continuous Assessments & Feedback Strategies in Promoting Student Learning in a First-Year Mathematics Course	3D	LG02	Wed	12:00-12:15
Tumu	Sailas	Dr	Assessment of Oral Health Knowledge and Care Practices of Grades 7 and 8 Students of Two Urban Primary Schools in Kundiawa in Simbu Province	2D	LG02	Tue	3:45-4:00
Varpit	Francisca	Ms	A Serological Survey of Selected Papua New Guinea Blood Donors for Hepatitis B and Related Co-Infections	3A	NLT	Wed	12:15-12:30
Varpit	Francisca	Ms	Reasons for Plagiarism Among Bachelor of Medical Laboratory Students at the University of Papua New Guinea	2C	UG07	Tue	4:15-4:30
Vavrova	Daniela	Dr	Reflecting on Collecting: Creating Relationships through Heritage Objects	3E	LG04	Wed	11:45-12:00
Vera	Numa	Ms	Knowledge, Attitude and Behavior Towards Antimicrobial Resistance in the Pacific Islands	2A	NLT	Tue	4:45-5:00
Waiin-Adu	Vagi	Mrs	The Migration of Traditional Plant Medicine from the Mortlock Atolls of PNG to Port Moresby	1F	LG05	Tue	2:00-2:30
Wangihama	Eva	Ms	Agriculture as a Subject in the Primary School Curriculum	4D	LG02	Wed	1:45-2:00
Wau	Jayson	Mr	Prevention of Insect-Borne Diseases in PNG through Local Repellent Production from Essential Oils	2A	NLT	Tue	4:00-4:15
Whittaker	Maxine	Prof	What Can Be Done About the Continued Preventable Maternal Deaths in PNG?	1A	NLT	Tue	1:30-1:45
Wilson	Pes	Mr	An Assessment of National Settlement Situation in PNG	1B	UG02	Tue	2:15-2:30

Surname	First name	Title	Abstract title	Session	Room	Day	Time
Winn	Teddy	Mr	Investigating Corruption in Papua New Guinea Through the Patron-Client Structure: The Citizens' Perceptions	1B	UG02	Tue	1:45-2:00
Witne	Bomai	Mr	Understanding Sorcery Accusation Related Violence: The Experience of the Yuri people of Gumine District of Simbu Province in Papua New Guinea	1E	LG04	Tue	2:30-2:45
Wohiemani	Jessica	Mrs	Reconsider Focus of English Teaching to Address Current Decline in English Proficiency Standards in Papua New Guinea	4C	UG07	Wed	2:00-2:15
Wood	Michael	Dr	Creating a New Politics of Disaster? Ulawun Volcano in New Britain, Papua New Guinea	4E	LG04	Wed	2:45-3:00
Woolley	Torres	Dr	Social-Return-on-Investment Impact Evaluations: The 'Gold Standard' Method for Monetaring the Value of Social and Economic Benefits from a Community Development Project	1B	UG02	Tue	1:30-1:45
Yangin	Russel Michael	Mr	Papua New Guinea Elections; A Narrative of the 2017 General Election and the Concern for Electoral Integrity	3F	LG05	Wed	12:00-12:30
Yasaro	Ponsie	Mr	Processes and Benefits of Marine Protected Area and its Application to Local Context	2E	LG04	Tue	3:30-3:45

ABSTRACTS

A TO B

Human-Computer Interaction: From Learning to Utilization: A View in Enga Province, Papua New Guinea presented by Dr Bienvenido Abad, Lecturer, School of Information Technology, IBS University

The economic and technological gap between the developing and developed countries is apparent. The capitalization of the developed countries in the use of Information and Communication Technology (ICT) to advance their economic progress and ultimately lives is apparent, thus developing countries are striving to use ICT. Nonetheless, many authors questioning the applicability of “Western” technology specifically the Human Computer Interaction (HCI) which are forced to underdeveloped countries like Papua New Guinea. This research is to identify and analyse the most obvious factors affecting the success of ICT learning and utilization in rural development context with emphasis on software and cultural adaptation. The answers to this question will be gathered through recollection of experience and observation of the research during his stay in Enga Province, Papua New Guinea. The study hypothesizes that poor basic education, lack of computer know how, socio-economic status, electricity and internet connectivity are main factors affecting the learning of ICT, thus utilization is affected. Culture/ethnicity moreover is not hindrance in learning and utilization of ICT however language localization is preferred.

Bienvenido **Abad**, IBS University, bienvenido.abad@ibs.ac.pg

The Use of Moodle e-Learning Platform in Papua New Guinea presented by Dr Bienvenido Abad, Lecturer, School of Information Technology, IBS University

MOODLE has been used in many institutions, mainly in education. The widespread use of MOODLE is because of its versatility and various features that support almost every aspect to attain successful teaching-learning endeavour. The case of the learning institutions in Papua New Guinea would be different as the country remains a developing country, limited and hampered by many issues relating to human development, societal issues and technological inclusions. Many institutions in different parts of the world had spent considerable amount of resources in the trial-and-error before reaping the great benefits of MOODLE. Hence, this study aims to contribute in reducing the effort of PNG institutions when they go through similar process. The study was conducted by distributing questionnaires to 200 active MOODLE user students in Port Moresby, reflection of the authors’ experience and observations while students are using MOODLE in Enga Province and in Port Moresby and taking consideration of the related literature of MOODLE usage in PNG conducted in Madang. The study shows MOODLE is mainly used as a de-facto of study materials, and in assessments administration. Moreover, students overwhelmingly appreciate MOODLE as an e-learning platform, however, students criticize the slow network connectivity which reflects the current state of the country’s internet infrastructure.

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Women in Higher Education: A Case of the Papua New Guinea University of Technology presented by Dr Rachel Aisoli-Orake, Senior Lecturer, Papua New Guinea University of Technology

Historically, women as compared to men have represented a lower percentage in higher education (HE) globally and Papua New Guinea (PNG) is no exception. The objectives of this paper are to give an insight of the women graduates and academics of the PNG University of Technology (UoT), the developments and challenges of women academics and future implications. The situated case is based on data from the PNGUoT Students' Administration records, Career Development Office (CDO) Training, Department of Higher Education, Research, Science and Technology (DHERST) reports and a recent survey on women academics’ voices. Despite the challenges, the field of academia which was previously exclusive for men now has an emerging participation of women in various faculties.

Rachel **Aisoli-Orake**, PNGUOT, Rachel.aisoli-orake@pnguot.ac.pg; Mirzi Betasolo, Sogoing Denano, Dora Kialo, Veronica Bue, Lydia Yalaming, Mary Aisi, Shamsul Akanda, Tindi Nuru, PNGUOT

Students' View on Editing Skills Lessons Taught in Creative Writing Course at UPNG presented by Mr Aundo Aitau, Lecturer, Literature & English Communication, School of Humanities and Social Sciences, University of Papua New Guinea

Writing clearly is not a simple task. It is a highly complex activity that requires the coordination of several processes and sub-processes for it to be effective and purposeful. The ability to express ideas with clarity can meaningfully affect a writer's ability to communicate and the quality of their work. In some instances, a writer may have knowledge about a topic but might not be able to compose clear sentences to share this message. One of those sub-processes needed to produce clear writing is 'editing skills.' This research attempts to help address issues related to the quality of students' writing. Editing skills is the last sub-process involved in the writing process. Student writers strive to improve a draft by correcting errors, making words and sentences clearer, and more precise, and effective. The aim of this research project is as follows: firstly, to gauge the students' views on the editing skills lessons covered in the course Creative Writing; secondly, to see whether students had adequate guidance into editing their work before submitting for assessment or not, and thirdly, to find ways to encourage the practice of editing works before submitting work. The method employed to collect our data is as follows; firstly, we asked the students to write one short story each. Secondly, we teach the first editing skill lesson. Next, we asked each individual student to choose a partner and exchange his/her story. After that, we gave the lesson's editing rubrics to each student. Finally, the students use the rubric to edit the friend's story. The same process is repeated using the same story, for the second and third editing skills lessons. We then asked the students to use the three-edit guide to edit their own story and rewrite their second draft. Finally, we gave the questionnaire to the students to gauge their views about the three lessons, mainly on how the lessons helped them to edit their own work. We then collected their responses and wrote up this paper. In conclusion, the three editing lessons, though not without limitations, do have effective, communicative, linguistics benefits for the students in their dual role as writers and editors. The results also show that there is a need for lecturers and tutors to guide students through the editing process as part of the writing process. It would be better, for lecturers/tutors to teach editing skills lessons in their courses. This will encourage students to edit their own papers before submission for assessment. The final product will be the improvement in the students' writing skills.

Aundo **Aitau**, UPNG, aaundo@upng.ac.pg

Enhancing Students Essay Writing Skills: A Pilot Research Project presented by Mr Nehemiah Akia, Tutor, School of Humanities & Social Sciences, University of Papua New Guinea

This article reports a pilot project which aims to improve the essay writing skills of undergraduates on a first-year literature course at the University of Papua New Guinea. The research was designed as a pilot project to enhance students writing skills through an improved teaching strategy. Students were asked to hand in drafts of their major term papers as a formative task prior to the term paper being due at the end of the semester (summative task). Out of 12 students, a total sample of nine students for this particular class took part in this activity. Of these nine students, seven of them were Literature and English Communication majors whilst the other two were from different disciplines. Hence, from their draft essay papers and through a questionnaire given out at the beginning of the semester (week 2), it was identified that there were certain key areas that students struggled with. These areas were grammar, writing style, mechanics and referencing. Nevertheless, weekly tutorials were given where they received basic instruction in writing mechanics, grammar, writing style, and referencing. Students were also given a specific rubric to work with for their final major papers. Improvement occurred immediately for referencing, whereas other skills did not improve significantly until they handed in their final drafts. The results show that teaching writing in content courses such as Modern World Literature can yield significant improvement in students' writing. I believe that writing instruction by academics of different disciplines is worth the time and effort to help undergraduate students develop better essay writing skills. The conclusion is that tutors/lecturers should include writing guidance, and that students probably need writing instruction throughout their four-year program, but there is little specific information about how this can be accomplished.

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Rural Entrepreneurship for Inclusive, Equitable and Sustainable Growth in Papua New Guinea presented by Dr Ramakrishnan Akkinapally, Deputy Director General, PNG National Agricultural Research Institute (NARI)

Entrepreneurship is considered as an unconventional way to tackle some of the socio-economic problems that are confronted by Papua New Guinea (PNG), especially the problem of high unemployment, deprived livelihoods and low rural economy. The role of entrepreneurship is to promote prosperity by establishing new jobs, decreasing unemployment and increasing economic growth. Entrepreneurships provides a basis for economic change through new knowledge creation and helps increase productivity by introducing new innovation and speed up structural changes by forcing businesses to reform and increase competition. The best remedy for marginal income generation and low employment lies in encouraging more business activity and start-up the new ventures through entrepreneurship to promote income empowerment in an economy.

Sustainable livelihoods and gainful employment of the rural communities is not the prerogative of government alone, but a joint effort between the public and private sectors is essential. In this regard, this paper seeks a sustainable solution to this endemic and pandemic phenomenon through the promotion of entrepreneurship development. This paper has attempted to set out the key issues related to entrepreneurship in the context of its relationship with rural development and gainful employment. Recognizing the diverse spectrum of poor rural households, NARI proposes a broad approach to help rural poor to move from low labour status and low levels of productivity (e.g. subsistence agriculture) to a high productivity (higher incomes and good employment conditions) to ensure households and individuals reach a decent standard of living through their livelihoods. This new approach aims to (i) address structural constraints faced by smallholder agricultural households by increasing their access to natural resources and other assets; improve their capacity to manage risks and their productivity; and link smallholders to markets and food systems, (ii) create an enabling environment for decent off-farm employment for smallholders and the rural communities by fostering entrepreneurship and providing occupational skills, (iii) building inclusive, nutrition-sensitive, risk informed and shock-responsive social capital to put the vulnerable and poor rural communities back in the driver's seat to make them economically viable, (iv) build and scale up agricultural innovation systems, and (v) establishment of farmer resource centres to get the rural communities organized for collective action, cooperatives/producer organizations and networks.

It is concluded that entrepreneurship development is a key tool for stimulating employment and economic growth as entrepreneurship is acquisition of skills and ideas for creating employment for oneself and others. Entrepreneurship development can be perceived as a catalyst to increase the rate of economic growth, create job opportunities and support PNG to reach its full potential in economic and social development.

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Q-SEEDLING Training for Smallholder Nursery Productions in the Highlands presented by Ms Vincianna Andrew, Forester, PNG Forest Authority

This research identifies how cohorts of smallholder tree farmers from different ethnic backgrounds in the Highlands region are contributing to mitigate climate change through forest rehabilitation. The research examined environmental and socio-economic changes in farmers' decision to undertake tree farming. The hunger for tree farming is so passionate in the minds and hearts of the people as they realise that climate change can be addressed through tree planting. Education and status of the people really does not matter when it comes to up-taking nursery technologies in improving planting materials for the rehabilitation and restoration programs. The local people are striving silently but making great impact on the journey to creating a greener environment in reducing carbon emission. External factors are pushing these champion farmers to be different in terms of adoption of tree technologies on the Highlands.

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What is the Impact of Papua New Guinea's Leadership on the PIF, MSG, and Donor Partners if 'Take Back PNG' and 'Work the Pacific' was Adopted as a Foreign Policy? presented by Mr Joelson Anere, First Vice-Chairman, Anere Institute of International Studies

Under the concept of "Take Back PNG" by the Marape-Davis Government, the Government of Papua New Guinea is placing increased emphasis on country ownership on sustainable resources such as agricultural products coffee, cocoa, copra, energy security, human security, transparency and accountability in Public Financial Management, historical cultural heritage material security, governance security, and democratic security.

This harmonizes well with the concept of the, “Blue Pacific”, in which island nations are placing increasing priority on the oceans, seeking to integrate policy on climate change, maritime security, fisheries and ocean biodiversity. The Marape-Davis Government’s leadership in the South Pacific region would greatly impact the Pacific Island Forum (PIF), the Melanesian Spear-Head Group (MSG), Multilateral, Bilateral, and Philanthropic Donor Partners if these two concepts formed the basis for Papua New Guinea’s Foreign Policy by combining the two concepts together. These would not be a means to an end, but rather a reflection of Papua New Guinea’s growing confidence and maturity in its own leadership as the largest Pacific Island State in the Pacific region after Australia and New Zealand.

Hence, “Take Back PNG” and “Work the Pacific” is a more reformist, inclusive, sustainable, and safe foreign policy for Papua New Guinea. This builds on Papua New Guinea’s first Foreign Policy of “Friends to all, Enemies to None” outlined by the then PNG’s First Foreign Minister at the dawn of Independence, Late Hon. Sir Albert Mari Kiki GCMG OBE KBE KStJ. This agenda however affects France, one of the remaining colonial powers in the Pacific, which controls a vast maritime domain in the region. It would also affect Australia, the United States and the European Union in areas such as exclusive economic zones, security, research, fisheries, climate change, and maritime boundaries.

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Palm Oil Contribution to Local Communities in East New Britain: Nucleus Estate versus Small Holder presented by Ms Barbara Apisai, Student, Politics Department, University of Papua New Guinea

Palm oil is now the PNG's biggest agricultural export in kina terms accounting for almost PGK 1billion since 2013, overtaking coffee. The two main models of palm oil economy that involve PNG nationals are in the form of nucleus estate and smallholder. This study uses East New Britain Palm Oil data to see which model brings maximum benefits to Papua New Guineans, and explores why.

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The Effect of Corn-based Microplastic Beads on the Life History Traits of Chironomus Riparius (Non-biting Midge) presented by Mr Gibson Aubona, Academic Assistant, School of Science & Technology, University of Goroka

Biodegradable bioplastics are substitutes for conventional plastics but immediate impacts in the environment are not well studied. The biodegradable microbeads in personal care products are disposed to the environment which takes several years to fully decompose. This study investigates the immediate effects on aquatic organisms exposed to biodegradable bioplastic beads in the sediment. The midge larvae were exposed to polylactic acid and polystyrene for 10 and 28-day exposures. The impact on survival for Day 10 exposure was insignificant, however, Day 28 exposure was a trend for a better survival compared to the control of microplastics ($P = 0.059$). However, female chironomids had significantly longer development time than the males. In summary, there were similarities with the effect of biodegradable and non-biodegradable microplastics, the negative effect of corn-based microplastics was observed.

Gibson **Aubona**, UOG, gibsonaubona@yahoo.com; Matthew Landu, Frank Johansson, Warren Kunce

Working Towards a Community of Knowledge's – ONETALK presented by Dr Vincent Backhaus, Lecturer, Indigenous Education and Research Centre, James Cook University

ONETALK is an online academic journal that aims to provide an approachable writing space for Black and Indigenous writers and academics. Our mission is to articulate, challenge, and inspire meaningful research surrounding the Melanesian and West Pacific contexts by encouraging a PNG and Indigenous Australian alliance. The presentation aims to introduce the editorial board and the research capacities of each team member as early career researchers themselves and to chart out and think through the possibilities of engagement with the journal and the knowledge it embeds into the journal. The presentation also wishes to extend an invitation to audience members to nominate for a sitting period within the newly created editorial advisory board.

Vincent **Backhaus**, JCU, Vincent.backhaus@jcu.edu.au; John Brooksbank, Nalisa Neuendorf, Tahnee Innes, JCU

Sustainable Management of the Shark Resources of Papua New Guinea: Socioeconomic and Biological Characteristics of the Fishery presented by Ms Leontine Baje, Student, College of Science & Engineering, James Cook University

In an initiative to address severe data gaps surrounding Papua New Guinea's shark and ray resources, the National Fisheries Authority collaborated with Australian Centre for International Agricultural Research (ACIAR), CSIRO and JCU with support from UPNG between 2014 and 2018. Data from fisheries observers on commercial fishing vessels and coastal fisheries surveys were obtained for the project. 132 species of sharks, rays and chimaeras were identified as occurring in PNG waters. Life history (age, growth and maturity) and demography information were determined for key species in the target shark longline fishery, pelagic longline fishery and prawn trawl fishery. Population structure and connectivity was also investigated for three species. This work provides valuable country-specific information to assist fisheries management and conservation of sharks and rays in PNG and also regionally.

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Study on the Carbon and Taxa Diversity of the Hall Sound Bay Mangrove in the Hall Sound Bay (HSB), Kairuku District, Central Province presented by Dr Lawong Balun, Senior Lecturer, Biology Division, School of Natural & Physical Sciences, University of Papua New Guinea

This study is a baseline study on the carbon stock, and taxa diversity of the mangrove system in the Hall Sound Bay area conducted under the auspices of PNG Centre for Locally Managed Areas (CLMA). The study further investigated the cultural significance of the mangrove to the HSB people, particularly the role of women in mangrove conservation. Mangrove provides a plethora of ecosystem service, including; coastal biogeochemical cycles, carbon sequestration, mitigate coastline erosion, nursery for coastal fishery, and daily sustenance of the coastal communities. The HSB mangrove forest covers an estimated land area of 37,407.49 ha with an estimated blue carbon content of 9.4 million tonnes or 250 t. C. ha⁻¹. We measured a total of 71 vascular mangrove plant species from 62 genera, and 41 families in the HSB mangrove. The HSB community exploit mangrove plant species for 15 different subsistence uses, namely; firewood, house, canoe pole, crabbing, fencing, yam stick, packing crab, children toys, medicine, traditional attire, food, string/rope, bathe newly delivered mother, soil erosion control, and canoe.

Lawong **Balun**, UPNG, lbalun@upng.ac.pg; Brownwyne Balun, Peter Moikey, UPNG

Poverty, Greed and Dysfunctionality: Legal Analysis of Forest Clearance Authorities in Papua New Guinea presented by Brian Brunton, Consultant, Alotau Environment

The paper will describe the law and policy surrounding Forest Clearance Authorities, Special Agricultural Leases, using the Pohowa Agriculture (PA) scheme in the Manus Province as a case study. In particular it will look at the policy and legal framework that allows the removal of prime forests of high biodiversity value, and the substitution of cash crops. The paper will fix PA, clear felling in prime high biodiversity forest, substituting rubber, cocoa and other crops, in the context complex social mapping, rural poverty, the tyranny of geography, chaotic legal system, mal-administration, multi-polarity and the US-Australia-China-PNG relationship, China's Belt and Road Initiative, the US pivot to Asia (Pacific), Momote airstrip and Londru Naval base. The Australian Manus Refugee detention centre, Manus as an emerging special economic free-trade zone, and rent-seeking local politics. The tangential role of civil society, conservation groups and environmental conservation in PNG in the context of the social media explosion will be addressed.

Brian **Bunton**, Alotau Environment, brian.bunton@gmail.com

A Reflection on Constructive Alignment in a UPNG Undergraduate Medical Education Course presented by Mrs Etuparo Buka, Lecturer, Public Health Division, School of Medicine and Health Sciences, University of Papua New Guinea

The UPNG undergraduate medical education curriculum is problem-based and grounded in the constructivist learning theory (Brodie, 2012). This solid theoretical foundation provided the springboard from which the course that was the focus of this study, was re-designed using constructive alignment and implemented in the 2016

academic year. Introducing a change in 2016 warranted an evaluation/reflection to determine whether the innovation was effective/worthwhile (Hartfield, 2010). To this end, reflective practice was employed through document analysis to assess the extent to which the core elements of the course were articulated and aligned. Results were then analysed by combining elements of both content and thematic analysis (Bowen, 2009).

Findings indicated that the intended learning outcomes (ILOs) were not constructively aligned with either the assessment tasks (ATs) or learning activities (LAs). This resulted from not clearly articulating the expected targeted knowledge and skills in the ILOs, thereby, highlighting the importance of clearly articulating them so that nominated verbs in the ILOs become common links that establish alignment between ILOs, LAs and ATs (Biggs, 2014). The findings pave way for further reflective practice to rectify the problems identified using constructivist learning theory thus, building a quality enhancement mechanism into the course from the outset (Biggs, 2014).

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C TO D

Teaching Ethics at the University of Papua New Guinea: The Formative Assessment Approach presented by Mr Gabriel Cherake, Teaching Fellow, History Gender and Philosophy, School of Humanities and Social Science, University of Papua New Guinea

Teaching ethics as a philosophical subject at the tertiary level, requires developing students' awareness to basic philosophical terms and ethical theories. Arguably, this awareness can be made using formative assessments. This paper explores the use of formative assessments in teaching ethics at the University of Papua New Guinea. The research investigated whether formative assessments can stimulate moral reasoning in students. That is, assessment judges the quality of students' performance. It is an integral part of teaching and learning for students to assess their own understanding of ethics. This article used surveys to look at the statistics after students had taken the formative assessments in tutorials. Two hundred and ninety-five students participated in the study. They were given survey questionnaires to provide their opinion on the formative assessments. The students' ability to recognize an ethical issue was analysed by calculating the statistical responses to the questions. This study took a constructivist tradition to explore students' progress in learning and construction of knowledge. The results from this study showed that ethics education has a greater impact on student responses to identifying ethical dilemmas and developing ethical awareness. This study is informative and valuable to reconsider teaching and assessment practices at the university level as it resonates with the Garnaut and Namaliu Report (2010) on quality assurance issues at the PNG universities. The use of formative assessments in class prepared students well in doing their summative assessments.

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Population Demographics of and Ethical Attitudes Towards Free Roaming Dog Populations in Port Moresby presented by Dr Clara Chin, Veterinarian, RSPCA of Papua New Guinea

Rapid urbanisation in Port Moresby (POM) has increased the number of stray and free-roaming dogs present in the city. These dogs pose human and animal welfare concerns, particularly from a One Health perspective, due to their role as reservoir hosts for zoonotic diseases and injuries such as bites. The majority of free-roaming dogs appear owned, providing companionship, security and assistance to their owners. This study employed the mark-resight framework to record dog numbers within city wards in POM. Surveys of ethical attitudes and dog ownership were also completed by people attending the RSPCA of PNG veterinary clinic, participants in RSPCA school education program and people encountered during dog population counts to determine the source of the roaming dog population as well as mitigating factors in improving dog welfare and controlling the roaming dog population. Positive attitudes towards animal welfare have correlations to decreased interpersonal violence within families. Therefore, knowledge of current animal welfare attitudes and free-roaming dog population statistics is important to understanding one health challenges within POM and planning for future management of these challenges. This data will be used in planning dog population management by determining percentage of owned free roaming dogs and stray free roaming dogs, allowing assessment of appropriate tools to be employed as part of a one health population management plan.

*Clara **Chin***, RSPCA, drclarchin@gmail.com; *Jessica Hoopes*, RSPCA

Application of Community Mapping in Mine-Impacted Communities in Papua New Guinea: The Case of Mt. Kare Gold/Silver Project Area in Enga Province presented by Mr Kenneth Cornilius, Teaching Fellow, Geography, University of Papua New Guinea

Land boundaries and ownership within the Exploration License (EL) areas in PNG are mostly found to be under disputes by landowners. Ownership to land with high economic value is involved in most of these land disputes. The Landmine Impact Surveys (LIS) conducted in Mt. Kare, has employed geographical knowledge to confirm oral and traditional histories of land and the right to its ownership. This process was used in determining land ownership rights and resolving existing land disputes. The study combined geographical, sociological and cultural knowledge to resolve land disputes and determine landownership. In PNG, customary landowners in many cases are not recognised and engaged in development projects. This is because of the difficulty of understanding land rights based on oral traditions and its relationship to natural or geographical features used as landmarks. A research methodology of identifying clan boundaries and land registration using this methodology is what this study sets out to investigate. ILGs are now transparently registered by genuine landowners by using geographic coordinates of important landmarks found in the natural environment as reference points. This ensures that the land is leased to the state and developers by the local community after a LIS is completed. Past studies have shown that there is a lack of effective community consultation and participation with landowners, particularly in the mining sector. In this study, both quantitative and qualitative methods were used to collect data. These included interviews, field observation, GPS survey, physical boundary walks and community consultation with landowning communities and clan leaders in Mt. Kare, Tagili and Paiela. It was found that the use of Cumulative Management Area (CMA) with the LIS empowered landowners to participate freely and actively in solving land disputes. The physical walk exercise along the land boundaries enabled landowners to link their genealogies and oral histories with the physical landmarks and mark out a clan map based on the information collected from these sources. This process proved to be an effective way of identifying the rightful landowners of various land boundaries in the study area. Furthermore, results from this study showed how geographic factors were used to identify and determine landowners in mining projects. The complexity of social relationships between land, resources and ownership in PNG are partially understood by social scientists and geographers, and this study has hailed the application of CMA in the LIS process as an important resource management tool. Other major findings were based on genealogy and ownership statuses of genuine clans found within the mine impacted area of Mt. Kare, of which the Heli clan remain the custodian and owner of land in Mt. Kare based on the application of first occupancy principle. Further research into social organisations and clan histories of the Mt. Kare people are required to support the findings of this study especially in areas like trade and migration. The application geographical statistics has provided a new dimension for LIS conducted in mining projects to determine land or resource ownership. It presents an important area for future research where statistical and geographical methods can be used to quantify and justify sociological and anthropological meanings in land and resource allocation and ownership.

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PNG Agricultural Women Capacity Building – A People to People Perspective presented by Mrs Joy Deguara & Mrs Valerie Lang, Facilitation, Rural and Community Development, Joy Degaura & Associates

We, as members of Australian Women in Agriculture, utilized Action Research methodologies to work with PNG women farmers and professional women working in agriculture, to further increase their capacity to contribute to their industry, farms, communities and families. Informal capacity building occurred over 10 years, through shared planning sessions, Annual General Meetings, workshops, conferences and farm visits in Australia and PNG. Formal training occurred within a partnership with Charles Darwin University through a larger Capacity Building Project. Workshops focused on Leadership and Effective Decision Making. Each event was reviewed during the process and upon completion, utilizing the “plan, act, observe and reflect” method, with changes made to recognize the different needs of each community. The first workshops involved 25 women. The third (final) workshop, with 67 people from across PNG and the Pacific, included a number of men who worked within the field. Women participants from earlier workshops were trained to assist as facilitators and interpreters.

The increase in women’s confidence, networks and skills was shown from reports, observations and discussions. Women had used the benefits as they set up farmer networks, became co-operative leaders, stood for parliament, and obtained senior government jobs. There is potential to use this model of capacity building across

PNG and the Pacific, focusing on Training local facilitators to assist with workshop presentation (using local language where necessary); Researching and continually developing content that meets local needs, with the capacity within the project to adjust the program.

Joy *Deguara*, joy@moorvale.com.au; Valerie Lang, vlang@ansonnic.com.au

Undiagnosed Pre-diabetes and Diabetes in New Ireland Province: The Insidious Impact of Disease Burden in Healthcare Workers presented by Dr Stephanie Deklin, Post Graduate student, Medicine and Dentistry, James Cook University

Background: The WHO STEPs National prevalence study conducted in 2008-9 showed that 14.4% of adults aged 15-64 years in Papua New Guinea (PNG) had a fasting blood sugar level of ≥ 6.1 mmol/L with figures expected to rise over the years. A good number of the adult population comprises of healthcare workers (HCWs)

at the forefront in recognizing as well as diagnosing diabetes. However, HCWs may ignore the warning signs when it comes to their personal health.

Objectives: This study aimed to assess the prevalence of Type 2 diabetes mellitus (DMT2) in a sample of HCWs in New Ireland Province, PNG and to identify the anthropometric factors associated with DMT2 diagnosis.

Methods: A retrospective observational study of HCWs aged 18 years and above was conducted using data obtained during the Diabetes/TB Improved Access and Awareness Campaign in New Ireland Province in PNG in March 2017. Pre-diabetes was defined as either fasting blood glucose (FBG) level of 6-7 mmol/l (impaired fasting) or random glucose level (≥ 7.8 -11.0 mmol/l (impaired glucose tolerance)) and diabetes was defined as FBG >7 mmol/l or random blood glucose of >11 mmol/l. Anthropometric measures obtained were body mass index (BMI) and waist circumference (WC).

Results: HCWs (n= 276) were included. 58.7% were females (mean age = 39.5 \pm 11.3). Overall the prevalence of pre- diabetes and diabetes was 8.8% and 3.4% respectively. More than half of the HCWs diagnosed with diabetes were male (55.6%) while 57% of those diagnosed as pre-diabetes were females. HCWs diagnosed as diabetic had a significantly higher BMI compared to HCWs with pre-diabetes (3.62 \pm 5.5 vs 2.8.0 \pm 4.9) and normoglycemia (36.2 \pm 5.5 vs 28.1 \pm 6.0) respectively (P = 0.001). There was no difference in mean BMI between the pre-diabetes and normoglycemia groups. Also, WC was not statistically significant different between HCWs diagnosed as diabetic, pre-diabetic or normoglycemic.

Conclusion: The findings of these study demonstrate that healthcare workers are at risk of developing DMT2 and there is a need for regular health-checks to rule out undiagnosed DMT2.

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E TO F

Indigenous Language Learning and Teaching: An Intercultural Program in the Highlands of Papua New Guinea and Guatemala presented by Gibson Aubona on behalf Dr Carola Emkow, Adjunct Research Fellow, Language and Culture Research Centre, James Cook University

Language and culture are at the heart of Nogoti-Ojchab'al, a program promoting indigenous languages to be learned, spoken, taught, and experienced. The Oxlajuj Aj teaching method follows an inter-active, communicative approach to language learning and has efficiently been applied to Mayan languages spoken in Guatemala. Language acquisition is facilitated for the students by living with host families and participating in daily life as well as structured classes and guided situational interactions. Students learn true inter-personal communication, and also carry out their own language-related research.

As languages reflect the environment and culture of their speakers and the ways in which communities view the world, we consider it fruitful to bring together people from Papua New Guinea and Guatemala, both with remarkable cultural and linguistic diversity, to engage in mutual language and cultural exchange.

Here we present our ideas on the importance of language and cultural preservation, methods for language and cultural learning, and the ideal that bringing together people from desperate and distant communities strengthens the individual's dedication and perspective on the importance of these ideals. To us it seems

unquestionable that indigenous people learning from the other is both enriching, and promising as research with an impact.

Carola **Emkow**, JCU, carola.emkow@jcu.edu.au; Pedro Mateo Pedro, Universidad del Valle Guatemala; Anne-Marie Wanamp, UOG; Gibson Aubona, Binatang Research Centre

Is the DHERST Online Grade 12 Student's Selection for Higher Education Institutions (HEIs) Fair in the Distribution of Access that is Inclusive of All Provinces? presented by Mr Tuai Erapae, Assessment Coordinator, Open College, University of Papua New Guinea

When Papua New Guinea, got independence from Australia in 1975, there existed an urgent need of skilled public servants to fill the public service machinery for the newly established nation. On top of that, the newly established government was faced with another developmental challenge, and that is to establish a workforce both in the public sector and the private, that is truly inclusive of all the different provinces for a unified Papua New Guinea. Historically, the country was already divided on many fronts. Colonial German and other European establishments in the New Guinea Islands, Australia and British occupation in the South and Dutch plantations in the north, with a less explored highlands interior of the mainland. Culturally diverse people with geographically isolated landscape.

Unity and development were the pillars of the then National High School Scholarship (NATSCHOL), where top students who passed out of high school with good grades after Grade 10, were selected and placed in the four regional National High Schools for two years of pre-tertiary studies qualification courses and from the four national high schools, admission was granted to the students into the tertiary institutions.

This study analyses the list of students selected for tertiary studies in 2019 academic under the recently introduced Department of Higher Education, Science and Technology (DHERST) online student selection system to establish whether the system is fair and inclusive for national unity and development aspirations of all provinces which were the pillars of the PNG higher education system when it was first established.

Tuai **Erapae**, UPNG, terapae@upng.ac.pg

Exploring Buai as a Resilient Indigenous Method for Creative Learning presented by Mrs Naomi Faik-Simet, PhD Candidate, Dance Studies Programme, University of Auckland

Buai practice is predominant in the New Guinea Islands of Papua New Guinea. Particularly, this indigenous method of creative knowledge acquisition is practised by Tena Buai who are custodians and teachers of the Buai culture. As a cultural institution, the Buai epitomes resilient, indigenous methods of teaching and learning associated with creativity.

This presentation focuses on current Doctoral research into the Buai culture of the Tolai people in East New Britain. It explores indigenous methods undertaken by Tena Buai to facilitate creativity. The research reinforces Buai as a method of acquiring and applying creative knowledge in 21st century indigenous art education contexts. Results of recent fieldwork data gathered in East New Britain in the periods September 2018 - February 2019, demonstrates the resilient and trans-formative nature of the Buai as part of the Tolai epistemology.

Naomi **Faik-Simet**, UOA, nsim123@aucklanduni.ac.nz

Whose Biodiversity? Using Research on Local Language Names of Marine and Terrestrial Fauna to Mediate Value and Sovereignty of Nature in a Proposed World Heritage Site in the Nakanai Ranges, New Britain presented by A/Prof Simon Foale, Head of Social Sciences, College of Arts Society and Education, James Cook University

While the authors of this paper support the World Heritage system we also acknowledge, that in many ways, it remains a neo-colonial institution. It seeks to impose regimes of protection over parts of the world deemed to embody some form or other of 'outstanding universal value'. In the case of proposed sites like the Nakanai Ranges in New Britain, these 'universal' values include high 'biodiversity' as well as the unique geology of this area, with its fast-flowing underground rivers and impressive caves. The work presented here, showcases

research on Mengen language names for various groups of local fauna (and some flora), with emphasis on coastal fishes. The data reveals that the land (and sea) owners of this area think about the value of its fauna quite differently from the natural scientists whose biodiversity surveys constitute a significant component of the set of values that underpins the bid for World Heritage status. The disconnect between 'global' scientific and local value systems highlighted by this work reflects a broader pattern across the Western Pacific and beyond, and draws attention to a persistent top-down aspect of transnational conservation work globally.

Simon **Foale**, JCU, simon.foale@jcu.edu.au; Jennifer Gabriel, Michael Wood, Stephanie Januchowski-Hartley, JCU

G TO H

A Collaborative Research Framework Approach to Creating a Sustainable Collaborative Research Culture in PNG presented by Ms Susan Gasson, Coordinator & HDR Advisor Development, Graduate Research School, James Cook University

A collaborative framework is present and discussed in the context of the sustainable research challenge faced in PNG. Included in the presentations will be strategies to establish and reinforce links between researchers as well as to embed a culture of research the community through a range of engagement activities. The aim of the presentation is to continue the process of empowering and enabling PNG researchers by guiding them in the creation of a sustainable collaborative research culture.

Susan **Gasson**, JCU, susan.gasson@jcu.edu.au; Christine Bruce, Helen Marsden, JCU

Understanding the Sociocultural Perspective of Gender Disparity in Mathematics Education in Papua New Guinea presented by Ms Bethsheba Gima, Teaching Fellow, Division of Mathematics, Statistics and Computer Science, School of Natural and Physical Sciences, University of Papua New Guinea

Abstract to be finalised

Bethsheba **Gima**, UPNG, gima2bethsheba@gmail.com

Exploratory Study Behind Factors Contributing to Social Work Students' Low-Quality Essay Writing presented by Mr Joshua Goa, Tutor, Social Work, School of Humanities and Social Sciences, University of Papua New Guinea

This exploratory study was conducted in UPNG. It identifies the factors contributing to low quality essay writing among social work students from the perspective of experienced social work academics. There is a lack of Papua New Guinean research into this issue, so this study both adds to the existing body of research and generates findings specific to a Papua New Guinean context.

The participants were informed and recruited by the distribution of an invitation letter via email. In-depth interviews with participants were completed and a thematic analysis of the data using Microsoft excel was undertaken. From the data analysis, the following themes emerged: student factors, academic factors and university factors contributing to quality essay writing.

Across these themes it showed that academic staff to students' ratio, workload, weak education transition from primary schools right up to the university and weakness in enrichment course communication and life skills, were the major contributing factors towards social work students low quality essay writing. The findings from this study can inform academics in direct practice and inform further research on the best approaches towards improving students' quality essay writing.

Joshua **Goa**, UPNG, joshua.goa@upng.ac.pg

Quality of Life-Regional Disparities: An Empirical Study with Reference to South Pacific Developing Economies presented by Dr Albert Prabhakar Gudapati, Senior Lecturer, Economics, School of Business and Public Policy, University of Papua New Guinea

Growth and equity are the twin objectives of any economy. Growth depends on the resource base, input use and infrastructure development. Given the distribution of resources such as land and capital, growth favours the resource owners, users and labour force working in the utilization and exploitation of these resources. All labour is not involved in the growth process due to inequalities in education and health status. Inequalities emerge and grow as long as economic growth takes place unless policies are implemented for effective redistribution of gains. To minimise the emerging and growing inequalities as a consequence of economic development an effective balancing network is to be created for the redistribution of gains from growth. For sustain economic growth, we need educated, healthy, and secure people.

The total population in the South Pacific is approximately 10 million and consists of the following major countries: Papua New Guinea, Fiji, Samoa, Solomon Islands, Tonga, Vanuatu, Marshall Islands, and Kiribati. South Pacific island economies have a number of common features: all have small internal markets; all experience substantial transaction costs in accessing world markets; all are vulnerable to natural hazard and in varying degrees, to market-related hazards; and in all cases, structural conditions hinder the establishment of relatively competitive markets. But at the same time all these economies diversified with quality of life. There are regional disparities regarding the development of education and health.

An attempt is made in this paper, using secondary data from World Development Report and Human Development Reports, to analyse the disparities in the quality of life of the people in South Pacific developing economies. An attempt is also made to examine how economies are classified according to (a) Index of income and quality of life and (b) Index of Quality of life and Index of Human Development.

Albert Prabhakar **Gudapati**, UPNG, prabhakar@upng.ac.pg; Richard Lan, Wasita Pomel, UPNG

Will Special Temporary Measure (Reserve Seats) Work in Papua New Guinea? Lessons from Rwanda *presented by Mr Michael Guka, Student, Political Science, University of Papua New Guinea*

Whilst PNG struggles to elect women representatives into parliament, Rwanda has the highest women representation in the world, both are developing countries. With no women elected in parliament in the 2017 elections, the former Prime Minister, Peter O'Neill made several announcements of creating reserve seats for the 2022 elections. The main inspiration for such direction is usually drawn from the temporary special measure (TSL) used by Rwanda. This paper looks at the TSL used in Rwanda to draw lessons from, and see whether it is applicable in PNG.

Michael **Guka**, UPNG, michaalguka5@gmail.com; Ganiapa Biho, Angie Deklin, UPNG

Case Study of an International Farmer to Farmer Knowledge Exchange Tour *presented by Mr Kirt Hainzer, Senior Research Officer, Institute for Future Farming Systems, Central Queensland University*

The economy of the Papua New Guinea (PNG) Highlands, especially in areas with relatively good links to transportation infrastructure, is evolving rapidly. Within these rapidly evolving economies, farmers are continuing to turn from subsistence farming to market-oriented production to improve livelihoods. Sweet potato (kaukau) plays a key role in this evolution and has become an important income diversification strategy within the diverse agricultural systems of the Highlands.

In 2016, CQUniversity began a project with PNG partners, the National Agricultural Research Institute (NARI) and the Fresh Produce Development Agency (FPDA), to support sweet potato farmers to move from subsistence farming towards commercially orientated production. This Australian Centre for International Agricultural Research (ACIAR) funded research project aimed to strengthen sweet potato value chains, increase market-orientated production and introduce management skills so that smallholders have greater access to market opportunities and the ability to meet consumer demands.

As part of this larger project, a Knowledge Exchange Tour (KET) was undertaken in May 2019. 14 sweet potato farmers and four support staff from our partnering organisations, travelled to Bundaberg in Queensland to gain a practical experience of the Australian commercial sweet potato industry to promote practice change and learning. To capture the perceived benefits of participation, and the extent to which participation impacted practice when farmers returned home, a qualitative, case-study approach was utilised.

This paper presents the findings from the case-study and provides insight into how participation in an international KET can contribute to improved management practices regarding sweet potato production and marketing in PNG.

Kirt **Hainzer**, CQU, k.hainzer@cqu.edu.au; Chris Bugajim

Understanding Issues for Governance Deficits in Lower and Primary Schools in PNG presented by Mr Patrick Hikin, Principal Consultant, Palampat Consultancy Services

The governance deficit within the lower education system in PNG is the one that concerns the board which runs and operates the school as per the National Education Act of PNG. Under the Education Act, schools are supposed to be conducting at least four meetings in the year and two on special or emergency matters arising in the school. Unfortunately, many schools in PNG do not fall into this category. Often being the case, schools either implement the meetings or do not, in which case there is no charge or action taken on the part of the Board. In this time where the need for accountability is needed more than ever, School Boards should become a function of state where Boards are financially resourced to carry out their functions. If Boards are taken into consideration for funds they can assist the schools in delivering their intended infrastructure and program development needs.

Patrick **Hikin**, PCS, brucehikins@gmail.com

Neonatal Nurses - The Potential Impact for Small and Skin Newborns? presented by Ms Donna Hovey, Chair, Low Resource Countries Special Interest Group, Australian College of Neonatal Nurses

Quality of care for newborns in health facilities is reported as poor in low-middle income countries (LMICs). A key to improving newborn mortality in hospitals is having nurses delivering safe and effective care to small and sick newborns. For this to happen, skilled and trained nurses in neonatal care are needed.

Global recognition of issues that facilitate or hinder the delivery of high-quality care in LMICs include critical health workforce shortages, an association between nursing shortages and care being delayed or omitted to patient safety, outcomes and care quality, no international standards for neonatal care and neonatal nursing, poor intra-professional and interprofessional communication and inability of nurses to be involved in medical rounds, introduction of new technology/equipment without adequate education and non-patient activities.

PNG challenges include: paediatric courses available have halved and the course does not have a specific neonatal component, midwifery courses concentrate on the well newborn, in many instances nurse-initiated interventions are limited and differences where small and sick newborns sit, under maternity or paediatrics.

Novel approaches are needed to provide targeted neonatal education to nurses in hospital settings in LMICs if the sustainable development goals are to be achieved.

Donna **Hovey**, ACNN, lrcsig@acnn.org.au; Karen New, Gill Mibus

The Impact of Low-Dose High-Frequency Helping Babies Breathe Training in Papua New Guinea presented by Ms Donna Hovey, Chair, Low Resource Countries Special Interest Group, Australian College of Neonatal Nurses

Background: The Australian College of Neonatal Nurses provide Helping Babies Breathe training to Village Health Volunteers (VHVs) in the Eastern Highlands. This training is embedded in the Essential Elements of Newborn Care (EENC) program facilitated by Touching the Untouchables (TTU).

Objectives: (i) To report the number of VHVs who received EENC training and newborns who required and received breaths at birth. (ii) To report on VHVs confidence to manage newborns at birth.

Methods: Training and birth data was collected between November 2016 and November 2017 from the Henganofi District.

Results: EENC training was attended by 138 VHVs. VHVs delivered 576 newborns. Following stimulation and drying, 25 newborns required assistance to breathe, of which 14 (56%) were successfully resuscitated. The VHVs report improved confidence, knowledge and skills and felt empowered to help babies breathe.

Conclusion: VHVs are the interface between villages and health facilities and thus have the potential of great impact on newborn mortality when they are provided with low-dose high-frequency training. The VHVs have demonstrated retained knowledge, skills and increased confidence levels in managing newborns around the time of birth.

Donna **Hovey**, ACNN, lrcsig@acnn.org.au; Karen New, Gill Mibus

I TO J

Rugby League Related Deaths in Papua New Guinea. A Retrospective Study presented by Dr David Inaho, Senior Lecturer, School of Medicine and Health Sciences, University of Papua New Guinea

Objective: In Papua New Guinea (PNG) there are reports of deaths from rugby league and other sports. The actual cause of death varies from head, spinal cord to abdominal injuries. This study provides the first scientific data on prevalence, cause and risk factors associated with death of athletes in rugby league and promote the role of sports medicine in PNG.

Method: A nationwide retrospective study was done and data collected between 1980 to 2018 from hospital admission notes and post-mortem reports. Data were analysed statistically.

Results: There were 24 deaths from head, spinal cord and abdominal injuries. In Highlands 11, Southern Region 7 and Momase 6 deaths. 22% due to ruptured spleen and 78% from head and spinal cord injuries.

Conclusion: Death from rugby league has serious implication and negative effect in the sporting code. In this study 22% of death is due to splenic injuries and is preventable. Health personnel providing medical cover should be skilled in management of injured athletes.

David **Inaho**, UPNG, davidinaho@gmail.com; Sunita Sethy

Delivery of ICT Course in Open College Using Technology Enabled Learning (TEL) presented by Mr Shaik Dawood Ansari Jainul Abideen, Lecturer in ICT, Open College, University of Papua New Guinea

At the University of Papua New Guinea Open College, ICT courses are delivered in Certificate in Tertiary and Community Studies (CTCS) and Certificate in Tertiary Studies (CTS) programs. In 2020 Certificate 3 in ICT, Certificate 4 in ICT and in 2021 Diploma in IT programs will be offered by Open College. ICT courses need practical computer lab sessions to train the students on ICT skills. In Open and Distance Learning education limited number of classes conducted with less numbers of practical classes can make quality of delivery questionable. Tutors are assigned to handle theory and practical classes even though lack of communication between course coordinator and tutor can make practical classes ineffective. This paper suggests technology can help to overcome the problem to provide effective practical sessions and strengthen the communication between course staff and student. Common Wealth of Learning (COL)'s Technology-Enabled Learning (TEL) aims to increase access to quality teaching and learning by supporting policy formulation and innovation in the application of ICT in education, and the development of ICT Skills. By using TEL, we can improve effective delivery of ICT courses to train the students in ICT skills and to increase student staff interaction and collaboration using technology.

Shaik Dawood Ansari **Jainul Abideen**, UPNG, jsdansari@upng.ac.pg

Foreign Employment and Implications for Human Resource Development in Papua New Guinea presented by Mr Raymond John, Lecturer, Human Resources Management, School of Business and Public Policy, University of Papua New Guinea

This paper discusses the employment of expatriates in Papua New Guinea by analysing the latest data from the Department of Labour and Industrial Relation work permit system and the human resource development implications for Papua New Guinea. The paper further explores policy option that can be developed and implemented by the Government to improve skills and human resource development in Papua New Guinea.

Raymond **John**, UPNG, rjohn@upng.ac.pg

K TO L

Political Clientelism: Relationship Between Legislative and Executive, and the Control of Constituency Development Funds Between 2012 and 2017 presented by Mr Michael Kabuni, Lecturer, Political Science, University of Papua New Guinea

Clientelism is often associated with contingent exchange and particularism. In politics, clientelism when candidates and politicians offer benefits to voters that are contingent upon receiving or expecting votes from the voters, and the reverse is true for voters' expectations from the politicians and candidates. Literature on clientelism in the Pacific often focuses on the relationship between the politicians and the voters, and on the effect of clientelism on the quality of governance. This study proposes to apply the clientelism theory to the relationship between the Prime Minister Peter O'Neill and the members of parliament between 2012 and 2018.

The executive has been accused of using constituency funds to control the parliament (Ketan, 2007). Several times, the MPs in the opposition accused the Prime Minister Peter O'Neill of withholding the DSIPs and PSIPs of the MPs in the opposition who were either critical or did not support the executive's decisions (Kabuni, 2018; Kama, 2017). With the MPs conscious of keeping their voters happy, they gravitated towards the government side to access these funds. This consolidated the government's position, resulting in the O'Neill government becoming the second government to ever complete a full term in parliament. This stability, however, was achieved at the expense of a weak legislature where legislations were 'bulldozed' by a dominant government side (Kama, 2017).

This study will use funds paid to both opposition and the government MPs from 2012 to 2018 to ascertain whether these claims are true.

Michael **Kabuni**, UPNG, mkabuni@gmail.com

Employment Challenges for UPNG Graduates presented by Mr John Kamasua, Lecturer, Social Work, School of Humanities and Social Sciences, University of Papua New Guinea

Building on research completed early this year (and presented at the recent PNG Update 2019) on graduates and job availability, involving forty 2019 recent UPNG graduates. The paper will combine results of a 'tracer study' of the 40 graduates on their current job search efforts and employment status, with my own efforts to assist final year students and graduates in the areas of career development and employment, and relate that to similar research efforts through literature. The paper will therefore attempt to point out a lack of 'National Job Availability Snapshot' for the country. Finally, I offer a recommendation for a 'Graduate Employment Strategy' to capture graduates to both 'engage' and enable them to acquire much needed 'skills' and 'work experiences' required by the greater job market.

John **Kamasua**, UPNG, kamasujk@upng.ac.pg

A Critical Examination of CBOs and Capacity Building in PNG presented by Ms Primas Kapi, PhD Candidate, School of Humanities and Social Sciences, Deakin University

Community Based Organisations (CBO) are now being recognized as important organizations in the development of rural communities. CBOs also have a very difficult time surviving and face a vicious cycle in terms of sustaining themselves over the long term despite being based in communities and relying on their members. CBOs partner with donors to overcome these difficulties and at the same time implement their activities. However, donor funded projects are designed and funded to include CBOs out of a belief that CBOs are able and will continue to provide constant impacts. There is an inherent presumption in most donor funded projects that partner with CBOs that the engagement of CBOs will automatically provide continued impacts. All of these presupposes that long-term impact of these projects can and should be sustained but the evidence suggests otherwise. This research aims to critically examine the continued impacts of projects through CBOs after donor funding ceases in PNG.

Primas **Kapi**, Deakin University, pkapi@deakin.edu.au

Sociodemographic Factors Associated with TB Health Literacy Among the People of Suai LLG, Sinasina District, Chimbu Province presented by Ms Carolyn Kawale, Student, Division of Public Health, School of Medicine and Health Sciences, University of Papua New Guinea

Background: Tuberculosis is a serious public health challenge in Papua New Guinea with Chimbu among the ten provinces contributing to 76% of PNG's TB burden. TB incidence in Chimbu is 286/100,000 population. TB literacy can play an important role in reducing this challenge.

Objective: The aim of this cross-sectional study was to determine the TB literacy and any associated sociodemographic factors in Suai LLG, Sinasina District, Chimbu.

Methods: Three randomly selected villages' 289 adult residents were interviewed using a standard TB KAP questionnaire. ANOVA, chi square and t-tests were used to determine associations between TB literacy and sociodemographic factors.

Results: Males (51%, n=147) and those with no schooling up to sixth grade (48%, n=139) each made up about half of the participants. Most participants (89%, n=256) were unemployed and 30% (n=87) lived less than 10km from the health facility. Almost 80% of the participants had poor TB literacy, although 90% had satisfactory literacy on treatment. Higher education level and being employed and living close to health centre were all significantly associated ($p < 0.001$) with better TB literacy.

Conclusion: It will be important to design and implement effective preventive multisectoral interventions to address these underlying associated factors while simultaneously building the public's TB literacy.

Carolyn **Kawale**, UPNG, carolinekawale@gmail.com; Georgia Guldán, UPNG

A Framework for Mitigating and Offsetting Impacts on Biodiversity from Industrial Development in PNG presented by Mr Bensolo Ken, Associate Consultant, The Biodiversity Consultancy

The Government of PNG is committed to developing a system for mitigating industrial impacts on biodiversity, including a system for biodiversity offsets. The Conservation and Environment Protection Authority is leading this initiative with funding support from the UNDP and Global Environmental Fund, and technical support from The Biodiversity Consultancy. A Biodiversity Offsets Policy Framework is being developed, aligned with various national and global commitments, goals and principles, and stakeholder consultation. The Framework is aimed at enabling industrial development projects to achieve 'no net loss' on biodiversity by incentivising avoidance, minimisation and restoration of impacts and by offsetting any residual unavoidable impacts through investment into PNG's proposed protected area network (and claiming credits through averting forest loss). Our survey of protected area managers suggested a mean of USD1.3M for establishment and start-up, and USD7/ha/year for managing established terrestrial protected areas in PNG. Marine Protected Areas are more costly to set-up but cheaper to manage. We will review these preliminary results to help determine the actual costs of delivering biodiversity offsets. Similar costs would be required to manage forests as carbon offsets under national Reducing Emissions from Deforestation and forest Degradation (REDD+) schemes.

Bensolo **Ken**, TBC Ltd., bensolo.ken@thebiodiversityconsultancy.com; Guy Dutson, Robin Mitchell, David Wilson, TBC Ltd

A PNGUOT Socio-Nethnographic Virtual Community of Practice Didactic presented by Dora Kialo, Deputy Director, PVC Academic, Teaching and Learning Methods Unit, Papua New Guinea University of Technology

Since the 1990's we have seen an increase in consideration of research, innovation and societal socio-economic and cultural aspects interplay in learning as a way to foster organizational learning and human performance. Despite strong interest among practitioners, researchers and scholars, the study of female academic virtual communities of practice in organizational learning is lacking in empirical research. The lack of women in academic leadership across Papua New Guinea (PNG) Universities, particularly from the PNG University of Technology (PNGUOT) didactic has been problematized in the literature. Often contemporary discourses promote 'supporting the women' as a solution. Consequently, interventions aimed at helping women break through 'glass ceiling' abound. This paper describes and discusses the possibility of removing the stubbornly maintained entrenched inequalities of gender power relations at our university whereby, regardless of measures implemented for and by women, the problem still remains. It begins with understanding a socio-nethnographic

virtual community of practice (VCoP) didactic among PNGUOT females as academics, researchers, knowledge designers and builders, innovators and technocrats here calls attention to the importance of seizing the opportunity in designing effective learning management systems for the training of other academics given the rapid growth in online coursework design to establish and validate quality standards for these courses is eminent. Additional analysis based on Google Classroom (GC) course observation and interview data, suggest that frequent and effective student-lecturer interaction creates a virtual environment that encourages and scaffolds inter-linkages between research, innovation and societal impact.

Dora **Kialo**, PNGUOT, dora.kialo@pnguot.ac.pg; Eric Gilder, Mirzi Betsolo, Rachel Aisoli-Orake, Tindi Nuru.

Analysis of Past Natural Disaster Events in PNG as Analogues for Future Social Impact presented by Dr David King, Director, Centre for Disaster Studies, College of Science and Engineering, James Cook University

Social impact assessment methodology is used to assess the likely impacts of natural hazards as analogues both for future events as well as for climate change in the case of climate generated hazards. However, PNG's most serious disasters have been tectonic rather than climatic and will likely continue to pose a major threat to loss of life and infrastructure in the future. In order to use social impact assessment methods to model future disaster impacts, research is compiling analyses of previous natural disasters in PNG. The experience of communities in past events enables analysis of local knowledge, emergency management responses, recovery, institutional capability and the impact on people, communities, livelihoods, structures and infrastructure. Social vulnerability and resilience are indicated in past events as a base on which to model future disasters from a social impact perspective.

David **King**, JCU, David.king@jcu.edu.au

Assessment of Anaemia and Iron Status Among Pregnant Women in NCD - A Clarion Call presented by Mr David Kisambo, Medical Lab Scientist, Division of Basic Medical Sciences, University of Papua New Guinea

Assessing the prevalence of anaemia, iron deficiency (ID) and iron deficiency anaemia (IDA) among women is essential for evidence-based intervention programs, especially when such prevalence data are scanty. Low iron status is one of the major causes of anaemia, which can be a major public health problem among women of reproductive age. The objectives of this prospective outpatient and community based cross-sectional study were to assess the prevalence of anaemia, ID and IDA among pregnant and non-pregnant women resident in National Capital District (NCD).

Convenience sampling was used to randomly select 157 pregnant women attending antenatal clinic in PMGH and non-pregnant volunteers. Blood was collected from the women after obtaining their informed consent. HemoCue was used to measure Hemoglobin (Hb); Soluble Transferrin Receptors (sTfR), Serum Ferritin (SF), and C-reactive proteins (CRP) were measured by specialized 96-wells Enzyme-Linked Immuno-Sorbent Assay (ELISA) Kits. World Health Organisation (WHO) guidelines were used to interpret Hb for anaemia; Serum sTfR level greater than or equal to 21.0nmol/L was used to indicate ID; SF below 15.0µg/L was used to indicate ID. The "sTfR-F Index" was also calculated and used to indicate IDA. Mild to moderate anaemia, low SF, and elevated serum sTfR were prevalent among 28.0% of the non-pregnant women; the sTfR-F-Index showed that 16% had IDA. For the pregnant women, 59.9% had mild to severe anaemia indicating severe public health significance; 47.8% had low SF and 38.2% had elevated serum sTfR; the sTfR-F-Index showed that 32.8% of them had IDA. Results for women in first, second and third trimesters of pregnancy will be presented. The significance of these findings will be discussed.

David **Kisambo**, UPNG, kisambodavid96@gmail.com; Victor Temple, S Mage, AB Amoa, MR Bagita-Vangana, S Grant, S Taufa

A Case Study on the Challenges, Opportunities and Lessons Learnt for National Research and Policy Implementation in PNG presented by Mr Russel Kitau Snr, Lecturer, School of Medicine and Health Sciences, University of Papua New Guinea

Research is basic fundamental tool for evidence-based policy and decision-making. Since national health planners and managers depend on evidenced- based research as the tool to guide them in developing their plans, at least 5% of the annual recurrent budget should be set aside for research. But this is not so in PNG. The Mid-Term Review of the plan in 2015 described overall performance of the health sector as sluggish. As a researcher and lecturer at SMHS, UPNG, I will share my own experiences on how I became involved in development and implementing the National Health Plan 2011-2030, the National Health Research Policy (2012) and the first National Health and HIV Research Agenda 2013-2018. Participatory Action Research (PAR) approach will be used as tool by health managers and community leaders to participate in consultative process to develop strategies for the new 10- year plan. This will create pathways for research collaboration between NDoH and AITHM and achieve the PNG Vision 2050.

Russel **Kitau** Snr, UPNG, rkitau25@gmail.com

The Challenges, opportunities and lessons learnt in implementing Public-Private Partnership for better health service delivery in PNG: A Case Study presented by Mr Russell Kitau Jnr, Student, University of Papua New Guinea

Public-private partnership (PPP) supports delivery of health services to the rural majority and urban disadvantaged populations in Papua New Guinea. Through the Health Sector Partnership Policy (2014), by strengthening partnerships and coordination with stakeholders, the private sector can now work with the Provincial Health Authorities to deliver health services to reduce the high level of maternal and child health mortality in rural areas. However, many challenges remain at all levels of the health system - like coordination, lack of tools for monitoring and evaluation, unsustainability of programs and an ineffective leadership and management structure to manage the multiplicity of partners involved in health service delivery. A review of these policies and plans was undertaken to identify these challenges, opportunities, gaps and lessons learnt, since 2011, using a qualitative thematic analysis approach and develop strategies and tools to monitor the new NHP 2021-2030 and PNG Vision 2050.

Russell **Kitau** Jnr, UPNG, dankay730@gmail.com; Russel Kitau Snr, UPNG

Using a Transformative Paradigm Research Approach to Investigate Guidance & Counselling Services in Papua New Guinea (PNG) Schools presented by Dr Kainaro Kravia, Lecturer, School of Education, University of Goroka

The PNG Government's Vision 2050 plan is to improve its Human Development Index (HDI) ranking and be among the top 50 countries in the world. School guidance and counselling (G&C) services can complement the vision since schools are agencies for shaping the lives of young people. Since the 1900s, G&C has evolved from a position model to a program model in response to the diverse needs of students, community and the workplace. The position model perceived G&C as an ancillary activity whilst the program model saw G&C vital to student wholistic development. Presently, PNG continues with the position model introduced by Australia in the 1970s. This paper explains a transformative paradigm research project conducted to investigate the possible transformation of PNG G&C services from the position to the program model. Using mixed methods, this study reports the data triangulation of an autoethnography (n=1), survey (n=37), and interview (n=9). Survey and interview data were analysed using SPSS and NVivo software. Findings indicated that G&C services in PNG were restricted to vocational guidance in secondary schools. G&C services in school were affected by shortage of trained personals; no guidance curriculum and minimal stakeholder support. Recommendations included PNG developing a comprehensive program model that will embrace trained personals, adequate guidance curriculum with improves networking. G&C is an integral component of education that can foster wholistic human development, thereby reducing poverty, inequality and injustice to creating a smart and harmonious PNG.

Kainaro **Kravia**, UOG, kraviak@unigoroka.ac.pg

The Impact of Educational Facilities on Students' Achievement, Attitude and Behaviour presented by Mrs Evelyn Kua, Lecturer, School of Business and Public Policy, University of Papua New Guinea

Many existing studies aimed at establishing a relationship between teaching and learning facilities, students' performance, behaviour and attitudes. Some of these studies documented that the influence of educational facilities upon student learning can be measured, and this influence can be good or bad depending upon the condition of the building.

Most literature to date found that most research conducted have been carried out on lower to primary schools and high schools' level in countries categorized as developed which may have educational infrastructures not the same to that of developing countries like PNG where formal education was introduced in the 1950s and higher education in the 1960s. However, there is still a need for further research to identify the effects of higher education building conditions on students' performance, attitude and behaviour, particularly in Papua New Guinea. This study will address this gap by focusing on students attending UPNG main Waigani campus. In recent years new school buildings have been built at UPNG, and now co-exist with older buildings from the 1960s. The investigation will focus on these two different types of building. Adopted methodology will involve in-depth interviews and survey of students attending classes in both old and new buildings.

Evelyn **Kua**, UPNG, ekua@upng.ac.pg

Hindsight: Repatriating Photographs and Film in the Gulf of Papua New Guinea presented by Associate Professor Lara Lamb, Anthropology and Archaeology, School of Humanities and Communication, Faculty of Business, Education, Law and Arts, University of Southern Queensland

This project seeks to make a contribution to an interdisciplinary field of study, which is interested in interrogating and addressing the legacies of colonialism. It takes the form of a specific case study of an expedition by the explorer, journalist, photographer, and cinematographer Frank Hurley to the Gulf of Papua New Guinea in the 1920s. In returning Frank Hurley's colonial era photographs to the source communities of the Kerewo and Urama peoples for comment and testimony, we seek to understand the ongoing effects and affects of this colonial process on their communities. We argue that in order to reach a more accurate, representative, and equitable understanding of what takes place in exchanges such as that which occurred between Hurley's expedition and the Kerewo and Urama peoples, we also need to know more about the agencies through which they were colonised and their response to those agencies. Such an understanding requires an inter-disciplinary interest in the cultural, ethnographic, and historical conditions that influenced the collection and representation of these images and objects.

Lara **Lamb**, USQ, lamb@usq.edu.au; Christopher Lee

Academics' and Supervisors' Perspectives of the Current Fieldwork Partnership Between UPNG Social Work and Fieldwork Agencies presented by Mr Dunstan Lawihin, Social Work Lecturer, School of Humanities and Social Sciences, University of Papua New Guinea

Field education is an integral component of social work education and is delivered in partnership with field agencies. Effective university and agency collaboration is critical for the delivery of quality social work field education across the globe. Although collaboration is fundamental in delivering social work field education, UPNG does not have a clearly defined, reliable and strategic partnership arrangement. The collaborations are currently nebulous. There is also limited knowledge and research done to identify relevant partnership models for effective and meaningful collaboration in the PNG context.

Therefore, this research focuses on exploring the perspectives of academics and supervisors on the Current Field Education Partnership between UPNG Social Work and Fieldwork Agencies. The research will explore the question of "What do UPNG social work academics and field supervisors identify as meaningful collaboration for effective coordination of field education and student placements?" The broader question for investigation is "What does effective and meaningful collaboration look like in the delivery of social work field education in the Papua New Guinean context (UPNG)?"

In an attempt to answer the research questions, this project intends to examine the current fieldwork partnership, define the meaning and characteristics of an effective and meaningful partnership and to identify ways to build an accepted and sustainable collaboration for effective and quality student learning and supervision. The project is using UPNG as a case study.

Dunstan **Lawihin**, UPNG, dunstan.lawihin@gmail.com

Earthquakes in PNG and their representation in geoscience, narrative and cosmology presented by Ms Shirley Lee, Lecturer, Geology, School of Natural and Physical Sciences, University of Papua New Guinea

Abstract to be finalised

Shirley Lee, UPNG, Shirley.lee1@my.jcu.edu.au

Men's Perceptions of Pregnancy: A study of Views of Lufa Men in Papua New Guinea presented by Ms Loto Losenamo, Lecturer, School of Humanities and Social Sciences, University of Papua New Guinea

The incidence of high maternal mortality in developing countries including Papua New Guinea (PNG) is a result of constraints relating to health care, management, social, economic and cultural aspects. Cultural practices jeopardize the health of mothers during pregnancy and at child birth leading to maternal deaths, even in places where adequate health services are accessible. An important cultural determinant for maternal health is men's role in their partner's pregnancy. Research shows that male behaviour such as violence and denial of right to finances is associated with maternal deaths. Distinct gender roles, gender-based practices, male supremacy in decision making and distribution of resources in family units can deny women of healthy living and accessibility to health services. However, very little is known about how fathers can take appropriate actions in supporting pregnancy. This presentation focuses on the way the father's roles are shaped by social, economic and cultural factors.

The results from a study on the views of Lufa men from PNG revealed that men view and practise their fatherhood roles based on their gender beliefs. The fathers encourage and enable health promoting behaviour for their expectant partners within the means of resources and knowledge they have. They prepare financially in advance, seek the services of skilled birth attendants for their expectant partner and pay visits at the hospital after delivery. This research also shows that the men do not attend clinic appointments with their partners or witnessed delivery. Further research would be beneficial in explaining the constraints relating to culture and the maternal health services. The men also have myths about conception which indicates lack of knowledge relating to pregnancy.

First time fathers experience anxiety and confusion during delivery due to their uncertainty about the outcome of the delivery. The men hold negative perceptions about the quality of health services and health worker attitudes based on their partners or their own experiences. All together these issues need to be addressed through appropriate policies, programs and services to enhance father involvement in pregnancy and contribute to quality of maternal health.

Loto Losenamo, UPNG, loto.lozenamo@upng.ac.pg

Transforming Rural Farmer Opportunities Into Cash - One Woman's Effort presented by Mrs Dorothy Luana, social entrepreneur and small agro-business owner, Devine Management Services Ltd

Leaving the comfort of an office job I attempted to try see if it was possible to make a genuine living from my farm-skills I had learnt over my childhood days as a mission kid. Despite obstacles, I managed to obtain a Masters level degree. I spent much of my afterschool hours working in the World Bank, the United Nations and AusAID as a project officer and during that time I had reservations about how people in PNG could get ahead in life and particularly the rural people. This project set out to replicate what I am doing to facilitate or create job spaces for others who can in turn create more cash job opportunities for other rural farmers. I have been trialling my ideas over the last four years and believe this is possible. I have gone from a woman selling wares in a basket to now turning over a good profit, with much of this going back into the rural sector. To date my model evolved organically with absolutely no cash hand out and this is what gives me hope that we can transform our rural sector and the bottom economic bracket of PNG society.

Dorothy Luana, DMS, dorothy.d.luana20@gmail.com

M TO N

How Does Male Circumcision Protect Against HIV in PNG? Presented by Associate Professor David MacLaren, Principal Research Fellow, College of Medicine and Dentistry, James Cook University

Male Circumcision reduces transmission of HIV from a woman to a man by around 60%. Male circumcision is therefore being considered as a HIV prevention activity in PNG. However, the exact biological mechanisms by which male circumcision protects men against HIV is not well understood. Responding to this research gap, world first research is being undertaken at Pacific Adventist University, in collaboration with University of New South Wales and James Cook University to investigate how and why male circumcision protects men from HIV.

Circumcision and other forms of foreskin cutting (in PNG a dorsal slit is common) exposes the glans and surrounding penile tissue and may lead to: (i) drying of the tissue and (ii) a change in the bacteria on the penis (penile microbiome). We tested these hypotheses across 3 levels: Firstly, we determined the moisture content of the glans and foreskin tissue in men before and after circumcision. Secondly, we determined if these moisture levels correlate with viral entry into tissue. Finally, we determined changes in the penile microbiome in men before and after circumcision.

Preliminary results show major differences in moisture content and microbiome before and after circumcision. Results also show men with dorsal slits have very similar changes in moisture content and microbiome as men who have been fully circumcised. These results are important for PNG because the common dorsal slit may offer similar biological protection as being fully circumcised. The common dorsal slit may also represent a pragmatic choice for HIV prevention for men in the PNG setting.

David **MacLaren**, JCU, David.maclaren@jcu.edu.au; Stuart Turville, UNSW, Rachael Tommbe, PAU, On behalf of male circumcision for HIV prevention study team

Psychological Preparedness and Support During Labour for Pregnant Women in the Eastern Highlands presented by Lucy Mahabi, Nursing Director, Rural and Remoted Outreach, Eastern Highlands Provincial Health Authority, Goroka Hospital

Background: Maternal anxiety and/or negative expressions of pregnancy can have a detrimental effect on pregnancy and normal birth. Objectives: To assess (i) the emotional reaction of mothers to their pregnancy; (ii) the relationship between parity and emotional reaction; (iii) emotional support received. Methods: Structured interviews with women who birthed at Goroka Hospital.

Results: A total of 96 women were interviewed. Women ranged in age from 16-38 years, with an average age of 24 years. Almost half (n=45, 47%) were teenagers (15-19 years), with 60% (n=27) having between 2-4 previous live births. Most women were parity 0 (n=42), with 7 women identified as grand multiparity (≥ 5 births). Women indicated they were 'happy' to the news they were pregnant 54% (n=52) of the time. Other reactions included being afraid, angry and upset. Negative emotions were expressed by women in their 3rd, 4th and 5th pregnancies. Women reported receiving most psychological support during labour from other family members, husbands or in-laws, and lastly health workers. However, most women (n=87) preferred assistance from a nurse during labour.

Conclusion: There is a need for a policy review to strengthen emotional support, mental and reproductive health of pregnant women in the Eastern Highlands.

Lucy **Mahabi**, lmahabi08@gmail.com; Elizabeth Angiva, Karen New

Is Diabetes the Biggest Epidemic of the Twenty-first Century in Papua New Guinea? Data from New Ireland Province presented by Professor Usman Malabu, College of Medicine and Dentistry, James Cook University

Background: Diabetes is a major public health problem that is approaching epidemic proportions globally. Worldwide, the prevalence of chronic, noncommunicable diseases is increasing at an alarming rate. Despite the rising prevalence of diabetes and obesity in both developing and developed countries, few studies have assessed impact of diabetes in Papua New Guinea (PNG).

Objectives: This study aimed to assess the prevalence and risk factors of diabetes and obesity in New Ireland Province of PNG.

Methods: A prospective province-wide diabetes screening program was conducted between September 2017 and August 2019 on residents of New Ireland Province aged 18 years and above as part of World Diabetes Foundation's Improved Diabetes Access and Awareness campaign. Eligible participants were screened for

diabetes, obesity and hypertension. Pre-diabetes was defined as either fasting blood glucose (FBG) level of 6-7 mmol/l (impaired fasting) or random glucose level of $\geq 7.8 - 11.0$ mmol/l (impaired glucose tolerance). Diabetes was defined as FBG >7 mmol/l or a random blood glucose of >11 mmol/l. Blood pressure and anthropometric parameters were measured according to standard guidelines.

Results: Details of our findings will be presented at the conference.

Conclusions: Implications of our findings will be discussed.

Usman **Malabu**, JCU, usman.malabu@jcu.edu.au; Venkat Vangaveti, Theophilus Emeto, Anne Botu, Kenneth Sodeng, Mclee Matthew

Bringing University Education to Students Through the Use of Technology presented by Mr Isaac Manu, ICT Advisor, UPNG ICT Division, University of Papua New Guinea

Technology can be harnessed to provide university education to the students anywhere in PNG. The presentation of this abstract is on use of technology to present Live Teaching Online using some kind of a video conferencing technology.

Currently video conferencing tools are used for live meetings and presentations. The same technology can be adapted in higher education sector in PNG so these tools can be used to present live classroom teaching to the students. The PNG Government vision to increase graduates in PNG by a certain percentage cannot be achieved by the current institutions. There is no capacity to increase graduates. Live Teaching using video conferencing technology is the cheapest method to provide university and college education to students who miss out in universities and colleges.

With the presence of 4G network in major towns in PNG, video conferencing tools can be used to bring a university education to the students where they are. The students who miss out on spaces in the universities and colleges does not mean they are not intelligent. It is the capacity of the institution that cannot provide the opportunities for the students. The use of video conference technologies will be the way forward to provide a university or college education to the students so they contribute meaningfully to the development of their country.

Isaac **Manu**, UPNG, isaacm@upng.ac.pg

Parents Perspective of Social Determinants Affecting Childhood Immunization in Oro Bay Rural in Ijivitari District of Oro Province, Papua New Guinea presented by Mr Gigil Marme, Lecturer and Head of Department for Public Health, Public Health Leadership and Training, Divine Word University

Introduction: Immunisation is considered as the most effective public health strategy that aims to prevent children from infectious diseases. The aim of this paper was to examine rural parents' perspective of social determinants affecting childhood vaccinations in Oro Bay rural in Oro Province, Papua New Guinea (PNG).

Method: A descriptive qualitative study design using semi-structured interviews and memos was employed with fifteen (15) parents of children under five years old using maximum variation sampling technique with the diverse sociodemographic background. Thematic analysis was used to transcribe, de-identify and code data to identify emerging themes. The Social Determinants of Health (SDOH) framework was used as a theoretical framework to guide the study.

Results: This study found that neighbourhood and build environment, health and health care, social and community context, education and economic stability have a significant effect on childhood vaccination programs at Oro Bay communities.

Conclusion: This paper concludes that using a Social Determinant of Health concepts of the rural parents' experiences of children immunisation activities produces a nuanced understanding of how parents in rural villages managed multiple social determinants including individual characteristics (distance to health facility, education, access to information), and parents attitude towards vaccinations, health workers' attitudes towards parents, and the level of paid work and income are all significant factors for a successful immunisation program.

Gigil **Marme**, DWU, gmarme@dwu.ac.pg; Gaudi Gerison

Incidence of Substandard Amoxicillin Oral Dosage Forms in the National Capital District of Papua New Guinea, Part 1: Survey Protocol and Product Inspection presented by Ms Rose Mayaune, Tutor, Pharmacology, Division of Basic Medical Sciences, University of Papua New Guinea

The prevalence of poor-quality medicines remains a global health issue with their use being associated with the development of drug resistance. In 2018 the World Health Organization (WHO) estimated that 10% of medical products in low and middle-income countries were substandard or falsified, with amoxicillin being most commonly detected. The aim of the current study was therefore to measure the prevalence of substandard and falsified amoxicillin products (tablets, capsules and oral suspensions) in the National Capital District (NCD), with the survey protocol and product inspection presented in this Part 1. Amoxicillin products were collected from retail pharmacies, private and public health facilities and the Area Medical Store in October 2018 and again in March/April 2019. All products underwent a visual inspection, which included the package and labelling. These two surveys, conducted five months apart, represented 94% (2018) and 91% (2019) of licensed medicine outlets. Tablets (250mg) were most commonly dispensed (79%) as individual units in plastic bags or bottles, while for the capsules (250mg and 500mg) 43% and 47% respectively, had been similarly repackaged. While no falsified products were detected, Part 2 of the study will involve quantifying the amoxicillin content to determine whether any of these products are substandard.

Rose **Mayaune**, UPNG, rdmayaune@gmail.com; Naomi Hehonah, Sherryl Robertson, Beverley Glass

Primary Health Care in PNG: JCU Nursing and Midwifery in Partnership with YWAM Medical Ships presented by Dr Marie McAuliffe, Senior Lecturer, Nursing and Midwifery, James Cook University

Background: In 2018, a new partnership between Youth with a Mission (YWAM) Medical Ships Townsville and JCU Nursing and Midwifery created an initiative enabling JCU Nursing and Midwifery students to undertake accredited placement on the YWAM Medical Ship, MV YWAM PNG. Throughout these placements, students are members of the YWAM primary health care teams providing clinical care in the villages in partnership with local health care workers. JCU Nursing and Midwifery academic staff accompany the students for supervision. To date, students have undertaken placement in the Western, Gulf, Central and Oro Provinces.

Method: Descriptive methods will highlight observations of the student experience, recorded by the author, during the placements and reflection on the experiences post placement.

Results: JCU Nursing and midwifery students value the opportunity to provide primary health care in low resource settings and challenging environments.

Conclusions: With appropriate support, the primary health care experience on the YWAM Medical ship, MV YWAM PNG is a valuable rural and remote clinical placement opportunity for nursing and midwifery students

Marie **McAuliffe**, JCU, marie.mcauliffe1@jcu.edu.au

Intangible Cultural Heritage Bringing Culture, Nature and People Together to Build Sustainable Local Communities presented by Associate Professor Susan McIntyre-Tamwoy, Adjunct Professor, College of Arts, Society and Education, James Cook University and Navin Officer Heritage Consultants

Papua New Guinea ratified the Convention for the Safeguarding of the Intangible Cultural Heritage on the 12th December 2008. Over the intervening time period they have not had any ICH included on Representative List of the Intangible Cultural Heritage of Humanity. This is despite the fact that we know that PNG has a rich and vibrant Intangible Cultural Heritage. In other parts of the Asia Pacific region state parties to the convention have enthusiastically embraced the convention and its potential to, not only protect heritage and strengthen cultural identities, but also to fuel sustainable micro economies for local communities. This presentation looks at case studies from the region and reflects on the potential benefits of research in this area for PNG.

Susan **McIntyre-Tamwoy**, JCU, smcintyre-tamwoy@nohc.com.au

"Olgeta Samting Senis": Extraction, Gender & Sexual Economy in Hela Province, Papua New Guinea presented by Ms Agnes Mek, Social and Behavioural Researcher and Research Project Coordinator, Sexual Reproductive Health unit, Papua New Guinea Institute of Medical Research

Due to the wealth flowing from Liquefied Natural Gas extraction, Hela Province has undergone immense socio-culture changes. Many of these changes are well documented. Tari, the capital town has undergone enormous transformation but those pertaining to gender and sexuality have largely been overlooked. Using photovoice research method in Tari among people on the project site participated in two workshops. A total of 24 participants took photographs, wrote or digitally recorded narratives of the meanings behind the images and chose how the results were to be presented. Standard processes of participant de-identification, data process and analysis applied.

Ethics approval was given by appropriate partners and bodies. The shared experiences and perceptions, visualized and narrated, showed participants creatively documented lived-experiences pertaining to money driven transformations. The rapid social change highlighted gendered experiences where women and children felt the impacts differently. Three key findings include: land and livelihoods; marriage, family and sexual relations; health and well-being. These experiences show us the diverse ways in which the industry has impacted on the people who are not direct beneficiaries. Such alternative approaches are feasible to apply among marginalized communities for their voices to be heard and engage wider community's attention for sustainable development programs.

Agnes **Mek**, PNGIMR, akmek1996@gmail.com; Angela Kelly-Hanku, Verena Thomas, Richard Eves

Young and Positive: Living with HIV in Papua New Guinea presented by Ms Agnes Mek, Social and Behavioural Researcher and Research Project Coordinator, Sexual Reproductive Health unit, Papua New Guinea Institute of Medical Research

Young people's susceptibility to HIV risks have been researched in Papua New Guinea. However, little is known of the issues related to living with it. Experiences of adolescent girls' and young women's HIV status living in Port Moresby and Goroka remain important areas for ongoing support and care. Film and photovoice, participatory research methods were used in two sites. Participants collaboratively shared their stories and experiences of living with HIV on camera, visuals, written or digitally recorded. The video retained the identities of the young women, while photovoice deidentified them. Standard ethics approval was granted by partners and bodies. Key findings exemplified complex yet related ways, when they were tested to treatment; recovery; role of family, clinicians, faith and desired hopes in future. Unique about the participants is that they were living at home and attending schools. Husbands and parents had no influence on their HIV status.

Their stories and experiences offer important insights into issues facing adolescent girls and young women and the significance for continued support and care. It is essential for policymakers, service providers and development partners to hear these voices for retention on long-life treatment.

Agnes **Mek**, PNGIMR, akmek1996@gmail.com; Angela Kelly-Hanku

Difficulties Screening for Gestational Diabetes Mellitus in Low Resource Settings. What's the Impact? presented by Ms Gill Mibus, Secretary, Low Resources Countries Special Interest Group, Australian College of Neonatal Nurses

Background: Gestational Diabetes Mellitus (GDM) is a major non-communicable disease increasing worldwide. GDM is associated with maternal, perinatal and newborn morbidity and mortality. Midwives at the Goroka Provincial Hospital (GPH) reported an increasing number of large babies, perinatal deaths and stillbirths and postulated that this may be a result of increasing GDM rates.

Objectives: (i) Review GDM screening at GPH antenatal clinic; (ii) Audit babies born over 4kg.

Methods: Discussion with antenatal clinic midwives regarding GDM screening. Snapshot audit of births from GPH birth registration book from 2017 to 2019.

Results: Antenatal clinic midwives confirmed that they were aware of GDM screening guidelines, however screening rarely occurred due to a lack of resources. Birthweights over 4kg showed rates ranging from 5.1% to 9.0%.

Conclusion: GDM screening in low resource settings is often not part of routine antenatal care due to difficulties with consistent supply of screening consumables. Data on GDM prevalence and related maternal, perinatal and newborn complications are therefore also scarce. Without reliable antenatal screening and management to optimise the health of mothers with GDM, they and their newborns remain at significant health risk.

Gill **Mibus**, ACNN, irsig@acnn.org.au; Donna Hovey, Karen New

A study of UPNG Students Perceptions of Gender Imbalance and the Bride Price system in PNG presented by Ms Geejay Milli, Lecturer, Political Science, School of Humanities and Social Sciences, University of Papua New Guinea

The bride price system in Papua New Guinea is an ancient Melanesian custom. Over time, this custom has developed 'hybrid characteristics' due to the westernization and the introduction of modern monetary value. Over the last two decades, there has been an increase in reports of outrageous amounts of Kina spent in the bride price ceremony, often exceeding hundreds of thousands of PNG Kina. Associated with this trend, there has also been a rise in the cases of gender-based violence and other social ills, such as poverty and burden of repayment of bride-price-based debt accumulation. This paper is based on a small study conducted at the University of Papua New Guinea to measure perceptions of university students' perceptions on the bride-price system. Bride-price is an intrinsic part of Melanesian and Papua New Guinea culture; hence based on this study, this paper seeks to suggest alternate ways in which modernity and culture could merge in this custom without it resulting in gender-based violence and social ills. [A study conducted by students of the Political Science course – Gender Politics, as part of fulfillment of the research component]

Geejay **Milli**, UPNG, geejay.milli@gmail.com; Patrick William, UPNG, williampatrick040@gmail.com; Ben Joel, UPNG, joelben37@gmail.com; Biston James, UPNG, bistonjames43@gmail.com

The Governance Issues Relating to PNG Capital Market Transformation: A Case Study Analysis presented by Mr Sent Moke, Lecturer, School of Business and Public Policy, University of Papua New Guinea

The financial markets are a part of the financial system and capital market is an integral part of the financial system. This research explores the unique challenges in terms of governance that the Papua New Guinea (PNG) capital market faced during this early phase of its development. Exploring these challenges presents the opportunity to evaluate further change and continuous improvement in the PNG financial market.

This research reviews the development of the capital market of Papua New Guinea in the late 2000 to the present reforms and the state of development concerning specifically the issues of governance to the capital market transformation. It is important to analyse the health of this important system underpinning the economy.

There was earlier literature which high-lighted the financial reforms especially the review of institutions, markets, regulations relating to the PNG financial sector. An assessment would assert that economic development depends on financial markets. The Financial Sector Stability Assessment Report 2011 pointed out a significant number of issues concerning the financial sector of Papua New Guinea.

Specific legislations were introduced in 2015 which its scale of impact is yet to be felt. The Financial Sector Development Strategy 2018 -2030 is an important blueprint which is the roadmap for an inclusive financial growth and prosperity of the entire financial system of Papua New Guinea with key insight concerning governance issues past, present and future.

Sent **Moke**, UPNG, smoke@upng.ac.pg

Roles and Challenges of Women Vendors in Informal Settlements in Papua New Guinea presented by Ms Wilma Molus, PhD Student, Creative Industries, Faculty School of Design, Queensland University of Technology

Urban informal settlements in countries in the global South are areas of rapid change and increasing inequalities. This results in different forms of vulnerabilities in the urban informal settlements' context. After Papua New Guinea's independence, informal settlement communities in Papua New Guinea expanded, and many people living in informal settlements have been marginalized and isolated from formal opportunities. Despite the unavailability of formal social and economic opportunities, there is evidence that in particular women have shown resilience for playing different roles in the family, community and contributing to development processes. The research study presented in this paper examines the different roles women vendors play and the challenges they face in informal settlement communities in Papua New Guinea. The study is being conducted in Kamkumung informal settlements in Lae city. It employs indigenous research and participatory arts-based

methodologies to explore women's voices and their hopes for change and understandings of safety within their surroundings. I share initial research findings from the research project to inform women empowerment interventions, infrastructure planning, basic service delivery, informal settlements' upgrading policies with emphasis on considering women vendors' active participation in development processes.

Wilma **Molus**, QUT, Wilma.molus@hdr.qut.edu.au; Verena Thomas, Jacki Kauli, Laurie Bys

Collaborative and Inclusive Participation at the Local Level presented by Ms Fiona N'Drower, PhD Candidate, College of Business Law and Governance, James Cook University

Collaborative and inclusive participation at the local level in communities in rural Papua New Guinea (PNG) is still a struggle. This was observed while conducting field work in twelve different communities. The main purpose of the field work was to assess the effectiveness of Community Based Tourism (CBT) in rural PNG using an Indigenous Research Method modified to suit PNG's cultural context. It was noticed that females played a secondary role in facilitating tourism initiatives within their communities. There was also a disconnectedness between the tourism resource owners and tourism regulators in the form of service delivery as well as the main tourism operators who supplied tourists to the local tourism sites. This scenario mimics other development projects at the grass root level in communities. International agencies, however, can assist in easing such dilemmas through inclusiveness and ethical prosperity by re-adjusting their requirements for offering assistance to locally-led developments. This is to ensure there is equal participation for the common good for all and there are equal economic benefits especially in communities who are considered to be at the bottom end of the economic spectrum.

Fiona **N'Drower**, JCU, Fiona.ndrower@my.jcu.edu.au

Nurturing Care, Nutrition and Neurodevelopment presented by Dr Karen New, Honorary Research Fellow, Low Resources Countries Special Interest Group, Australian College of Neonatal Nurses

Background: The Nurturing Care for Early Childhood Development. A framework for helping children survive and thrive to transform health and human potential pertains to all newborns, infants and children from 0-3 years globally.

Objectives: To review nutrition and early childhood development: globally, the pacific region and Papua New Guinea (PNG).

Methods: Review of peer-reviewed and grey literature from 2014-2019, pertaining to core elements of developmental care and nutrition in the context of promoting nurturing care.

Results: Breastfeeding supports optimal nutrition, however, challenges to this for small infants include mother-infant separation, and motor and physiological immaturity. Exclusive breastfeeding is encouraged for at least the first 6 months and preferably to 12 months, but rates are declining not improving. Evidence is emerging that human milk has a positive impact on preterm infants, neurodevelopmental outcomes not only in the shorter-term but in the longer-term right through to adulthood. Data is lacking in many countries including PNG.

Conclusion: Action is needed to increase exclusive breastfeeding. It is important for countries not only to collect data to generate their own evidence, but report and monitor to better position themselves to advocate for policy changes and investments that are needed.

Karen **New**, ACNN, eso@acnn.org.au; Donna Hovey, Gill Mibus, Andrea Flint

O TO P

An Investigation of Factors Affecting Grade 10 and 12 Students Mathematics Results in Port Moresby, PNG presented by Mr Jerome Oko, PhD Candidate, School of Education, The University of Adelaide

Many mathematics educational studies have been conducted with a limited or narrow scope, and are focused on only one or a couple of factors relating to how teaching and learning of mathematics occurs (Whannell & Tobias, 2015). By contrast this study focuses on a number of factors and their interrelationships that are believed to influence Grade 10 and 12 students' mathematics performance. This study is relevant because to date there have been no studies undertaken related to factors affecting students' mathematics results in PNG. In addition,

PNG has not participated in international studies such as Programme for International Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS), and the results of this study will therefore enable PNG's participation in those studies. This study is focused on this educational level because of Grades 10 and 12 students' poor mathematics results in annual national examinations, and subsequent attrition rates. Therefore, the study will highlight that school, teacher and student level factors affect the mathematics results of Grade 10 and 12 students in PNG. The micro (student) is nested within the meso (teacher) level and meso within the macro (school) level. At the student level, factors such as motivation, attitude and gender influence their mathematics achievement. The factors associated with teacher level are teaching quality, instructional resources and learning environment (Nicholas, Poladian Mack & Wilson, 2015). At the school level, factors such as school type and curriculum affect students' mathematics results. This study employed a quantitative dominant mixed method. As such, a sample of 729 students (354 are Grade 10 and 375 are Grade 12 students) with 41 of their teachers participated in the survey. Besides this, 20 out of the 40 teachers who answered the survey questionnaires also participated for the interview. The survey instruments are validated through rigorous statistical techniques such as Rasch measurement model (RMM) at the item level and Confirmatory factor analysis (CFA) for the structure/relationship of the constructs with the items. The W-scores from the RMM were used for the path analysis/Structural equation modelling (SEM) to examine the direct and mediated effect from the student and teacher levels variables, respectively, on the mathematics results. Further, since the data has a hierarchy in nature, multilevel analysis/Hierarchical linear modelling (HLM) was used to obtain the direct and cross-interaction effects of the variables on the mathematics results. The findings from SEM shows that parents education level, attitude, motivation and private schools have a direct significant ($p < 0.05$) effect on the students' mathematics results. Similarly, mothers' education level and private schools also have a direct significant ($p < 0.05$) effect on Grade 12 students' mathematics results. However, the attitude and motivation towards mathematics diminished as students moved to Grade 12. The results of the direct effect of HLM are consistent with the findings of SEM. The attitude from the student level and average mothers' highest education level from teacher level have a cross-interaction effect on combined and Grade 10 mathematics results whereas gender and average mothers' highest education level cross-interaction effect for Grade 12 mathematics results. Therefore, these results of this study can provide PNG education leaders, stakeholders, teachers and parents with a better understanding about the factors involved in improving mathematics results. This research, conducted as a nationwide study, can offer tools for the development of better mathematics education programs not only in PNG but also in the mathematics education communities internationally.

Jerome **Okon**, UOA, jerome.okon@adelaide.edu.au

Knowledge, Attitude, and Practices in Sexual and Reproductive Health (SRH) Among Secondary School Children in the National Capital District, PNG presented by Dr Deborah Panao, Obstetric and Senior Gynaecology Registrar, Port Moresby General Hospital, School of Medicine and Health Sciences, University of Papua New Guinea

Background: Worldwide adolescents face a myriad of problems such as Early initiation of unprotected sexual activities, exposing them to STIs/HIV, Teenage pregnancy & Abortion, and initiation of unhealthy addictive behaviours. There are no available data in PNG.

Aim: To find out about the current knowledge, attitude, and practices in SRH among secondary school students in the NCD of PNG so that the information gathered can be utilized appropriately by the relevant authorities concerned.

Materials and Methods: It was an observational school-based survey carried out in 4 Secondary Schools in the NCD from April – July 2019.

Results: A total of 1437 students participated in the survey. Males were more prone to poor SRH, such as, consuming alcohol, smoke cigarettes, taking recreational drugs, watch pornography and have sex than females. Even though FP is taught in class, the uptake is low, resulting in unintended pregnancies and abortions. More than 90% of them know about HIV and STI, however only 7% have tested for HIV. Domestic Violence is common in homes. Males are more physically abused, females more verbally and both an equally sexually abused.

Deborah **Panao**, UPNG, deborahpanao@gmail.com; Robert Jones

Assessment Rubrics in Health Science Education at the School of Medicine and Health Sciences, University of Papua New Guinea presented by Mrs Ruth Pape, Lecturer, Discipline of Medical Imaging Science, School of Medicine and Health Sciences, University of Papua New Guinea

Background: The importance of rubrics for formative feedback in assessment has widely been used in higher education worldwide to enhance student learning and achievement (Bearman et al. 2014; Lipnevich et al. 2014; McCarthy 2015; Osterbur et al. 2015; Strangman & Knowles 2012). This research investigates tertiary medical imaging science students' perceptions of the usefulness of individualized feedback using a detailed marking rubric at the University of Papua New Guinea.

Methodology: In the first half of 2017, in the course Research Project, 15 fourth year students were assigned to one assessment rubric, with a detailed description of how their work were graded. Students were told to submit first draft of their writing on a particular date, and then electronic feedback (Osterbur et al. 2015) was delivered to them to support the revision process. The benefits of the rubrics were evaluated at mid-semester in the form of a paper-based survey (Creswell 2014), which provided participating students with the opportunity to critically reflect on the learning experience.

Findings: A huge proportion of students (53.3%) were satisfied that feedback on their proposal drafts using the rubric provided them with information about their progress with respect to achieving the assessment learning outcome. This positive response reflects the integration of effective formative feedback strategies to enhance students' learning as evidenced through higher education worldwide (Brown & Race 2012; Gibbs & Simpson 2004; Lipnevich et al. 2014; McCarthy 2015; Naylor et al. 2014; Osterbur et al. 2015).

Significance: Findings of the current study will be used for future practice as a benchmark in integrating the rubric as part of the curriculum for formative feedback in assessment to enhance student learning and achievement within the discipline and for the wider university community.

Ruth **Pape**, UPNG, ruth.pape@cqumail.com

Integrating Sports and Hygiene Promotion in Papua New Guineas schools: A Behaviour Change Study presented by Ms Rachel Payne, Country Director, WaterAid PNG

This research assessed the effectiveness and sustainability of two interventions – nudges (visual cues) and netball-based activities, in increasing handwashing with soap (HWWS) and sports participation by children in eight schools in two provinces in PNG. Participating schools received handwashing facilities at the start of the program, followed by the interventions. Data was collected before, during and after to detect changes in response to the interventions. Methods included interviews, focus group discussions, behavioural observations and surveys. Following the installation of facilities and before other interventions were implemented, 72% of students were observed to practice HWWS after leaving the toilet. It is likely that the additional interventions contributed to sustaining the high rates of HWWS. The research indicated that a lack of opportunity (access to handwashing facilities) is a major constraint to children washing their hands, rather than awareness alone. Results also showed an increased interest in playing netball, among girls and boys. Dynamics between sports promotion and HWWS were also observed. Behaviour change is complex and access to opportunities to practice the desired behaviours are essential. Implementing behaviour change approaches in schools requires a strong enabling environment, including support and capacity of participating schools for sustainability and impact.

Rachel **Payne**, WaterAID PNG, Rachel.payne@wateraid.org.au; Diana Gonzalez Botero, Melissa Steven, Lua Rikis, WaterAID

Re-Designing Student Learning Experiences in a Satellite Study Campus with the Possible Use of the Commonwealth of Learning (COL) APTUS Device presented by Mr Michael Pepen, Director, Madang Open Campus, Open College, University of Papua New Guinea

In a dual mode university such as the University of Papua New Guinea where a technologically enhanced environment is missing and print is still the mainstay; innovation in teaching is a must particularly with respect to the Scholarship of Teaching and Learning (SoTL). And the search for a way to teach, engage and enhance or enable student learning experiences is more a need than a want.

Here the use of the COL APTUS device is proposed, with likely scenarios that is anticipated and envisaged that will enable teaching and learning to occur in an open and distance learning environment in the not too distant

future. This proposal as it is, is a result of an exploratory study that was conducted through the case study research strategy employing multiple sources and multiple methods, since there were only 11 students and a tutor who participated in the study here in one of the University's satellite centres. The data was analysed qualitatively and framed by employing the 4Q Model of Evaluation by Smith (2008), and clustered using the content analysis under specific themes or evaluation clusters in the 4Q Model of Evaluation.

This paper is a proposal towards the re-designing of teaching and learning, especially learning experiences here in the UPNG Open College, especially in its satellite centres with the possible employment and deployment of the COL APTUS device in particular.

Michael **Pepen**, UPNG, mpepen@upng.ac.pg

Land Grabbing: Implications on the Proposed Bootless Bay Marine Protected Area presented by Mr Fidelis Porika, Research Cadet Officer, Social Environmental Research and Consultancy Services

Customary land grabbing is an escalating issue faced by landowners within the vicinity of an economic zone in Papua New Guinea including the Motu-Koita people of Central Province. In the case of the proposed Bootless Bay Marine Protected Area (BBMPA) project, the coastal communities own land along the coastline of Tubusereia, Taurama, Oyster Bay, Pari and Joyce Bay. However, the land grabbing issues are increasingly evident among urban villages of Pari-Taurama and Pari-Tauata in Moresby South electorate.

This paper documents the customary land tenure in the Pari-Taurama area highlighting customary land grabbing issues resulting in unplanned construction and development, illegal settlement, sale of customary land, and the illegal Incorporated Land Groups (ILG).

Key research methodologies are both qualitative and quantitative and includes literature review, checklist, interviews, focus group discussion and stake holder analysis highlighting issues concerning land grabbing and its implications on the BBMPA project.

Fidelis **Porika**, fporika@gmail.com; Alfred Urim

Tetrodotoxin Studies and Screening of Bioactive Compounds in Marine Organisms from Solomon Islands presented by Dr Clyde Puilingi, Lecturer, School of Science and Technology, Pacific Adventist University

Marine environment is a source of bioactive compounds. Investigation of tetrodotoxin (TTX), a neurotoxin, in pufferfish from Solomon Islands was conducted in *Arothron hispidus*, *A. nigropunctatus* and *Diodon holocanthus* using LC-FLD and LC-MS. Result revealed *A. hispidus* and *A. nigropunctatus* to be toxic while *D. holocanthus* is nontoxic. All toxic pufferfish contain TTX and its analogues including the highly toxic analogue, 11-oxoTTX. Continuous monitoring of TTX distribution is important for Solomon Islands and the region.

Studies on marine sponge *Melophlus sarasinorum* revealed a new sarasinoside congener (sarasinoside M2) along with a known sarasinoside B1. Sarasinoside M2 was isolated as a colorless powder with its HR-ESI-MS determined and calculated as C₆₁H₉₆N₂O₂₆Na, m/z 1295.6144, highly compatible with NMR spectral data. HR-ESI-MS/MS data of sarasinoside M2 indicated the presence of a sarasinoside B-type sugar moiety and a steroidal structure containing an epoxy bond. Sarasinosides B1 and M2 showed moderate (7-24 µg/mL) cytotoxicity against the tested cell lines.

Clyde **Puilingi**, PAU, clyde.puilingi@pau.ac.pg; Yuta Kudo, Keiichi Konoki, Yuko Cho, Mari Yamashita

Childhood Malaria Referral from Primary and Secondary Health Care Services to a Tertiary Hospital: Port Moresby General Hospital, Papua New Guinea - A Case Study. presented by Dr Francis Pulsan, Lecturer and Paediatrician, Division of Public Health, University of Papua New Guinea

Introduction: Children with malaria are referred to tertiary health services. There is a paucity of studies regarding the demographic and reasons for childhood malaria referral in Papua New Guinea. The current research will be carried out to investigate the reasons why children with malaria are referred to tertiary health services from primary and secondary health services.

Methods: We searched PubMed using the following key words: malaria OR Children AND Papua New Guinea up to September 2019. In addition, we hand-searched the grey literature, including national and international policies and guidelines.

Results: Malaria remains a burden in holoendemic areas in Papua New Guinea. Malaria infection prevalence has reduced from 11.1% to 0.9% since the introduction of insecticide-treated nets in endemic areas of PNG. mRDTs were found in 90.2% of health centres compared to 21.3% of aid-posts. Artemeter-Lumefantrine was available in 87.8% of health centres whilst in 19.2% of aid-posts. However, there are insufficient studies conducted in PNG on referral of malaria to document why children with malaria are referred to hospitals.

Conclusion: The lack of literature and evidence regarding malaria referral is one obstacle for the development of referral guidelines. The personal, medical and socio-economic impact of malaria referral of infants and children is not known. We speculate that the lack of anti-malarials and diagnostic tools could be important reasons for referral.

Francis **Pulsan**, UPNG, francis.pulsan@gmail.com; Lars Henning, JCU

Does a Problem-Based Learning MBBS Curriculum Prepare Resident Medical Officers for Paediatric Practice in Papua New Guinea? presented by Dr Francis Pulsan, Lecturer and Paediatrician, Division of Public Health, University of Papua New Guinea

The problem-based learning curriculum for the MBBS programme has been in place for almost 20 years, and whilst opinions have been expressed as to how well it prepares the students for clinical practice there have been no studies to explore the issue. Our research attempted to start addressing this knowledge gap using questionnaires completed by Resident Medical Officers and their supervisors. Questions were based on items covered in the internationally recognised and validated Preparation for Hospital Based Practice Questionnaire (PHPQ) and included interpersonal skills, confidence/coping skills, collaboration, practical skills and patient management, understanding science, prevention - health promotion and disease prevention, holistic care and self-directed learning. RMOs were asked to respond to 35 statements using a Likert scale of 1-5, where 1 indicated strong disagreement to the statement and 5 strong agreement. Supervisors were asked to respond similarly to 10 focussed statements. Means and standard deviations of the scores for each statement were calculated. A mean of ≥ 3.5 was regarded as suggestive and a score of ≥ 3.9 strongly suggestive of overall approval. The opportunity for students to suggest areas in which they felt their undergraduate training could have prepared them better was provided in an open question. Twenty-five (66%) of 38 RMOs and 19 (76%) of 25 clinical supervisors who initially agreed to take part returned completed questionnaires. A mean score of ≥ 3.9 for the RMOs was obtained in 16 (46%) of the 35 questions and a score of ≥ 3.5 in 24 (69%). Scores of ≤ 3 were obtained in 5 (14%) questions, four of which related to dealing with job stress including dealing with parents and families of children who die, and balancing personal and professional life. Scores of ≥ 3.5 were obtained for 7 of the 10 questions to supervisors with the lowest score of 3.29 relating to basic science knowledge. A number of RMOs expressed the view that more training in paediatric and neonatal resuscitation was required in the undergraduate programme. Supervisors had an overall positive view of the preparedness of the RMOs {3.65(0.13)}. Limitations to the study include the low response rate of the RMOs, suggesting the possibility of a positive bias to the results, and this was a small study relating only to paediatric practice. Similar studies relating to the other disciplines would be valuable, but the results are encouraging and suggest that the current undergraduate training programme prepares the students for Residency reasonably well.

Francis **Pulsan**, UPNG, francis.pulsan@gmail.com; John Vince, UPNG

The Effects of Sub judice Rule in Papua New Guinea presented by Mr Glen Pumuye, Lecturer, School of Law, University of Papua New Guinea

The presentation deals with the issue of subjudice and the effects it has on the motion of no confidence procedure in Parliament. By virtue of Supreme Court references No4 and 5 of 2018 all the laws pertaining to the introduction and moving of the motion of no confidence procedure as well as the outcome of a successful motion of no confidence are before the Supreme Court for its interpretation and deliberation. The question then is, if the procedure is before the Supreme Court does that render the moving of a motion of no confidence in Parliament subjudice? Did the previous Prime Minister Peter O'Neill legally have grounds to block the motion of no confidence motion? During Prime Minister Marape's current rein, is any motion of no confidence still

subjudice until a deliberation has been given by the Supreme Court? This presentation will seek to answer these questions.

Glen **Pumuye**, UPNG, pumuyeglenmola@gmail.com

Q TO R

Uses of Digital Technologies in Agriculture presented by Dr Vijayanandh Rajamanickam, Programme Promoter, School of Information Technology, IBS University

Agriculture, the backbone of the country's economy. PNG has more farming lands and using digital technology for farming definitely increases the economy. As the digital technologies have impacted on all the industries, it has also impacted agricultural industry. Digital agriculture makes use of the digital tools and the outcomes of digital analysis of farming-based information in pre-farming, on farming and post farming. In this paper, we are to discuss how the digital tools could be useful for the farmers or agricultural sectors to maximize the yield with the optimal resource during all the stages of farming. Discussions about the use of these tools in soil analysis, water management, selection of best fertilizer, scheduling for sub-farming activities between seed and yield are also presented. This paper also discusses the use of the datamining tools to provide weather forecast report based on the PNG previous year's metrological data, prediction of seasonal attacks to crops and other threats which may impact crop yield. It also adds the use of software applications in predicting the market demand, providing e-flat form for selling of agricultural products.

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A Study to Determine the Cause of Work-Related Low Back Pain and Musculoskeletal Discomfort Experienced by Industry Workers in Papua New Guinea presented by Mr Issac Ramson, Physiotherapist, Port Moresby General Hospital

The primary aim of the study was to add better understanding to the existing body of knowledge into the cause of work-related low back pain and musculoskeletal discomfort developed by industrial employees in Papua New Guinea. This was done by identifying behaviour of pain sustain by employees. (Higgins, 2015) states the classification system used to classify low back pain according to the clinical pattern at which it occurs. Adult employees are more vulnerable to have moderate work -related low back pain. From this stand point the fundamental objective for this study was to identify the behaviour of pain frequently experienced by industrial employees, the occurrences or cause of low back pain relating with the work mechanism for the employees. The usual pain behaviour highlighted in this study includes moderate, severe and less pain.

This study took an exploratory and descriptive approach in which questionnaires were based on the behaviour of pain, the mechanism of the pain, interventions and its classification of lower back pain. Twenty set questions were developed to collect data in one targeted venue which is Telkom PNG Limited. Participants were selected on typical cases using an inclusion-exclusion criterion. A total of 200 participants were surveyed and results of the regions of the body affected reveals 51 % low back pain, 23% sholder, 19% neck and 7% hand respectively.

This study was beneficial for physiotherapist and medical officers in two important areas; firstly, the study links biomechanical concept to how working pattern that contributes to the prime cause of low back pain sustained by many cooperate industry employees and secondly assist physiotherapist to determine the effectiveness of physiotherapy intervention prior and after medications. Lifetime risk of sustaining low back pain and musculoskeletal discomfort in adults is approximately 47% in adult males and 53% of the women with remarkable difference. Industrial employees who are women are vulnerable to develop musculoskeletal discomfort after work. Pain related to work is unique in the pain context as it is in the theory that the pain is persistence. Musculoskeletal discomfort was the leading cause of loss of workplace productivity absence from work and reduces quality of life in this century. The final phase of this research contains some of the recommendations as to how it can be managed and prevented at the early stage.

Issac **Ramson**, issacramson2050@gmail.com

Social and Cultural Determinants of Sexual Health in Papua New Guinea: A Critical Poetic Inquiry presented by Dr Michelle Redman-MacLaren, Senior Research Fellow, College of Medicine and Dentistry, James Cook University

Social and cultural determinants of health impact the sexual health and wellbeing of people in Papua New Guinea (PNG). How to effectively research and report these determinants is being explored. Innovative arts-based approaches to research are being used to inform improved sexual health and wellbeing outcomes for individuals, communities and health services in PNG.

Using critical poetic inquiry, an arts-based research methodology, poems have been written to critique and communicate social and cultural determinants affecting the sexual health and wellbeing of research participants from PNG. Found (transcription), narrative and auto-ethnographic forms of poetry incorporate, or are informed by, qualitative and observational data. This presentation includes performance of poems by a sexual health researcher to engage health professionals, policy makers and researchers as active witnesses to participant experiences. Determinants of sexual health including violence, poverty and stigma are highlighted. Religious and cultural responses are re-presented throughout the poetry, with women and girls the focus. The role of the researcher is also explored.

Critical poetic inquiry re-narrates, synthesises and concentrates data to innovatively communicate participant experiences. This arts-based approach also offers innovative analysis and amplifies evidence to inform action for improved sexual health and wellbeing of people in PNG.

Michelle **Redman-MacLaren**, JCU, michelle.maclaren@jcu.edu.au

Assessing the Awareness and Prevalence of Gender-Based Violence Among Female Students in the University of Papua New Guinea presented by Ms Melissa Riven. Medical Lab Scientist, Division of basic Medical Sciences, University of Papua New Guinea

There are several studies documenting the existence of violence against women or gender-based violence (GBV) in Papua New Guinea. However, research reports on the prevalence of GBV among female students in the universities of PNG are scanty. The objectives of this prospective, observational, cross-sectional study were to assess the awareness and prevalence of GBV among female students in Taurama and Waigani campuses of UPNG.

Simple random sampling was used to select consented female students from both campuses. An anonymous pretested self-administered questionnaire with mostly closed-ended questions was used for data collection. A total of 506 questionnaires were distributed (200 in Taurama and 306 in Waigani). The questionnaires were collected, checked, coded and entered in Excel spreadsheets for analysis. Response rates were 54.5% and 35.3% in Taurama and Waigani respectively. In Taurama 98.2% of respondents have heard about GBV and 90.8% know about GBV, compared to 97.2% and 88.9% in Waigani respectively. 11.9% of respondents in Taurama compared to 3.7% in Waigani were aware of UPNG policy on GBV. About 12% and 10% of respondents in Taurama and Waigani respectively said that they have experience physical violence. In addition, the respondents were aware of higher percentage (67.9% and 72.2%) of their colleagues in Taurama and Waigani campuses respectively that have been subjected to physical violence. In Taurama 59.6% of respondents are aware of female colleagues subjected to Psychological violence, compared to 56.5% in Waigani campus. In both campuses frequency of verbal violence was about 25%. The percentage of respondents that have been forced to have any form of sex by anyone in Taurama was 7.3% compared to 5.6% in Waigani campus. 40.4% and 38.0% of respondents in Taurama and Waigani respectively said they know female students that have been sexually harassed on their campuses. This is strong evidence of high rate of GBV in both UPNG campuses. Further confirmation is that 28.4% and 32.4% of respondents in Taurama and Waigani respectively said that they experienced sexual harassment or was at the receiving end of sexual comments on their campus. Additional results will be presented and discussed.

Melissa **Riven**, UPNG, melissarivs98@gmail.com; Victor Temple, Florence Muga

Incidence of Substandard Amoxicillin Oral Dosage Forms in the National Capital District of Papua New Guinea, Part 2: Physiochemical Compliance presented by Dr Sherryl Robertson, Technical Officer, Discipline of Pharmacy, College of Medicine and Dentistry, James Cook University

Low and middle-income countries are particularly vulnerable to the incidence of falsified/substandard medicines. Amoxicillin, listed by the World Health Organization as an essential medicine and classified under the ACCESS group of antibiotics and thus required to be available at all times is easily degraded in both the solid state and in liquid dosage forms. Therefore, especially for tropical countries, inappropriate handling and storage can contribute to the prevalence of substandard amoxicillin products. The aim of the current study was therefore to measure the prevalence of substandard and falsified amoxicillin products (tablets, capsules and oral suspensions) in the National Capital District, with the physicochemical compliance of the products collected in Part 1 presented in this Part 2. Analysis to determine the amoxicillin content of the various dosage forms was performed using a validated high-performance liquid chromatography method. Results have indicated that 50% of the tablet samples collected in 2018 were found to contain substandard amounts of amoxicillin, with the capsules (250 mg and 500 mg) exhibiting lowest incidence of substandard amoxicillin content of the dosage forms collected. Although the prevalence of substandard medicines was measured, identifying the risk factors to be addressed will improve health outcomes for the population.

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S TO T

Indigenous Languages: Documentation of Tauwade Language of Goilala in Central Province, Papua New Guinea presented by Anna Safi, Applied Linguistic Graduate, Linguistics and Modern Languages, University of Papua New Guinea

Global landscape is predominantly changing, at that brink there is an emerging trend, where massive wave on contemporary knowledge is becoming more influential, drawing colonization trait in most infused traditional societies that are more linguistically and culturally diversified. This growing scenario is underpinning impacts on traditionalism patterns of indigenous languages, knowledge and societies, driving loss on the authenticity of cultural architectures of language. Many languages are endangered globally and the rate of loss is estimated at one or two language every week. "Between 1950 to 2010, 230 languages went extinct, according to the UNESCO Atlas of the Worlds Languages in Danger. Today, a third of worlds languages have fewer than 1,100 speakers left. Every two weeks a language dies with its last speaker, 50 to 90 per cent of them are predicted to disappear by the next century". Penetration of contemporary culture into native traditional settings is becoming prevalent, invading into vulnerable roots of indigenous languages. This raise concerns on the societies that are multilingual. Papua New Guinea is a multilingual society and there are hundreds of untouched languages, these shows that such virgin languages are at the verge of vulnerability to become moribund.

Objective: This project sets out to document the Tauwade Language of Goilala in Central Province, Papua New Guinea with the intention to echo and promote the invaluable significance of indigenous language and culture within Papua New Guinea. The Tauwade language itself is a native language with almost 3000- 4000 speakers. It is only a fraction out of 1800 languages. It is one out of the three languages in the Goilala District of Central Province in Papua New Guinea. The climate of this project seems promising for further research.

Method: The qualitative method will stretch into narrative and phenomenological types to assess and analyse the written language sample on folklores. The analysis of the written sample of the Tauwade Language will be used to identify the linguistic features of the language particularly the grammar, sentence pattern and nouns of the language. Results: Generally, the project provides linguistic documentary of Tauwade language.

Conclusion: The scope of the project is posited on the general documentation of the Tauwade Language and preservation on the aspects of indigenous languages and cultural significance in Papua New Guinea.

Anna **Safi**, UPNG, annasafi22@gmail.com

Seeking Development of an Academic Library Consortium in Papua New Guinea presented by Mr Teio Same, Assistant Librarian, Medical Library, University of Papua New Guinea

Academic library consortia activity has become an integral part of university libraries operation around the world (Moghaddam & Talawar, 2009). Consortia have come to benefit considerable bargaining power over publisher's hand and has provided libraries with significant economic advantages (Tripathi, 2016). Additionally, library consortium creates interaction with publishers both as customers of publisher's products, with much stronger bargaining power than individual libraries hold. Consortia are changing the relationship between academic libraries and publishers and providing a solution for educational libraries facing financial constraints (Tripathi,

2016). Academic libraries are the concern recognised here in Papua New Guinea. Papua New Guinea academic library institutions continue to face budget cuts that affect their services, resources and growth. This report aims to systematically review the literature understanding what can be done to go about proposing the development of library consortia in the country (PNG) and by what manner can it go about implementing it. Furthermore, two main e-publications were retrieved, and 18 secondary articles were used that contained the management aspects of library consortia, organisational structure and business models. The quality of these articles was reasonably good, and a number of them were used to create a solid recommendation, however they (the selected articles) did reveal a general understanding of consortial library management. Moreover, particular challenges of moving towards developing a consortium amongst the four national universities have been highlighted, so that they may serve as a template for other academic libraries to follow in the country. However, there is insufficient evidence available on the effectiveness of early consortium programs in Papua New Guinea. Anecdotal evidence suggests that they are yet to be reviewed and highlights the need for librarians to systematically evaluate a possibility of pursuing the idea of developing a consortium. That can become an alternative solution that can help improve the informational services and systems of academic libraries in PNG. Teio **Same**, UPNG, tsame@upng.ac.pg

Dynamics of Indigenous Knowledge and Biodiversity Conservation in Rural Communities in Papua New Guinea presented by Dr Lilly Sar, Director, Centre for Social and Creative Media, University of Goroka

Changes in environment due to extreme climatic events and human activities and the impacts on people and natural resources is becoming a serious concern. This paper focuses on community initiatives in protecting endangered species and the habitats while simultaneously addressing livelihood options in order to reduce dependency on natural resource base. The participating communities were the Leatherback conservation in Karkum in Madang province, strengthening the sustainability of marine ecosystems and coastal livelihoods in Morobe province, the salt and fresh water crocodile conservation, East Sepik province and finally Tenkile and Weimang tree kangaroo conservation in Lumi, Sandaun province. Participatory Action Research method was employed to engage resource owners in conservation sites and to gather data. Major research findings for successful biodiversity conservation identified were (1) Participation of resource owners, (2) sustainable socioeconomic benefits, (2) Livelihood impacts, (3) Strong community social networks (4) Biocultural practices relevant for ecological and cultural sustainability for conservation of endangered species. This has enhanced local capacity in socio-ecological resilience. Developing policies for community - based biodiversity conservation, integrating indigenous ecological knowledge and environmental sciences is paramount.

Lilly **Sar**, UOG, lsarnorah@gmail.com; Eggert Gunnarsson, Tamalis Akus

The Status of Papua New Guinea's Tropical Rainforests under Unstable Environmental Conditions presented by Professor Simon Saulei, Head of Department, School of Natural and Physical Sciences, University of Papua New Guinea

The statistics about the forest coverage in the country indicates that the intact natural forests accounts for 60% of the total forest cover and with the new PNG forest definition as required under the UNFCCC the percentage cover has increased to about 80%. Forest ecologists in the country are now attempting to conduct research into addressing issues of adaptive resilience of the forests in respect to the impending impacts of climate change, increasing use of the forests for economic progress (through logging) and sustainability of human livelihoods (commercial and family agriculture) coupled with increasing population growth of about 3% annually. However, the primary focus of forest research should be aimed at understanding the nature of the country's tropical rainforest in relation to the dynamics of its unstable environment conditions. In this presentation I will focus my discussions on the issues relating to the unstable environment and its impacts on the rainforests, the results of the present analysis about the unstable environments and their impacts on the forests and finally I will provide some concluding remarks about the status of PNG's forests. From current analysis, it appears that the forests in the country are still developing and have yet to attain their climax or mature primary status. The indicative evidences include the high representation (20 – 45%) of secondary species such as Pometia, Intsia, Pterocarpus and Dracontomelon in the composition of the forests, coupled with low frequencies of large diameter class of trees in the forests. The frequent and extensive forest perturbances caused by the relative unstable nature of

the country's environment, especially that of the dynamic nature of the country's geology and climate has enabled this state of the forests to be maintained in what can be termed as the "geo-climatic climax forest community".

Simon **Saulei**, UPNG simon.saulei@upng.ac.pg

Community Reactions and Attitudes to Livelihoods and Resource Mapping Research in Pomio, East New Britain PNG presented by Ms Kylie Sesuki, Post Graduate Student, School of Humanities and Social Sciences, University of Papua New Guinea

Here we present two major impacts of the livelihoods and resource mapping social research carried out in four communities in Pomio District, East New Britain Province, PNG. This was done in three field seasons in 2018 and 2019. We describe the attitudes of the communities regarding the three key concepts of the research: conservation, development and sustainable development. In addition, we look at some aspects of the research process that influenced the quality of data and information given by the communities. Among our findings we observed that understanding community reactions to new or introduced development and/or conservation concepts, along with the quality of the rapport between researchers and community members, strongly determines the quality of the data produced.

Kylie **Sesuki**, UPNG, kyliesesuki1@gmail.com; *Teppsy Beni*

The Writing Needs of First Year Students at UPNG: A Needs Analysis presented by Ms Helen Setu, Tutor, School of Humanities and Social Science, University of Papua New Guinea

Due to global changes in business practices, there is an urgent need to review Business English courses at the tertiary level to ensure that such courses are able to better prepare business students to meet the current demands in both academic and professional business setting. Hence, a needs analysis is the first step in facilitating this review. This paper reports on a small-scale needs analysis study that gauged the perspectives of 4 different informant groups about the writing needs of first-year business students at UPNG. Drawing on evidence collected from this study, I will discuss the current language needs of first-year business students, particularly their report writing needs, and how the Business Communication course offered at UPNG can better address these needs in its course review. The study utilized the interview and questionnaire method, and highlighted the need for a more practical approach to addressing the report writing needs of first-year business students. Based on the identified needs, goals and objectives have been derived for report writing. The overall goal of report writing is that students be able to: (1) develop skills in writing effective reports, (2) utilise appropriate business-related language to write business reports.

Helen **Setu**, UPNG, helensetu27@gmail.com

The Effects of Fungi, Herbivore and Predator on the Secondary Succession of Tropical Lowland Forest Vegetation of Madang Province presented by Mr Jaspah Sua, Student, Department of Agriculture, Papua New Guinea University of Natural Resource and Environment

Secondary succession is a complicated process involving multiple factors of tropical rainforest ecosystems. It is the process relating to community growth or change that takes place when a habitat is disturbed or damage. A lot of theoretical emphasize is suggest succession of plant performance and competitive strength as the main drivers in early successional dynamics, which contrasting the role of top-down biotic factors that maintains plant diversity among the mature tropical forest. For the first time, food web interactions is being tested in the lowland tropical forest of Madang. In 72 vegetations plots (25m²) the food webs were experimentally manipulated; the pathogenic fungi, insect herbivore and predators in 5mx5m block using a broad-spectrum fungicide, insecticides and transparent net enclosure. The experimental manipulation of food webs results in partial effects during one year of succession. Herbivore, fungi and predator have less impact within treatments and the two locations have great impact. Ohu advance in species diversity whereas Wanang had low species diversity. In species compositions and structures, dominant species and specie group clusters towards predator and insecticide interactions. Food webs have clear but complicated effects on the direction and predictability of early

successional trajectories in rainforest ecosystems. This concludes that, top-down biotic factors are a significant-drivers in successional process and shaping future community compositions. In the meantime more specific studies and demographic data is required for individual species competitive abilities and working characteristics to reach individual treatments in order to have clear insights on secondary succession dynamics, so it is recommended that more than a year could have permit for experimental study prior to visualize treatment effects in-line with the changing climate as the indicator in insects infestation and incidence of insects on the succession and variation on different vegetation types.

Jaspah **Sua**, PNGUNRE, jaspersua76@gmail.com

Assessment of Cardiovascular Risk Factors in Apparently Healthy Adults in the National Capital District, Papua New Guinea, and Their Association with Behavioural Factors presented by Mrs Nayma Sultana, Senior Lecturer, Basic Medical Sciences Division, University of Papua New Guinea

Non-communicable disease is a major public health issue around the world of which there are key metabolic changes - high blood pressure, overweight or obesity, and high blood cholesterol. This may be the result of four main behaviours - tobacco use, physical inactivity, unhealthy diet and harmful use of alcohol.

This study was done at the School of Medicine and Health Sciences, University of Papua New Guinea. 296 subjects were taken from different organisations in National Capital District and following parameters were measured; blood pressure, BMI, abdominal circumference, while a questionnaire revealed their use of tobacco and alcohol as their level of physical activity.

The males had greater mean systolic and diastolic blood pressures compared to the females. Overall 37.5% males and 14.5% females had high systolic, while 6% males and 2% females had high diastolic pressure. 65% males and 62% female are either overweight or obese. 47% of the female had greater than normal while only 18% males had abnormal waist circumference. Prevalence of smoking for both males and females was 27%, chewing betel quid 66%, drinks alcohol 58% and does some form of physical activity 60%. There is significant correlation between metabolic and behavioural risk factors in males.

Nayma **Sultana**, UPNG, nayma_sultana@yahoo.com; Shalon Taufa

Investigating Iodine Status Among Non-Pregnant Women Resident in Kotidanga Kerema District, Gulf Province, Papua New Guinea presented by Ms Joan Sumbis, Medical Lab Scientist, Division of Basic medical Sciences, University of Papua New Guinea

The iodine status of non-pregnant women of childbearing age is important because it is the status of women entering pregnancy, when adequate maternal iodine nutrition is important for foetal development. During pregnancy and lactation, adequate intake and bioavailability of iodine are required for the biosynthesis of thyroid hormones, which are important for regulation of growth and the healthy development of the nervous system of the foetus and infant, control of metabolic activities, developmental processes, and functions of the central nervous system. The objectives of the current study were to assess the iodine status of non-pregnant and pregnant women resident in Kotidanga area in Kerema district Gulf province. This was a prospective cross-sectional study carried out in Kotidanga Rural LLG, a remote area in Gulf province. Multistage cluster sampling was used to randomly select 300 women visiting local markets. Salt samples were collected from a sub-sample of randomly selected households. The WYD checker was used to assess the iodine content in salt. A single urine sample was collected from each of the women after obtaining their informed consent. Urinary Iodine concentration (UIC) was determined using the Sandell- Kolthof assay method. The daily per capita discretionary intake of salt was 3.9g. The calculated mean per capita discretionary intake of iodine was 104.6- μ g. The iodine content in 87.0% of the households was above 30.0ppm. The median UIC for the non-pregnant women was 34.0- μ g/L and 88.7% of them had UIC below the recommended cut-off of 100- μ g/L. For pregnant women, the median UIC was 44.5- μ g/L and 93.8% of had UIC below the recommended cut-off of 150- μ g/L. The results indicate prevalence of moderate iodine deficiency among both groups of women. The significance of these findings, the factors affecting the availability and consumption of adequately iodized salt will be presented and discussed.

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The Impact of Coliform Bacteria in Restricted Drinking Water Sources in Papua New Guinea: A Mixed Community-Based Study in Angabanga, Central Province presented by Ms Monica Sungu, Tutor, Biology, University of Papua New Guinea

This paper discusses predisposing conditions and notable water threats, poor environmental sanitation in health care challenges in hygienic condition of the community in which children population were targeted. To evaluate the possible causes of water pollution and its impact in detection of harmful bacteria in common water use. The immediate surroundings of the residential population from eight locations in Angabanga River basin including 65 local residents and 67 water samplings were utilised during 2006 and 2008 while data analysis using Epi Info. Faecal coliform bacteria were observed in viable quantity at 2,400 MPN/100mls in both tank and river water sources. *Escherichia coli* (92%) with *Klebsiella oxytoca* (99%) were in one ground water source. *Shigella* spp (82%) and *Enterobacter cloacae* (94%) in oxbow lake. Co-existence of bacteria causing respiratory illnesses including *Klebsiella pneumoniae* (98%) with *Enterobacter aerogenes* (94%), *Pseudomonas aeruginosa* (57.7%) and *Enterobacter cloacae* (59.2%) were observed in both surface and ground water sources

There is no significant difference between coastal and inland villages for water use therefore a case control study is recommended in the future.

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PNG Education Yesterday, Today, and Tomorrow Place-Based Education-Oriented Teacher Education and Assessment Perceptions in the 21st Century presented by Mr John Wanis Tapura, Student, College of Education, James Cook University

Papua New Guinea (PNG) traditional education system was learning in real-life situations or place-based education. The undocumented curriculum of learning by doing was for survival that sustained traditional societies for centuries. The Kuk agricultural site in Western Highlands Province is evidence of such well-developed traditional education system that enabled agriculture developments to transform nomadic life to settled communities of food cultivation and animal domestication.

During the yesteryears when PNG met the outside world, early missionaries and the colonial administration introduced Western formal education for employment in the introduce cash economy. Its goals were achieved because jobs were plentiful for few educated people during the colonial and post-colonial era. Education was viewed as a ticket to formal employment, a concept deeply rooted that causes an influx of school leavers to migrate into urban areas searching for employment and causing socio-economic problems when they cannot find a job.

The current education system is trying to address unemployment-related socio-economic challenges by encouraging teachers to teach using real-life situations. Place-based learning would encourage school leavers to embrace their culture, land, and way of life and live in rural communities. However, students, teachers, and parents enculturated by examinations for further education and employment spend a lot of resources on examination which benefits only 20% of the school leavers while 80% exit without adequate training for rural living. The 21st-century teacher education should be place-based learning focused, aligning curriculum to the local environment to create and enact learning experiences that are place-based in preparation for rural living. PNG traditional education sustained the traditional societies, yesterdays introduced Western education was for employment, today's education is for rural living and tomorrow's education should be for improved rural living. The later can only be achieved through place-based learning-oriented teacher education programs and teaching and learning with less examination preparations.

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Creating Place-Based Learning Experiences as a Curriculum Enactment Approach: Way Forward to Achieve PNG Vision 2050. [An extract of a Progressive PhD Thesis at James Cook University] presented by Mr John Wanis Tapura, Student, College of Education, James Cook University

The National Curriculum Statement (NCS) of Papua New Guinea (PNG) encourages teachers to employ place-based learning as a curriculum enactment approach. The intent is to prepare about 80 percent of school leavers for sustainable rural living, and about 20 percent with academia capabilities for further education and training

for employment. The 80/20 percent segregation is not a policy, but a situation created by limited tertiary institutions and job scarcity which place-based learning is sanctioned for mitigation. Curriculum is a powerful tool and depending on its enactment practices can change human behaviour, which in PNG context, is to embrace rural living than urban migration. The explored the teachers, enacted curriculum practices using place-based learning according to the prescribed curriculum construe to achieve curriculum goals and ultimately PNG Vision 2050; and the dilemmas they experience in their enactment practices.

Data generated were from five participating teachers in Western Highlands and Madang provinces through interviews, lesson observation and document analysis of curriculum artefacts. Within an interpretivist and constructivist paradigm, the case study and hermeneutic phenomenological approaches used situated the researcher amongst the teachers to experience their curriculum as autobiography and construct their practices in alignment to the curriculum goals.

The study found that teachers based their curriculum aims and practices on their lived experiences in and out of school. Teachers had little awareness of the national curriculum goals and enactment policies including place-based learning. This led teachers to conceive personal goals which created affinity in their enacted curriculum practices such as prioritising national examinations, though the syllabus and teacher guide provide place-based learning opportunities. The study highlights such challenges and tensions in enacting curriculum change, reinforces the need to advocate place-based learning as the appropriate curriculum enactment practice throughout PNG and presents recommendations to support provinces and schools in achieving the national curriculum goals.

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Accurate Lung Function Testing in PNG Requires Validated Reference Equations to Prevent Misdiagnosis of Chronic Lung Conditions presented by Dr Shalon Taufa, Lecturer, School of Medicine and Health Sciences, University of Papua New Guinea

Spirometry is a component of lung function testing and is essential for the diagnosis of many lung conditions. Measured lung function parameters which fall below the lower limit of normal predicted for a patient are characteristic of either obstructive or restrictive conditions. Accurate diagnosis depends on the suitability of the normal values used for comparison.

Three main models are currently used to generate predicted normal values worldwide; the European Community for Steel and Coal (ECSC), the National Health and Nutrition Examination Survey (NHANES III), and the most recent Global Lung Function Initiative (GLI) developed by the European Respiratory Society in 2012. None of these models include any data representing the Papua New Guinea population or the Pacific region. Normal lung function varies with gender, age, height and ethnicity. Due to genetic, nutritional and socioeconomic differences, reference equations based on Caucasians should not be used on non-Caucasian ethnic groups without validation.

In PNG, high rates of both smoking and exposure to particulate cooking smoke increase the risk of developing lung disease. Thus, there is an urgent need to validate lung function reference equations for the PNG population to prevent misdiagnosis of the growing numbers of chronic lung conditions.

Shalon **Taufa**, UPNG, shalontaufa@gmail.com; Suzy Munns, JCU

Effect of Age of Onset (AO) of English Language Acquisition on the Academic Performance of University of Papua New Guinea Students presented by Mrs Olga Temple, Lecturer, Linguistics, School of Humanities and Social Sciences, University of Papua New Guinea

In Papua New Guinea, English (a second language for most Papua New Guinean children) is the language of education. Therefore, the hotly debated issue of 'age factor' in Second Language Acquisition (SLA) has been the focus of ongoing research at UPNG since 2015. Our results have shown a strong inverse correlation between the Age of Onset (AO) of English acquisition and students' academic performance in all of the National High Schools, as well as at UPNG. This paper (a follow-up on our 2015 study) presents the results of our 2018 survey of all five Schools in University of Papua New Guinea (UPNG). Students' language education backgrounds were matched with their 2018 GPAs and analysed, using SPSS 20 software. Ordinary least squares (OLS) regression and correlation analyses reveal that an increase in AO is associated with a decrease in GPA. A significant inverse correlation was likewise observed between the students' Age at Literacy (AGELIT) and their GPAs. The students'

Early Learning Language (ELL), “that is, the language in which they learnt to read and write“ was found to be a significant contributing factor to their academic achievement in 2018. This paper discusses our findings and recommends ways of improving UPNG students’ academic performance.

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Mobile Phone App for PNG's Protected Areas presented by Mrs Jean Thomas, Chief Operating Officer, Tenkile Conservation Alliance

The Tenkile Conservation Alliance (TCA) has been working to establish the Torricelli Mountain Range as a Protected Area in Papua New Guinea since it was established in 2001. TCA has been working recently with the PNG Government Department, Conservation Environment Protection Authority (CEPA), United Nations Development Global Environment Facility Small Grants Program and Catalpa (Australia) to build PNG's first Protected Area monitoring tool for smart phones. The phone has been trialled and tested in villages situated at the southern foothills of the Torricelli Mountains benefiting over 13,000 people from 50 villages.

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Strongim Meri Lida: Strengthening Women Leaders as First Responders to Sexual Health and Wellbeing Issues in PNG presented by Mrs Rachael Tommbe, Student, College of Medicine and Dentistry, James Cook University

Research and education can become a bridge for sustainable development in all aspects including health and well-being. In this presentation we describe how our team is responding to research information and training, consistent with SDG3: Good Health and Wellbeing and is framed within a participatory action research approach. During a 2013-15 sexual health study at Pacific Adventist University (PAU), female spouses of male students requested up-to-date and accurate sexual health and wellbeing training to help them capably respond to requests for advice when they returned to their villages and towns. Women who are spouses of students in PNG are regularly sought out as first responders to sexual health and wellbeing issues - they are viewed as leaders because of their proximity to education, especially in remote locations where social bonds are strong and access to quality information is limited.

We share findings from our review of literature used to inform development of the Meri Lida training program and describe the two-day program developed. We also reflect on our experience of piloting the program, and report evaluation findings. Our James Cook University-PAU team now plan to improve and structurally embed the Meri Lida program in a smaller scale in PNG.

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An Evaluation of the Effectiveness of Continuous Assessments & Feedback Strategies in Promoting Student Learning in a First-Year Mathematics Course presented by Mrs Sharon Torao Pingi, Lecturer in Mathematics Statistics and Computer Science, School of natural and Physical Sciences, University of Papua New Guinea

Learning of mathematics within the first-year course, Foundation Mathematics at the University of Papua New Guinea, has seriously declined over the last 10 years, failure rates have increased to up to 60-80 percent in the last three years. Since assessments are an integral part of learning and tend to dominate students’ thinking and the way they learn; it is important that this process by which final judgements on students’ learning are rendered, also support student learning. Formative assessments, used for learning have to be valid, reliable, inclusive, offer useful and timely feedback and be fit-for-purpose in terms of context, cohort, level of study and subject area. Foundation Mathematics currently lacks formative assessments, an evaluation of its first semester continuous assessment and feedback practices was conducted to determine how its formative aspects affected student learning outcomes. This study used a mixed methods approach with convergent parallel mixed methods design, delivered through an unstructured anonymous survey to Science Foundation Year students who had passed the Foundation Mathematics 1. The pragmatic theoretical framework was used to assess the formative aspects of continuous assessment and how these could be improved. The study revealed that students were most affected by the lack of proper and detailed feedback received on their assessment, fairness of assessment

weighting and complexity, insufficient learning and teaching resources and usefulness of tutorials to meet their learning needs. The results of this study will be used to improve student learning of mathematics, through a concerted effort by all stakeholders and participants and on many fronts.

Sharon **Torao Pingi**, UPNG, stpingi@gmail.com

Assessment of Oral Health Knowledge and Care Practices of Grades 7 and 8 Students of Two Urban Primary Schools in Kundiawa in Simbu Province presented by Dr Sailas Tumu, Junior Dental Officer, Post Graduate, Division of Public Health, Kundiawa General hospital, University of Papua New Guinea

Introduction: School-based oral health data in PNG is scarce, particularly outside the NCD. This research, aiming to understand student oral health, was conducted in two primary schools in Kundiawa, Simbu Province. Methodology: Two hundred twenty grades 7 and 8 students were randomly selected for this cross-sectional survey of their oral health knowledge and care practices using group-administered questionnaires followed by individual DMFT examinations. Participants' equal gender distribution was achieved. Data analyses were performed using Epi-Info software and Microsoft Excel. Chi square and t-tests were used to identify associations and test hypotheses between oral health knowledge, practice and DMFT scores. Results: Over 85% of the students responded favourably to the oral health knowledge questions, and likewise 80% for their oral health care practices. The mean DMFT score for all students was 1.8, indicating good oral health. Both students' oral health knowledge and their oral health care practices were significantly and positively very highly associated with their DMFT scores ($p < 0.0001$ for both associations). Conclusion: Both descriptive analyses and inferential statistics showed students had good oral health knowledge and practices and oral health as evidenced by DMFT scores, also demonstrating strong relationships between their oral health knowledge, care practices and DMFT outcomes.

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U TO V

A Serological Survey of Selected Papua New Guinea Blood Donors for Hepatitis B and Related Co-Infections presented by Mrs Francisca Varpit, Lecturer, School of Medicine and Health Sciences, University of Papua New Guinea

Hepatitis B virus (HBV) infection is a serious problem both globally and nationally. Earlier studies in Papua New Guinea have reported a high prevalence of hepatitis infection. However, little has been published on HBV prevalence in recent years and since an expanded immunization program was put in place. A retrospective study to investigate HBV prevalence trends and associated epidemiological risk factors was carried out using blood donor data at Nonga General Hospital, East New Britain Province, Papua New Guinea, from January 2003 to December 2018. Additional data for HIV and syphilis were also analysed for associations between these diseases and HBV infection. A mean HBsAg sero-prevalence of 19.14% (95%CI of 19.21-19.87%) was found for the period studied, and this was significantly higher in males (15.16%, 95% CI 15.28-15.88, $p = 0.000$). The sero-prevalence over the period studied showed a downward trend, which may reflect the effect of the extended program for immunization or greater awareness of these diseases. Syphilis and HIV sero-positivity also decreased over the period studied. Ethnically, HBsAg prevalence was significantly higher in the Tolais population group (Tolais: 14.42%; 95% CI 14.56-15.14, $p = 0.000$). Subtle differences in sociological cultural norms may be responsible for these differences in prevalence.

Francisca **Varpit**, UPNG, lakuadavina@gmail.com; Bruce Gummow

Reasons for Plagiarism Among Bachelor of Medical Laboratory Students at the University of Papua New Guinea presented by Mrs Francisca Varpit, Lecturer, School of Medicine and Health Sciences, University of Papua New Guinea

Academic integrity is an issue that is gaining attention across higher education internationally and there is a considerable volume of work occurring that attempts to understand and prevent occurrences. Plagiarism is one

form of academic integrity that continues to trouble higher education. The aim of this study is to identify reasons for plagiarism among novice second year Bachelor of Medical Laboratory Science Students.

A semi-structured survey using both closed and open-ended questionnaires was distributed to 28 students from August to September, 2018. Descriptive statistics on Excel program was used to calculate simple frequencies. Results indicated that correct citation and referencing not taught during orientation, ease of access to information on the internet, and poor time management, were predominant reasons for plagiarism. A lack of deeper understanding of what constitutes plagiarism was also evident.

This calls for awareness and clear explanation of university policy on academic misconduct on commencement of study, and implementation of institutional plagiarism checkers to self-diagnose own work before submission for assessment. This would be more an educative strategy rather than punitive, intended to help students better understand what constitutes plagiarism and hence improve on reducing the tendency to plagiarize.

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Reflecting on Collecting: Creating Relationships through Heritage Objects presented by Dr Daniela Vavrova, Adjunct Research Fellow, Lecturer, College of Arts Society and Education, James Cook University

When objects travel distances across time and space, they not only speak to us about the past but also about the potentiality of future relationships. James Cook University in Cairns recently received a large donation of Papua New Guinean artefacts collected and documented by a former Australian patrol officer. By accepting this donation, we acknowledge relationships between Australia and Papua New Guinea. We wish to stimulate dialogue about the historical transactions and transformations in which such objects have participated, and reflect upon the future relationships they might foster, especially through opportunities for research collaboration.

Daniela **Vavrova**, JCU, daniela.vavrova@jcu.edu.au; Rosita Henry

Knowledge, Attitude and Behavior Towards Antimicrobial Resistance in the Pacific Islands Countries presented by Ms Numa Vera, Lecturer, Department of Pharmacy and Pharmacology, Fiji National University

Introduction: Antimicrobial Resistance (AMR) is currently one of the most significant challenges to global public health and is increasing in the Pacific island countries (PICs). As an initial step in addressing the issue, this study investigated the knowledge, attitude and behaviour regarding antimicrobial resistance among the general populations of Solomon Islands, Tonga and the Marshall Islands.

Methods: A cross-sectional, questionnaire-based survey was conducted among the patients attending hospital outpatient pharmacies from June to July 2019. Participants were interviewed using four parts, five points Likert-scale Questionnaire. Descriptive statistics were used to analyse the data. Chi-square analysis was used to determine associations between variables.

Results: A total of 757 patients aged 18 years and above, the average age of 33 \pm 12 years participated in the study. There were more Marshall islanders (49%), males (52%), having tertiary education (48%) and employed (55%). Most of the participants had adequate knowledge (65%) and a positive attitude (59%). However, 52% had inappropriate behaviour. Factors associated with behaviour towards AMR include; employment status (p-value = 0.011) and education level (p-value = 0.001).

Conclusion: Several characteristics of the participants were identified to be predictors of knowledge, attitude and behaviour towards antimicrobial resistance. Appropriate mass media awareness programs on AMR must be carried out in the PICs.

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W TO X

The Migration of Traditional Plant Medicine from the Mortlock Atolls of PNG to Port Moresby presented by Mrs Vagi Waiin-Adu, Graduate Diploma of Research Methods Student, Tropical Environments and Societies, James Cook University

The effect of climate change and rising sea-levels has received increased global recognition in the last two decades, as a number of low-lying coral islands are slowly being reclaimed by the sea, displacing their human inhabitants along with their unique cultures and way of life. Papua New Guinea is home to a number of such islands, including the remote Takuu Islands, most commonly known as the Mortlock Atolls. Due to their isolation, Mortlock islanders rely largely on natural resources for many activities, including traditional medicine, which is a significant component of any culture. An increase in intermarriages and the need for higher education has resulted in a number of these islanders settling in mainland towns, such as Port Moresby. With the threat of an uninhabitable island in the next century, the preservation of their traditional knowledge and practices is crucial to those of this cultural group. This study therefore aims to identify traditional plant medicine knowledge of the Mortlock Atolls that is held and practiced by the Mortlock community in Port Moresby. This will be done via the use of open-ended interviews and structured questionnaires. Analysis of this qualitative data will then be used to assess the extent to which traditional plant medicine knowledge is being applied by the Mortlock community in Port Moresby and the degree of its verbal preservation.

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Agriculture as a Subject in the Primary School Curriculum presented by Ms Eva Wangihama, Lecturer, St Benedict Campus Wewak, Divine Word University

This study explored the importance of agriculture as a subject in the primary school curriculum. Papua New Guineans have been agriculturalists for thousands of years and this is still the case today. The majority of people live in local communities and their livelihood is supported by subsistence agriculture. Their food and income are based mostly on farming. However, the study found that agriculture is not a subject in the junior primary school curriculum; therefore, students may not value agriculture for home use or as a way of earning a living when they complete formal education. For relevance, the school curriculum should have strong links to social realities. The agriculture skills used in the home need to be emphasized and linked to subjects prescribed for students' formal learning. In the absence of a formal agriculture subject, students may not view agriculture as important for their future lives. Gardening is a real life-skill needed for both rural and urban settings and contributes to informal sector employment. It can enable young people to be self-reliant and create a career pathway for school leavers.

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Prevention of Insect-Borne Diseases in PNG through Local Repellent Production from Essential Oils presented by Mr Jayson Wau, Student, Science and Engineering, James Cook University

Insect borne diseases such as malaria or dengue represent a major health and economic burden in the Asia-Pacific region. In PNG, malaria morbidity and subsequently mortality are a major concern with 94% of the population at risk. Repellents are considered as the most successful approach for the control of these diseases ('prevention is better than cure'). Most common artificial repellents are derived from non-sustainable petrochemicals. Essential oils and their constituents represent renewable resources for the manufacturing of repellents. Para-menthane-3, 8-diol (PMD) is an active repellent against several Anopheles species with a lasting effect of over six hours in comparison to conventional repellents. Therefore, the local production of presents a promising approach in controlling malarial infections. PMD is a minor constituent of lemon scented gum oil (LSG, *Corymbia citriodora*), but its amount can be increased significantly by a simple treatment with catalytic amounts of acid. *C. citriodora* is native and common in Australia, hence, provides a suitable biomass base for industrialization. It was discovered that Queensland (QLD) sourced *C. citriodora* LSG oil had a high amount of the PMD-precursor compared to oils obtained from New Caledonia, China or Madagascar. In addition, local Kaffir lime oil has shown an even richer content of the precursor material, which makes it attractive as an alternative source for PMD production. Aqueous waste streams from the distillation process were suitable for the conversion process, thus minimizing wastewater streams. The local production of PMD from *K. lime* and/or *C. citriodora* in either QLD or PNG can help to fight insect borne diseases in the Asia-Pacific region.

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What Can Be Done About the Continued Preventable Maternal Deaths in PNG? presented by Professor Maxine Whittaker, Dean, College of Public Health, Medical and Veterinary Sciences, James Cook University

Papua New Guinea's maternal mortality rate (733/100,000 live births according to the 2006 Demographic and Health Survey) remains the highest in the Western Pacific Region, and among the highest in the world. Despite investments in maternal health and in the health system over the last 10 years there has been little change in levels of supervised deliveries nor antenatal visits, although some improvements may now be occurring, according to draft analysis of the 2016-2018 Demographic Health Survey. Based on the limited improvement since the first Ministerial Task Force on maternal health in Papua New Guinea (2009), a second Ministerial Task Force was convened 2018-9 and the report is being released before the end of 2019. In line with that report's focus on practical and specific guidelines on what must be done to accelerate progress, this paper will discuss some potential improvements in products for management of common causes of maternal death, and that could be carefully scaled up to strengthen the community and primary health care role in preventing and early management of women suffering life threatening obstetric complications. It will then discuss the collaborative partnerships that are developing in PNG across the health system, development partners, NGOs and Australian institutions to help reduce these preventable deaths of women.

Maxine Whittaker, JCU, maxine.whittaker@jcu.edu.au; Peter Hall

An Assessment of National Settlement Situation in PNG presented by Mr Pes Wilson, Lecturer in Social Science, Humanities Department, Divine Word University

This report emanates from findings of a national household survey for settlements undertaken by the presenters in the four regions of PNG while working with the Office of the Urbanisation (OoU). The OoU and other vital stakeholders such as the UN, the National Capital District Commission, the Department of Lands and Physical Planning, National Housing Corporation and the Government of PNG will use the findings of this study as a basis for the piloting of settlement upgrading strategies. The survey was done in the four regions of PNG using two sampling methods called random and purposive sampling. In each region, two provinces were selected to undertake this study. Standard questionnaire templates were used to capture information about the demographic, economic, social, physical and environmental aspects of the national settlement situation.

This report is very critical given the issues surrounding settlements in PNG such as sanitation, power, water, health and education issues, especially at a time when settlements in PNG are growing at an unprecedented rate. The study finally confirmed that the settlement conditions in PNG are being denied basic services such as water, sanitation, power and basic amenities. Hence, urgent mobilisation of resources, expertise and skills are needed to improve the current conditions of settlements in PNG employing a more participatory, transparent and sustainable approaches to upgrade the settlement conditions.

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Investigating Corruption in Papua New Guinea Through the Patron-Client Structure: The Citizens' Perceptions presented by Mr Teddy Winn, Higher Degree Research Student, College of Arts Society and Education, James Cook University

Corruption is deeply entrenched in Papua New Guinea's (PNG) administrative and political systems. Ranked 138 out of 180 countries in the 2018 corruption perception index (CPI), PNG is considered one of the most corrupt countries (Transparency International, 2018). Many studies on corruption and governance (World Bank, TI, UN et al) have alluded to the negative implications of corruption in PNG. These studies reflect definitions, causes and solutions from mainstream Western literature with an emphasis on institutional-political approach. The anthropological and ethnographic view on corruption have often been blurred. The principal aim of this research is to investigate corruption in PNG through the patron-client structure as a means of contextualising corruption in a cross-cultural setting, a gap that has often been blurred in the literature. The moral economy approach will be employed. This research will be guided by these five questions; 1) What is the historical significance of patron-client politics and its relationship to corruption? 2) Has colonialism induced subtle nuances of patron-client structures, and how does it impact on corruption? 3) Why have post-colonial PNG not made the expected full transition from patronage politics to programmatic politics and policies? 4) How do patron-client structures help to explain corruption in modern PNG context? and 5) How do citizens perceive the patron-client system and its implication on corruption? A review of pre-existing literature (desktop) and survey (focus group and interviews)

will be used to gather and analyse data. Units of analysis will be sampled from populations in selected state institutions, the private sector and ordinary citizens in PNG.

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Understanding Sorcery Accusation Related Violence: The Experience of the Yuri people of Gumine District of Simbu Province in Papua New Guinea presented by Mr Bomai Witne, PhD Student, School of Design, Queensland University of Technology

Contemporary sorcery or witchcraft beliefs and violence manifest in different forms in many countries. The United Nation's raised concern for sorcery beliefs related human rights violation in a recent meeting in Geneva (2017) highlighting the need for global strategies to address sorcery related violence. A country that has received international media coverage around sorcery accusation related violence is Papua New Guinea (PNG). This particular violence demands individuals, communities, state and non state organisations to address it. This research focuses on how Yuri people understand SARV and respond to address it. It explores how indigenous knowledge and social networks can be harnessed to better understand the role of community leaders and members' role in peacebuilding and addressing SARV. The research employs indigenous and arts-based methodologies that are informed by peacebuilding theory, which proposes that every conflict is complex and so is peacebuilding efforts. The complexity requires individual and community to take deliberate efforts to understand and address different forms of violence. The Yuri indigenous peacebuilding effort to address different forms of violence including SARV is explored by using one to one interview questionnaires, storytelling and photovoice. The presentation includes some initial findings from my fieldwork.

Bomai **Witne**, QUT, bdwitne@gmail.com; Jackie Kauli, Verena Thomas, Christina Spurgeon

Reconsider Focus of English Teaching to Address Current Decline in English Proficiency Standards in Papua New Guinea presented by Mrs Jessica Wohiemani, Literacy Lecturer, Open College, University of Papua New Guinea

With English as the medium of communication in educational institutions in Papua New Guinea (PNG), a high level of English proficiency in writing is expected of students at the tertiary level. Although English is taken as a subject for learning at the primary and secondary school levels in PNG, the low English proficiency levels evident in our post-secondary school students is an issue of concern. There is a current decline in our students' ability to proficiently communicate in both spoken and written English, as well as their ability to effectively comprehend reading and listening texts. To establish the particular problems associated with students' writing, an analysis was done on the written work of students in the English courses: Basic English and Advanced English, as part of the Certificate 3 in Tertiary Studies program offered through the University of Papua New Guinea's Open College. In addition, questionnaires were also designed to gauge from academics taking undergraduate programs at tertiary institutions, the quality of their students' academic writing skills. Moreover, a literature review was done to identify the writing problems encountered by learners of English as a second language (ESL) at tertiary institutions in other countries.

Results from the analysis of students' written work and the questionnaire analysis reveal that most students generally perform poorly in their academic writing skills. Poor performance in students' writing were attributed mostly to limited vocabulary and poor grammar skills. In addition, students' academic written work indicated an overuse of the informal language register. Literature review on current research in applied linguistics on how to improve writing skills in English indicated the need to focus on developing essential foundation skills of vocabulary and grammar. It was also noted that for ESL learners to develop adequate English vocabulary and grammar to use in their receptive (listening and reading) and productive (speaking and writing) skills, high frequency vocabulary and grammar elements relevant to academic text types should be the focus of English learning programs. The findings of this study suggest that the teaching of relevant high frequency English vocabulary and grammar, using teaching and learning strategies appropriate for ESL learners - should be critical components of English language learning programs - where English is taught or learnt as a second language. This paper will also discuss possible pedagogical implications and suggest recommendations.

Jessica **Wohiemani**, UPNG, jessica.wohiemani@upng.ac.pg

Creating a New Politics of Disaster? Ulawun Volcano in New Britain, Papua New Guinea presented by Dr Michael Wood, Anthropology Lecturer, College of Arts Society and Education, James Cook University

Mengen speakers living near Ulawun volcano have often positioned this volcano, its inhabitants and outputs as beneficial features of daily life. By way of contrast, volcanology, other geosciences, and more recent disaster planning discourses in Papua New Guinea, have highlighted Ulawun's capacity to generate threats to life, compulsory evacuations and states of emergency. The recent eruptions of Ulawun have intensified these concerns and this paper outlines some Mengen accounts of these concerns. The paper concludes with some thoughts on how these local understandings might be integrated into disaster planning concerning Ulawun's future eruptions.

Michael Wood, JCU, Michael.wood@jcu.edu.au; Jennifer Gabriel, Simon Foale

Social-Return-on-Investment Impact Evaluations: The 'Gold Standard' Method for Monetaring the Value of Social and Economic Benefits from a Community Development Project presented by Dr Torres Woolley, Evaluation Coordinator, College of Medicine and Dentistry, James Cook University

Traditional evaluations that look at a program's value-for-money either describe the value qualitatively or deploy cost benefit analysis - neither of which quantify the 'intangible' outcomes of a program, such as a community's social capital. 'Social value' is the value stakeholders experience through changes in their lives as a result of an external program.

It is essential that program evaluation counters this by using Social Return on Investment (SROI) methodology. SROI values outcomes by combining economic valuation techniques with in-depth stakeholder engagement. SROI is the leading, internationally-recognised methodology for measuring and valuing the impact of community development, health or personal empowerment programs.

By enabling social, environmental and economic costs and benefits to be represented in a common monetary unit, SROI allows organisations and evaluators to speak the language of many funders while still 'valuing what really matters.'

This presentation summarises the 6 steps of conducting a 'gold standard' SROI evaluation; complementing the theory with examples from the author's SROI evaluations in the Philippines Tanzania, and South Africa. The presentation also describes how the author has adapted the SROI approach to include complexity-aware data collection techniques within a mixed-methods design to make it more effective in evaluating program outcomes in complex environments.

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Y TO Z

Papua New Guinea Elections; A Narrative of the 2017 General Election and the Concern for Electoral Integrity presented by Mr Russel Yangin, Lecturer, School of Humanities and Social Sciences, University of Papua New Guinea

The literature of electoral studies has now focused on electoral integrity in democratic elections; the focus of this research is to provide a narrative of Papua New Guinea elections and possible open up theoretical discussion about Papua New Guinea's electoral Integrity. Papua New Guinea elections have been marred with violence, bribery, election rigging and lack of respect for the spirit of a true democratic election. Subsequent elections faced with similar discontent and the same is the story of the 2017 general election. Election observation reports have noted significant discrepancies to 2017 election. How well have the electoral processes been observed is the primary focus of the paper and secondly, what were the institutional and structural impediments in the electoral process that deemed 2017 election to be controversial is the secondary focus. The paper utilizes the case study method analysing Papua New Guinea 2017 general election. The objective of the paper is to narrate the events of the 2017 election so as to generate discussion about the 2017 general elections and try to position Papua New Guinea's case in the discussion on electoral integrity.

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Processes and Benefits of Marine Protected Area and its Application to Local Context *presented by Mr Ponsie Yasaro, Student, School of Humanities and Social Sciences, University of Papua New Guinea*

This paper is an ongoing research on the topic: Processes and Benefits of Marine Protected Area and its Application to Local Context. The paper identifies and analyses the processes and benefits of international Marine Protected Areas using insights from case studies in Canada, Indonesia, Solomon Islands and Fiji and how this can be applied to the proposed Bootless Bay Marine Protected Area. Using literature review, analysis of relevant policy documents, stakeholder consultations, and social baseline studies - social mapping and focus group survey - the paper evaluates the effectiveness of top-down and bottom-up processes of establishing MPA and discusses benefits in terms of ecosystems services, socio-economic benefits and waste management. The findings may provide information and options for the management plan of the proposed Bootless Bay Marine Protected Area.

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END OF ABSTRACTS

NOTES

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