



SYMPOSIUM ON RESEARCH, ENTERPRISE AND IMPACT

Wednesday 2nd October, 2013
Learning Resource Centre Auditorium,
UWI St. Augustine

UWI
RESEARCH
expo
2013

MESSAGE FROM THE VICE CHANCELLOR



Professor E. Nigel Harris
Vice-Chancellor of The University of the West Indies

My warmest congratulations are extended to Professor Clement Sankat and his team for organising this Expo and Symposium showcasing the stellar work being done by researchers at the St. Augustine Campus. One of the core elements of the University's mission and our current strategic plan is research that will not only create new knowledge, but will also explore solutions to priority national and regional challenges and provide a sound basis for public policy formulation and decision making. We have been getting better at sharing what we have been doing with our stakeholders both internal and external, and I am very proud of the very robust research agenda that has been evolving.

The breadth of work being done by our researchers is truly astounding and much of it has immediate and direct impact on the economy, livelihoods and wellbeing of the people of Trinidad and Tobago and by extension the rest of the Caribbean. I think events such as this Expo reaffirm that The UWI is the principal national and regional source of technical expertise in a multitude of disciplines that include health, engineering, education and the environment.

It also underscores for our stakeholders that The UWI is meeting its mandate:

To advance education and create knowledge through excellence in teaching, research, innovation, public service, intellectual leadership and outreach in order to support the inclusive (social, economic, political, cultural, environmental) development of the Caribbean region and beyond.

I look forward to many more events such as this, I know that they have been taking place, but maybe we need to have them more regularly, resources allowing! These are opportunities for us to share with our stakeholders the considerable knowledge and solutions that are being generated at our campuses.

My very best wishes for a wonderful Expo and Symposium!



MESSAGE FROM THE CAMPUS PRINCIPAL



Professor Clement Sankat
Pro Vice Chancellor and Campus Principal

I am extremely pleased that the UWI St. Augustine Campus is hosting its first Symposium on ***“Research, Enterprise and Impact”*** within our wider Research Expo week of activities. It gives our Campus a unique opportunity to place a spotlight on some of the ways in which our UWI research contributes to advancing national and regional development and is making a difference in the lives of the people we serve in our communities!

As our regional University of the West Indies moves ahead with the implementation of our Strategic Plan 2012-2017, the UWI St. Augustine Campus remains committed to enhancing the relevance and impact of its research. Over the past five years, we have been focused on reinvigorating our Campus' research agenda through increased engagement, capacity-building, dissemination (UWI Today, STAN, Express Column Research in Action, etc.), seeking grant funding through our Office of Research Development and Knowledge Transfer (ORDKT), recognition of our staff (our bi-annual Research Awards) and refocusing our dedicated funding for research so as to achieve maximum impact.

In 2012, we launched a new framework for national research funding allocated to the Campus by the Government of Trinidad and Tobago (GORTT) called the UWI-Trinidad and Tobago Research and Development Impact Fund. A new governance model was developed under the Office of the Campus Principal which has generated wide appeal. The RDI Fund provides targeted funding in six thematic areas, namely: Climate

Change and Environmental Issues; Crime, Violence and Citizen Security; Economic Diversification and Sector Competitiveness; Finance and Entrepreneurship; Public Health; and Technology and Society. Within these priority areas, the Fund provides funding for multi-disciplinary research projects that address a pressing development issue. In so doing, the RDI Fund aims to strengthen the nexus between scholarship, development and societal impact. Since its inception, the RDI Fund has issued two highly competitive Calls for Proposals and has approved twenty-two projects that are currently in execution.

This Symposium will highlight the outcomes and impact of some of our earlier research projects, which were awarded grant funding between 2006 and 2009 totaling TT\$14.6 million under the more general GORTT Research Scheme, the precursor to the RDI Fund. While these projects were not specifically requested to utilise a development impact framework as we now have mandated, a preliminary analysis of 48 of the 63 projects approved under the GORTT Research Scheme demonstrated noteworthy achievements.

These projects involved a number of cross-disciplinary teams with more than 209 team members and more than 60 graduate students. Collectively, 136 peer reviewed journal articles, 7 books, 12 book chapters and 50 other scholarly outputs were produced. Eleven MPhil and PhD theses linked to the research conducted have been completed to date and at least 4 more are expected to be completed

MESSAGE FROM THE RDI FUND SECRETARIAT

Developing our own pathways to impact

within the next 2 years. Researchers also delivered more than 120 presentations and hosted several workshops and seminars, indicating significant effort to ensure knowledge dissemination and engagement of stakeholders.

Our researchers in the area of science and technology, for example, were able to develop a cheap and quick method of purifying water contaminated with bacteria which can easily be adapted for rural communities where there is no safe supply of potable water. In the area of health, our researchers have developed a new dengue control strategy that will break transmission within 3 days of an outbreak; they have also developed a new surveillance tool for dengue fever (the Cardinal Points approach), and a new pre-seasonal treatment strategy which is being used to control malaria globally. In the area of the environment, UWI researchers were instrumental in the prohibition of turtle fishery in Trinidad and Tobago, while some of our researchers in Humanities were able to give 18 children the opportunity to receive speech-language pathology services within their school setting, a service they would not have otherwise been able to access.

Additionally, these projects were able to attract more than TT \$1.6 million in external funding and establish more than 48 new partnerships with recognised regional and international institutions such as the Caribbean Epidemiology Center (CAREC), United States Geological Survey (USGS), the International Atomic Energy Agency (IAEA),

the French Agricultural Research Centre for International Development (CIRAD), the National Institutes of Health (NIH), the University of Queensland (Australia), the University of Oxford, the University of Wales, Massey University (New Zealand), the University of Nis (Serbia), and Northwestern University (USA).

This is just a subset of the projects that benefitted from the GORTT Research Scheme and an even smaller proportion of the diverse research projects being undertaken across our seven Faculties and specialised research Units, Centres and Institutes. In some instances, researchers are pursuing their research interests with a bit of seed funding from our Campus Research and Publications Fund, in other cases, they may have won competitive grants from international funding agencies and research institutes or from our own RDI Fund.

Whatever the level of funding or area of research, as Campus Principal, it is my hope that this Symposium on Research, Enterprise and Impact will allow our staff, students and research partners in the public and private sectors, to better appreciate the potential of research to transform society and to have an impact in myriad ways beyond the traditional academic outputs (books, publications, new teaching material, courses, etc). I am a strong proponent of the view of our founding fathers that, ***“the problems of the West Indies will never be fully solved unless they are understood and investigated, to a far greater extentin the West Indies by West Indians”***

(Irvine Commission, 1945). Through this Research Symposium, and more broadly our Research Expo 2013, the UWI St. Augustine Campus will continue to strengthen its research collaborations and to forge new partnerships with the public sector, industry and civil society so that we can continue to produce impacting research that is relevant to the needs of the people of Trinidad and Tobago and our region.

In closing, I would like to extend heartfelt thanks to the National Gas Company of Trinidad and Tobago for their generous sponsorship of our Research Expo 2013. Special thanks also to our moderators, discussants and presenters who readily agreed to participate in this Symposium and to share their research, experience and expertise with our wider Campus community. I would also like to commend the staff members of the Office of the Campus Principal, led by Senior Programme Manager, Mrs. Stacy Richards-Kennedy, who have worked diligently to organise this very important and timely Symposium. To the Government of the Republic of Trinidad and Tobago who supported our research in an environment of significant underfunding of research in the Caribbean, we are also thankful.



Mrs. Stacy Richards-Kennedy
Senior Programme Manager



Ms. Lois St. Brice
Project Management Officer

Universities across the globe are placing increased emphasis on research impact and on better understanding the myriad ways in which teaching and research contribute to what is referred to as ‘third stream activities’, that is to say, the generation, use and application of knowledge outside the academic environment. The UWI St. Augustine Campus has, for over five decades, been engaged in outstanding teaching, learning, research and service in Trinidad and Tobago and the region and has been recognized for its contribution to the growth of many sectors. However, while the concept of research as a conduit for innovation and development may be appreciated, the process by which information, derived from university research, shapes decisions regarding products, services, institutional practices, policies, ways of thinking and behaviour, is not one that is always well known.

For those engaged in research and knowledge creation, however, it is understood that the pathway to impact is not a linear one. Neither is it automatic. Research can be a long and sometimes

lonely journey as the dedicated researcher follows ‘blind alleys’ of investigation and inquiry often meeting up with dead-ends before making a novel discovery or developing new insight. In the case of basic research, impact may be even less obvious to persons in society but this does not detract from the important contribution it makes to advancing knowledge. Thus, a broad approach to research impact is necessary, particularly in small Caribbean states that face resource constraints (technology, equipment, infrastructure, materials, data, supplies, etc.) and whose historical experiences call for a greater emphasis on indigenous knowledge and development. It is an approach that promotes impact in a range of areas beyond the academic and focuses as much on the process as on the research outputs and outcomes.

The UWI-Trinidad and Tobago Research and Development Impact Fund (RDI Fund) was established by the St. Augustine Campus to enhance research impact through the adoption of a more rigorous framework to support large research projects and to strengthen the link between university scholarship and development. Since its establishment in 2012, it has approved 23 projects and provided approximately TT\$17 million in research grants with contributions from the government of Trinidad and Tobago.

The support provided by the RDI Fund, however, goes beyond financial. Inherent in the RDI Fund research management framework is an emphasis on measures

to assist researchers in ‘planning for impact’ during the research process through the active engagement of different stakeholder groups, building networks and communities of practice, developing a range of research outputs (in addition to academic papers and publications) targeted to non-specialist audiences, and using a variety of media and channels for knowledge mobilization and knowledge exchange.

Without a doubt, better utilisation of research in development policy, planning and practice can help provide practical solutions, reduce poverty and improve quality of life in our communities. However, to achieve this, dialogue, partnerships, stakeholder engagement and knowledge exchange must be embedded in our research, across all disciplines, with a view to creating the opportunities that will allow research findings to be translated into broader societal impact, where applicable.

The RDI Fund is committed to enhancing the utilization and effectiveness of UWI research. In so doing, it strengthens the connection between the university and society. It also contributes to advancing the university’s mission by supporting the creation of knowledge that is relevant to the needs of Trinidad and Tobago and the Caribbean, fostering innovation and entrepreneurship, and developing indigenous capacity.

We are proud to feature in this Symposium diverse projects which are testament to the many ways in which UWI research has been making an impact in society.

SYMPOSIUM PROGRAMME

2:15pm – 3:25pm
Panel 1: Creating Enterprising Solutions

Presenters:
Building a National Programme for Screening and Treatment of Diabetes in Pregnancy

Prof. Surujpal Teelucksingh, *Professor of Medicine, School of Medicine, Faculty of Medical Sciences*

Novel Dengue Surveillance and Control Strategies Developed at UWI, St. Augustine, Trinidad

Prof. Dave Chadee, *Professor of Environmental Health, Department of Life Sciences, Faculty of Science and Technology*

Breadfruit Commercialization-Cultivars, Propagation, Orchards and Utilization

Dr. Laura Roberts-Nkrumah, *Lecturer in Crop Production, Department of Food Production, Faculty of Food and Agriculture*

Moderator:
Mr. Ewart Williams, *Chairman of Campus Council, UWI St. Augustine Campus*

Discussant:
Dr. Natasha Ramkissoon, *Chairman, National Entrepreneurship Development Company Ltd (NEDCO)*

3:30pm - 4:40pm
Panel 2: Facilitating Evidence-based policy making

Presenters:
Profiling the Gender Sensitivity of Nations
Prof. Patricia Mohammed, *Professor of Gender and Cultural Studies, Institute for Gender and Development Studies*

Poverty in the Urban City Centers
Dr. Ronald Marshall, *Senior Lecturer, Department of Behavioural Sciences, Faculty of Social Sciences*

The Schools Facing Exceptional Challenge Project: Improving Low Performing Schools in Trinidad and Tobago
Dr. Jerome De Lisle, *Senior Lecturer, School of Education, Faculty of Humanities and Education*

Moderator:
Senator the Honourable Dr. Rolph Balgobin, *Independent Senator, Parliament of Trinidad and Tobago*

Discussant:
Prof. Rose-Marie Belle Antoine, *Dean, Faculty of Law*

4:45pm - 5:55pm
Panel 3: Engaging our Communities

Presenters:
The Project for Ecosystem Services
Prof. John Agard, *Professor of Tropical Island Ecology, Department of Life Sciences, Faculty of Science and Technology*

Reducing Geologic Risk in the Eastern Caribbean
Dr. Richard Robertson, *Research Fellow, Seismic Research Centre*

Action Research: A Trinidad and Tobago Case Study of ICT Interventions in Small Scale Fisheries
Dr. Kim Mallalieu, *Senior Lecturer, Department of Electrical & Computer Engineering, Faculty of Engineering*

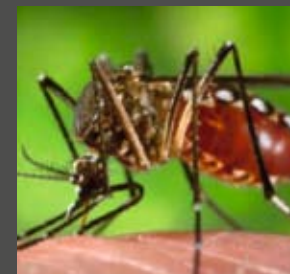
Moderator:
Ms. Terhi Karvinen, *Programme Coordinator, Delegation of the European Union to the Republic of Trinidad and Tobago*

Discussant:
Ms. Cassandra Patrovani Sylvester, *Vice President, Human and Corporate Relations, National Gas Company of Trinidad & Tobago Ltd.*

5:55pm – 6:00pm
Wrap-up & Closing Remarks
Prof. Kit Fai Pun, *Campus Coordinator for Graduate Studies and Research, UWI St. Augustine*

6:00pm – 7:00pm
Cocktail Reception, LRC Greens

PRESENTERS • MODERATORS • DISCUSSANTS
BIOS AND ABSTRACTS



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BIOGRAPHY

Professor Teelucksingh graduated with Honours in Medicine from The University of the West Indies in 1982, obtained his MRCP (UK) in 1988, a PhD from Edinburgh, Scotland 1995 and an MBA in 1998 from The University of the West Indies. He is currently Professor of Medicine in the Faculty of Medical Sciences at the St. Augustine Campus. He has risen through the ranks of Lecturer and Senior Lecturer since joining the Faculty of Medical Sciences in 1992. He has served as Head of Medicine for two consecutive terms (2002-2008) and as University Examiner in Medicine and Therapeutics (2008-2010). His contributions to the development of curriculum and assessment are noteworthy.

He was instrumental in the re-engineering of examination methodology that saw the changeover to the Objective Structured Clinical Examination from the traditional long case/short case scenario. He has also served as University Examiner in the Medicine and Therapeutics and External Examiner to the King’s College School of Medicine, UK.

Professor Teelucksingh’s research interest lies in Metabolic Medicine but he has also published articles in new and emerging diseases in the Caribbean. His work has documented the emergence of dengue hemorrhagic fever and erythema migrans in the Southern Caribbean. His activities in metabolic medicine span from the spectrum of basic science, clinical as well as public health medicine. His lead research is in the identification and treatment of diabetes in children where he is developing a sociological model for intervention. Professor Teelucksingh was also the Project Lead in the execution of an Inter American Development Bank Regional Public Good Project that unites the Caribbean in its fight against a common enemy-the chronic non-communicable disease- through the development and sharing of common methodologies for intervention, data capture and warehousing.

Professor Teelucksingh has chaired a Cabinet-appointed Technical Advisory Committee that reported to the Minister of Health of the Republic of Trinidad and Tobago on strategies to combat chronic diseases.

Professor Teelucksingh is the Public Orator to The University of the West Indies, St. Augustine Campus.

ABSTRACT

Building A National Programme For Screening And Treatment Of Diabetes In Pregnancy

Trinidad and Tobago has consistently been ranked in the High Human Development category under the Human Development Index (HDI) over the period 2002 to 2010. Gross Domestic Product (GDP) per capita estimated at US \$ 18,108 in 2010 was among the highest in the Anglophone Caribbean. Despite these impressive human development and economic indicators, Trinidad and Tobago displays the anomaly of an unacceptably high Infant Mortality Rate (IMR,= probability of dying by age 1 per 1000 live births). Although there has been steady decline in this rate from 60 to 25.74 per 1000 live births over the last 50 years (WHO 2011), current data compare unfavourably with Barbados (11.13 per 1000 live births) and Singapore (2.59 per 1000 live births (Central Intelligence Agency The World Factbook,

2013). The discrepancy between socioeconomic development and the unacceptably high IMR requires explanation and action. A steady increase in both obesity and diabetes among our population offers a working hypothesis for the observed phenomenon. Recent data from a recently conducted national survey have demonstrated an alarming prevalence for both these factors. Of even greater concern is the startling finding that teenage girls 15-18 years (the next generation of mothers of our nation) already carry a burden of obesity and diabetes comparable to that of their own middle-aged mothers (PAHO/WHO STEPS Survey, 2011).

It is now fairly well-established that a foetus exposed to such an unfavourable intra-uterine environment, as exists in obesity and diabetes, himself becomes a victim of such diseases in later life and beginning as early as the teenage years (Batson et al, 2013).

There is good data that early detection and treatment of diabetes in pregnancy improves outcomes for both mother and baby. Despite this, there is no formal program for screening and treating with these threats. This proposal aims to build the network and develop the capacity by harnessing local resources to deploy a standardized screening and treatment protocol for all pregnant mothers in Trinidad and Tobago.



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Professor Dave D. Chadee is currently Professor of Environmental Health in the Department of Life Sciences, University of the West Indies, St. Augustine, Trinidad. Prior to joining the University staff, Prof Chadee was the Entomologist/Parasitologist at Insect vector Control Division, Ministry of Health, Trinidad and Tobago; Director of the Trinidad Public Health Laboratory; and Deputy Director of Laboratory Services, Ministry of Health, Trinidad and Tobago. Prof Chadee currently holds an Adjunct Professor position in the Department of Epidemiology and Public Health, University of Miami,

Florida, USA. His area of specialty includes the ecology, surveillance, epidemiology and control of vector borne diseases. He has published 1 book, 21 book chapters and over 225 scientific papers in international peer reviewed Journals. Prof Chadee holds the unique position of being the only Caribbean scientist to have published in the journal Science over the last 50 years and has two papers published in the esteemed New England Journal of Medicine. In 2013 he was awarded the prestigious Anthony N. Sabga Caribbean Excellence Award and thus became a Sabga Laureate. Most of his work on the behaviour of mosquitoes has led to the development of mosquito traps, new disease surveillance systems and new control strategies. He has numerous collaborations with scientists from the USA, France, Austria, Australia and the UK. Prof Chadee is a graduate of Naparima College, Dalhousie University, University of the West Indies and the University of Dundee, Scotland, UK.

ABSTRACT

Novel Dengue Surveillance and Control Strategies Developed at UWI, St Augustine, Trinidad.

Historically, Aedes aegypti (L.) mosquitoes were controlled or eradicated by fumigation, residual spraying and the

elimination of breeding sites. However, the underlying mechanisms of how these vector populations were managed have never been evaluated. A ten week study collecting resting and flying mosquitoes from every room in houses using small hand nets and Propokock aspirators in St. Augustine, Trinidad, West Indies was conducted during the rainy season months of October to December 2010. The field study showed the major resting sites of Ae. aegypti were bed rooms (81.9%), living rooms (8.7%) and kitchens (6.9%). The laboratory study showed only 10% of females accepted a blood meal immediately after oviposition but the majority, 70% accepted a blood meal 12 hours post oviposition. The results provide evidence for the efficacy of indoor residual spraying (IRS) and recommend its re-introduction by targeting the major resting sites of these mosquitoes, especially during dengue fever outbreaks. These findings also support the “cardinal points” and “casa segura” approach to dengue surveillance programs.



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BIOGRAPHY

Dr. Laura B. Roberts-Nkrumah is a Lecturer in Crop Production in the Department of Food Production, The University of the West Indies. Dr. Laura B. Roberts-Nkrumah has previous experience as a Project Analyst and Agronomist. She teaches courses in horticulture and crop production at the undergraduate and postgraduate levels and has supervised postgraduate students.

Dr. Roberts-Nkrumah's major research interest is tree fruit crop production systems and she served as the Project Coordinator for the UWI/IDB research project on Sustainable Hillside Production Systems for Fruit

Trees which was implemented in Trinidad and Tobago and St. Lucia and involved on-farm research with mango, avocado, pommecythere and sapodilla. Over the last 23 years, she has focused primarily on breadfruit as a crop for food and nutrition security. Through a grant from the Jamaica Agricultural Development Foundation, she has established a breadfruit germplasm collection with accessions from the Caribbean and the Pacific. Her studies include germplasm evaluation, propagation, tree architecture and height management for orchard systems, phenology of growth and yield, tree decline, and surveys on production and utilization in the Caribbean. She has also conducted similar studies on chataigne. She collaborates with several researchers within the Department, across faculties and campuses in the studies on germplasm description, propagation, disease and utilization.

Dr. Roberts-Nkrumah has conducted several workshops and short courses on various aspects of tree crop production in the region and has written 18 manuals, one book chapter and several conference papers and refereed publications on tree crop production. She also served with the FAO and the Ministry of Agriculture in St. Kitts and Nevis as Team Leader and Horticulturist on the Technical Cooperation Programme for the Development

of the Breadfruit and Breadnut Industry in St. Kitts and Nevis.

ABSTRACT

Breadfruit Commercialization – Cultivars, Propagation, Orchards and Utilization.

As a food crop high in carbohydrates, important minerals and fibre, breadfruit (*Artocarpus altilis*) can reduce Trinidad and Tobago's dependence on imported staples and contribute significantly to national food and nutrition security. In recent years, increased demand has been detected but per capita breadfruit consumption remains relatively low and the tree population has declined. Therefore, its potential contribution remains underexploited and strategies to promote higher levels of consumption and production are necessary.

A research proposal was developed to address some key constraints to production and utilization by using a multi-disciplinary approach. The constraints included: Inadequate planting material supply; very limited germplasm diversity, description and evaluation; absence of technologies for orchard production systems; limited availability due to seasonality, high perishability and absence of value-added forms capable of long-term storage; absence of information

on the status of the industry; and absence of stakeholder linkages.

The Government of Trinidad and Tobago provided funding for a propagation study with the following objectives: to investigate micro-propagation techniques for more rapid planting material production, for in vitro germplasm conservation and for selection of variant (mutant) propagules; to investigate macro-grafting and micro-grafting of breadfruit on different *Artocarpus* rootstocks for improved root systems; to investigate the effect of plant growth regulators on propagation by root cuttings; and to investigate the epidemiology of the breadfruit tree decline disease.

The major outputs from this study included the development of protocols for grafting breadfruit on chataigne (*A. camansi*), a relative of breadfruit and for producing large numbers of grafted plants. The study also led to an improved tissue culture protocol to facilitate large-scale production and transport of breadfruit planting material. These protocols can be commercialized to improve planting material supply. Plants produced by both methods have established successfully in the field and borne fruit. As a result of this work we also now have an improved understanding of chataigne propagation, growth and development which can support commercial production.



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BIOGRAPHY

Professor Patricia Mohammed is a scholar, writer and filmmaker. She is Professor of Gender and Cultural Studies at the Institute for Gender and Development Studies (IGDS) and was the Campus Co-ordinator, Graduate Studies and Research at The University of the West Indies, St. Augustine, Trinidad from 2007 to 2012. Between 1994-2007, she served variously as Acting Head of the IGDS and Deputy Dean of the Faculty of Social Sciences, at UWI St Augustine, and as first Head of the Mona Unit, CGDS, UWI, Jamaica. She has held visiting professorial appointments or fellowships

at SUNY, Albany, University of Warwick, UK and Rutgers University, New Jersey and was elected President of the Caribbean Studies Association in 2008/9.

She is a pioneer in feminism and gender studies in the Caribbean since 1976, and founder and Executive Editor of the Caribbean Review of Gender Studies, an open access online peer reviewed journal of The University of the West Indies since 2006. Among her major publications in gender are Gender in Caribbean Development, 1988 (UWI Press, Kingston), Rethinking Caribbean Difference, Editor, Feminist Review, 1998 (Routledge, UK). Caribbean Women at the Crossroads, 1999 (UWI/Canoe Press, Kingston), The Construction of Gender Development Indicators for Jamaica, 2000 (Planning Institute of Jamaica/UNDP/IDRC), Gender Negotiations among Indians in Trinidad, 1917 – 1947, 2001 (Palgrave/ISS, UK and The Hague) and Gendered Realities: Essays in Caribbean Feminist Thought, (ed) 2002 (UWI Press, Kingston).

Her policy related work in gender has included assistance in drafting of four national gender policies for the Caribbean: Cayman Islands, Trinidad and Tobago, Dominica and British Virgin Islands, hosting a one week

intensive Gender Sensitive policy workshop for regional participants in Port of Spain in 2006 and production of a 40 minutes documentary entitled Engendering Change: Caribbean Configurations.

For the last fifteen years she has incrementally added Cultural Studies with an emphasis on visuality. Her major publications in this area include Imaging the Caribbean: Culture and Visual Translation, Macmillan UK, 2009, and a six part documentary film series "A Different Imagination" of which "Coolie Pink and Green" is an award winning film. She is currently writing a novel towards the production of a narrative feature length film and developing an interdisciplinary research project entitled Decoding the Visual in the Caribbean: The Impact of Images on Perception, Imagination and Behaviours.

ABSTRACT

Profiling the Gender Sensitivity of Nations

What are the indicators or markers of gender inequality or inequity in a society? The idea of a national energy policy or a national youth policy presents far more obvious signposts for evidence-based policy than one which attempts to harness gender as a category for social or economic analysis. How can

gender inequality or inequity be measured and how does one create a more gender sensitive society? What is the benefit to nations as a result of dissecting and re-assembling gender relations? Drawing on the research process carried out for construction of four national gender policies in the Caribbean, among them Cayman Islands, Trinidad and Tobago, Dominica and the British Virgin Islands, as well as the insights gained from participation in a global project entitled Building Global Democracy hosted by the Centre for the Study of Globalisation and Regionalisation at the University of Warwick, this presentation examines the research methodologies involved in concretizing gender in policy making, and assesses the impact of the policy making process on societies which have undertaken this task.



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BIOGRAPHY

Dr. Ronald Marshall is a Senior Lecturer and Coordinator of the Sociology Unit within the Department of Behavioural Sciences, at The University of the West Indies, St. Augustine campus. He is a graduate of Howard University, Washington D.C. He acquired his Master's Degree in 1989 and his Doctorate in 1992. His research interests are methodology and statistics, health behaviour, and social organization. Currently he is focusing on poverty as it is distributed between individuals and across cultures. His other areas of interest are street children, alcoholism and child abuse.

Dr. Marshall is a member of

the International Sociological Association (ISA) and the Trinidad and Tobago Sociological Association (TTSA). He is also a member of the Editorial Board of the Family Journal since 2000. He teaches the following courses: Advanced Statistics and Research Design, Sociology of Health and Illness, Survey Design and Analysis, Qualitative Methods in Sociological Research and Introductory Statistics in the Behavioural Sciences. Dr. Marshall is currently completing work on research methods and methodology, street children and health care in the Caribbean.

ABSTRACT

Poverty in the Urban City Centres.

Previous studies of the relationship between social factors and poverty have yielded contradictory results. Some studies have shown that rural areas have the largest pockets of poverty, while others have shown that access to basic services such as potable water, health and land are also critical to explaining poverty. This study uses a cross-sectional survey in selected city centres in the North-Western part of Trinidad to shed more light on the subject matter that would resolve the contradiction and establish a relationship

between the two. The study uses Pearson product-moment correlation coefficient to establish association between several traditional factors including age, income, and occupation. It is predicted that the urban city centres in North Trinidad will show a significant amount of poverty explanation as the city centre is cost-inducive. Further, it is expected that the results will hold even when we control for other factors. The results will help to resolve the apparent one-sided view of poverty being mainly exposure to a lack of access to natural resources and that a significant percentage of the poor are located in the main city centres.



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BIOGRAPHY

Jerome De Lisle has served as Senior Lecturer in Educational Administration at the School of Education, University of the West Indies, St. Augustine since 2009. During the period 1998-2005, he also worked as a Lecturer in Measurement and Evaluation at the Faculty of Medical Science, St. Augustine. In 1994, Dr. De Lisle became the first individual to earn a PhD in Education from the UWI, St. Augustine School of Education.

His academic training includes core specializations in the areas of educational administration, educational research, educational sociology, and educational psychology. His current research interests center

on educational assessment and educational evaluation, with a focus on methods, achievement inequalities and the improvement of national systems of educational evaluation.

His research work has been published locally as well as in several top international peer-reviewed journals such as Assessment in Education: Principles, Policy and Practice, Educational Studies, Journal of Educational Administration, and the International Journal of Educational Development. His most recent work is to be published in the Journal of Educational Administration and focuses on Trinidad and Tobago's system response to international assessment data.

Dr. De Lisle has worked extensively as a consultant for the Ministry of Education (MoE) on a variety of projects, including the Evaluation of the Continuous Assessment (CAP) Programme, the construction of the seamless education sample, and the review and handover of the Secondary Education Modernization Programme (SEMP) to the MoE. He has been the primary consultant for the development and use of performance standards and school performance metrics at the Division of Educational Research and Evaluation (DERE) since 2005. He has worked as a sub-consultant in Trinidad and Tobago for international agencies such as Cambridge Education

and as one of two National Lead Scholars for the Montreal-McGill consortium in the Trinidad and Tobago Educational Leadership (TTELP) project.

ABSTRACT

The Schools Facing Exceptional Challenge Project: Improving Low Performing Schools in Trinidad & Tobago.

Schools facing exceptional challenge are institutions confronted by multiple negative circumstances, such as chronic low performance, declining rolls, staff turnover, and disadvantaged feeder communities. In the mid-1990s, research into low performing, high poverty schools became prominent in several

OECD countries such as the United Kingdom, the Netherlands, Canada and the US. However, little is still known about these schools within non-OECD countries. This is surprising given the much higher variation in student achievement scores and likelihood of poverty concentration in these contexts. Current OECD system reform initiatives to address schools facing challenge include target setting and strategies for turnaround. However, not enough is known about the nature of underachievement in local low performing schools to guide reform. This research, then, is vital as Trinidad and Tobago seeks to reduce the high variation in student scores observed

on both National Tests and International Assessments. This project was implemented in 2007 and paralleled similar work in Canada (2006) and the UK (2005). The study was conducted in three phases: (1) A quantitative multi-level study of all public primary schools using the 2005-2007 national test dataset; (2) a multi-site case study of three schools identified as facing exceptional challenge, and (3) a qualitative follow-up study of these schools three years later. In Phase 1, performance metrics and school characteristics were used to operationalize the concept of "exceptional challenge". The data suggested that schools with disadvantaged populations were also likely to report low institutional performance. The findings of Phase 2 guided the development of contextualized theory on education practice within these institutions. Phase 3 findings identified reasons for improvement across the three year time period. The greatest success of the project was the transfer and utility of selected performance metrics to the national system. Especially useful was the Academic Performance Index (API), a metric based on the weighted distribution of students in the four achievement levels. This index has gained national popularity since 2010 and is now used widely for making judgments on the primary school system. The value of fully transferring the study's theory and tools to the Ministry of Education is considered.



Professor John Agard
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BIOGRAPHY

Professor John Agard is the current Head of the Department of Life Sciences at UWI. His main interest is the mainstreaming of environmental sustainability and climate change considerations into development planning at international, regional and local levels. His research is directed to working with Governments on mainstreaming an Industrial Ecology paradigm which attempts to optimize the balance between strong industrial development while also equally protecting human health and conserving

nature's ecosystem services on which people depend. This sustainability science research focuses mainly on introducing ecosystem services and climate change adaptation as one of the pillars of people-centered sustainable development.

Current research projects are attempting to develop markets for ecosystem services with an emphasis on non-carbon markets and with the ultimate intention of introducing ecosystem services valuation into national economic and planning frameworks. Research also involves scenario modelling of potential impacts of projected climate change on coastal areas, vulnerable communities and economic infrastructure as well as a range of ecosystem services on which humans depend.

At the international level, Professor Agard serves as a Lead Author of the United Nations Inter-Governmental Panel on Climate Change (IPCC). He has also served as an independent advisor on environment and sustainability to the Board of the Inter-American Development Bank in Washington. At the regional level, he has been a member of the CARICOM Regional Task Force on Climate Change. At the local level he is collaborating with the Ministry of Planning and Sustainable Development to introduce environmental considerations into spatial

development planning in Trinidad and Tobago and with the Ministry of Environment and Water Resources to develop climate change mitigation and adaptation strategies for Trinidad and Tobago.

ABSTRACT

The Project for Ecosystem Services

It is widely accepted that ecosystem services that support human well-being are a key contributor to sustainable development. It is also generally understood that sustaining these flows of ecosystem services is linked to maintaining natural capital. Yet, challenges still exist in mainstreaming ecosystem services into development policies and continuing conflicts between developers and environmentalist abound.

In this regard, the Project for Ecosystem Services with the support of the Global Environmental Facility (GEF), the T&T Green Fund and the UWI-RDI Fund, is working with the Ministry of Planning and Sustainable Development to introduce biodiversity and ecosystem services considerations into the next National Spatial Development Plan.

The project is also collaborating with the Ministry of Environment and Water

Resources and the Green Fund to develop a Payment for Ecosystems Services scheme. Discussions are ongoing with the Minister of Finance about the feasibility of Natural Capital accounting.

The overall goal of the project is to better integrate ecosystem assessment, scenario development and economic valuation of ecosystem services into national sustainable development planning. ProEcoServ will also lead to developing the capacities of decision makers to assess tradeoffs and development choices that contribute to strengthened biodiversity and ecosystem resilience, and to develop and apply appropriate ecosystem management tools within development planning.

The project components are intertwined and will jointly lead to developing capacities of decision makers, users and beneficiaries of ecosystem services. This is being achieved through three major components: Policy Support Tools, Policy Environment, and the Science-Policy Interface. ProEcoServ is a term used to describe an umbrella of ecosystem service mainstreaming projects between the United Nations Environment Programme and partner organisations in Chile, South Africa, Trinidad & Tobago and Vietnam.



Dr. Richard Robertson
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BIOGRAPHY

Originally from St. Vincent, Dr Richard Robertson joined the staff at the Seismic Research Centre in 1993 after serving for six years as Head of the local volcano-monitoring unit in St. Vincent (the Soufriere Monitoring Unit). Since joining the Seismic Research Centre he has been involved in a variety of projects including: the ongoing eruption of the Soufrière Hills Volcano on Montserrat; the establishment of volcano monitoring networks (mainly geodetic) and ongoing public education and outreach programmes throughout the Eastern Caribbean. He served several tours of duty as Chief

Scientist of the Montserrat Volcano Observatory during the period 1995-1999 and was its Director from October 1998 - March 1999. Dr Robertson served as Head of the Seismic Research Unit during the period 2004-2008 and as Director of the Seismic Research Centre from 2008-2011. Dr. Robertson resumed duties as geologist at the Centre in September 2011 and in September 2012 went on one year sabbatical.

At the UWI St. Augustine, Dr Robertson has assisted with the field supervision and lecturing of undergraduate geosciences students.

He has supervised graduate students based at UWI and UK institutions working on research projects in the Eastern Caribbean and Trinidad. He was one of the editors of the Volcanic Hazards Atlas for the Lesser Antilles. Since 2008 he has been the main coordinator of the SRC and IPGP operations at the Montserrat Volcano Observatory. His research interests include: magma genesis, volcano geodesy, risk perception, crisis communications, integrated volcanic risk assessment, volcanic hazard assessment, volcano monitoring and volcanic emergency management. He is currently involved in regional and international research projects on volcanoes in the Eastern Caribbean (Montserrat, Dominica, St. Vincent), Central America (Mexico), South

America (Ecuador, Colombia) and Italy.

ABSTRACT

Reducing Geologic Risk in the Eastern Caribbean.

The UWI Seismic Research Centre (UWI-SRC) is driven by the need to improve our understanding of the geologic processes at work in the region so as to reduce risk and promote sustainable development. The Centre provides the governments of its 9 contributing territories with accurate and up-to-date information about earthquakes and volcanoes, including 19 live volcanoes in the region. The UWI-SRC works closely with the National Disaster Preparedness Coordinators through whom reports to the Governments of the Region are channeled. Our research is of relevance to the region as it enables us to regularly update estimates of the level of earthquake hazard in the region as input into such things as the development of building codes, planning for seismic emergencies and the planning of important infrastructural projects, which are vulnerable to earthquake effects. We have within the past three years, begun to develop the capacity to undertake earthquake loss estimation (i.e. risk assessment) and conduct seismic microzonation studies.

The Centre also conducts a continuous study of active

volcanism in the Lesser Antilles by both geological and geophysical methods. The main objectives of our work are to: establish which of the volcanic centres in the region present a threat of future eruptions and advise regional governments accordingly; quantify the hazard in the form of hazard maps; provide timely and authoritative warning of impending volcanic activity and its converse to provide authoritative reassurance that sometimes alarming phenomena are not signs of an immediate eruption. Our research focus is to develop analytical and numerical models of diverse volcanic and hydrothermal processes and the assessment of volcanic hazard and risk. Research in volcanology provides input to short, medium and long-term planning through the generation of geo-referenced hazard maps and to emergency preparedness through input to volcanic contingency planning.

In education and outreach our main research focus is on hazard communications, awareness and perception of geologic hazards and use of the Internet in delivery of scientific information.

Our objective is to use a multi-faceted approach to increase awareness of geological hazards across the Eastern Caribbean as a means of creating prepared communities.



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BIOGRAPHY

Dr. Kim Mallalieu is a senior lecturer in the Department of Electrical and Computer Engineering at The University of the West Indies, having served as Head of the Department in the past. She leads the academic, commercial and outreach programmes in the Department's Communication Systems Group. She conceived of and coordinated the Master's degree in Regulation and Policy in Telecommunications, the MRP (Telecommunications), which was delivered to over thirty developing countries; and was the first online programme to be delivered from UWI's St. Augustine campus.

Dr. Mallalieu has been described as a trail-blazing

pioneer in engineering education and is the recipient of local, regional and international teaching awards as well as several other awards of distinction. She has led numerous institutional, national and regional initiatives designed to build capacity for ICT-enabled developmental interventions; and has led a team which has received institutional and international research awards. She has raised in excess of US\$1.5m, combined financial and in-kind, support for research and teaching in the Department of Electrical and Computer Engineering; and her research is richly collaborative with local and foreign institutions from the private, public and educational sectors.

Dr. Mallalieu has served on several Cabinet-appointed committees and various boards, including the Board of the Telecommunications Authority of Trinidad and Tobago, of which she is a founding as well as current member.

Dr. Mallalieu's research interests are multidisciplinary, predominantly revolving around innovative, regionally appropriate strategies and technologies in support of development, with a strong emphasis on human security and livelihoods; as well as longitudinal pathways for equity and inclusion of marginalized communities via transformational interventions.

She was a founding member of Diálogo Regional sobre Sociedad de la Información (DIRSI), a Latin American and Caribbean network of academics engaged in research on ICT policy and regulatory intervention for social and economic inclusion; and is currently the Principal Investigator of the Caribbean ICT Research Programme (Trinidad and Tobago).

ABSTRACT

Action Research: A Trinidad and Tobago Case Study of ICT Interventions in Small Scale Fisheries.

This paper describes the first full cycle of action research executed by the Caribbean ICT Research Programme (Trinidad and Tobago), CIRPTT, in the Department of Electrical and Computer Engineering at The University of the West Indies. The small scale fisheries sector is described as the focal point of this multidimensional, multi-disciplinary research, designed to produce a staggered programme of outputs, outcomes and impacts of significance to local communities of small scale fishers, as well as to policy makers, service providers and agencies with responsibility for national security.

The paper discusses the various phases and components of the first cycle of CIRPTT action

research, including the design, development and deployment of mobile applications for small scale fisheries. It describes the deliberate framework within which the research was contemplated, executed and evaluated. This framework, which responds precisely to the many tensions and competing demands faced by Universities in contemporary times, is replicable across disciplines and jurisdictions. It is contextualized according to the overarching as well as underpinning constraints, alongside strategic and operational imperatives, which form the basis of validation for action research as a viable model for productive, impacting and sustainable research in Small Island Developing States.

The paper outlines different creative strategies utilized in CIRPTT; as well as the innovative products developed and other outputs generated by the research team. It describes the range of new insights and knowledge gained as well as their relevance and applicability to policy development and participatory governance. It also shares important lessons relating to the application of technology to social and economic development and further opportunities for local action research. The paper emphasizes the critical nature of multi-dimensional, multi-stakeholder engagement.



**PANEL 1
CREATING ENTERPRISING
SOLUTIONS**

Mr. Ewart Williams
Chairman,
Campus Council
The University of the West
Indies,
St. Augustine

BIOGRAPHY

Mr. Ewart Williams is the second longest serving Governor of the Central Bank of Trinidad and Tobago, first appointed Governor in July 2002 and then re-appointed in July 2007 for a second five-year term. During his tenure, Mr. Williams was responsible for many major initiatives at the Bank. Noted among these are the Bank's enhanced capacity for economic research and support for monetary policy and the shift to a more market based monetary policy framework based on the REPO rate. He also ensured the strengthening of financial supervision through the

introduction of new statutes and amendments to existing legislation and financial infrastructure such as the electronic payments system. Mr. Williams also spearheaded a number of significant achievements for the Bank including the establishment of the Heritage and Stabilization Fund, the National Financial Literacy Program, the Financial Ombudsman Office, the publication of semi-annual Monetary Policy and Financial Stability reports, the development and introduction of the Real Estate Mortgage Market Guideline and Benchmark Interest Rate (MMRR), the establishment of the Bank's Money Museum and the Bank's charity programme "We Care". His tenure culminated with the re-introduction of the TT\$50 note in commemoration of the 50th anniversary of this country's independence.

Prior to serving as Central Bank Governor, Mr. Williams had a thirty-year career with the International Monetary Fund (IMF). During that period, he served as IMF Resident Representative to Jamaica, Assistant to the Director: African Department, and Senior Advisor/Deputy Director, Western Hemisphere Department. Mr. Williams led IMF missions to several countries in Africa, Latin America and the Caribbean, including serving as the

Mission Chief to Mexico, during the Mexican Financial Crisis of the mid-1990. In 2001, he was the main architect of the Caribbean Regional Technical Assistance Centre (CARTAC), established by the IMF and other multilateral and bilateral agencies to assist the region in capacity building, in public finance, banking and statistics. The Centre, which is located in Barbados, is now a principal source of technical assistance for Caribbean countries. Furthermore, CARTAC was the precursor to similar training institutions that were subsequently established in Africa and other parts of the world.

Mr. Williams currently serves as the Chairman of the UWI St Augustine Campus Council. He has also served as an Alternate Governor to the IMF, IADB and CDB and Governor of the Heritage and Stabilization Fund. He holds Bachelor of Sciences and Masters Degrees in Economics from the UWI.



PANEL 2 - FACILITATING EVIDENCE-BASED POLICY MAKING

Senator the Honourable Dr. Rolph Balgobin
Independent Senator
10th Republican Parliament
of Trinidad and Tobago

BIOGRAPHY

Dr. Rolph Balgobin is Deputy Chairman and Group CEO of Electrical Industries Holdings Limited, Executive Chairman of Quicksilver Convenience Limited, a Director of Neal and Massy, the Arthur Lok Jack Graduate School of Business and the Express Children’s Fund. He is the Director of the Centre for Strategy and Competitiveness at the Lok Jack GSB. He is also Chairman of the Presentation College San Fernando School Management and Advisory Committee, chairman of the BizBooster business incubator initiative and serves on several other companies and charities.

Prior to this he was Executive Director of the UWI Institute of Business (later the Arthur Lok Jack GSB), and a Project Director at Procter and Gamble as part of its Europe, Middle East and Africa (EMEA) operations. He was previously General Manager of Trinidad Cables Ltd., Trinidad Electrical Manufacturing Corporation (TEMCO) and Electrical Industries Ltd.

He has served as a director of TSTT, the Central Bank of Trinidad and Tobago and as chairman of Point Lisas Industrial Development Corporation (PLIPDECO). Dr. Balgobin was also an Advisory Trustee of Caribbean and Central American Action, based in Washington, a director of Youth Business Trinidad and Tobago and served on the national e-business Round Table and the Steering Committee of the Vision 2020 project, leading the team which developed the final report. He is an Independent Senator in the Parliament of the Republic of Trinidad and Tobago.

Dr. Balgobin holds an undergraduate degree in Industrial Management, an EMBA (both from UWI), an MSt. from the Judge Business School at Cambridge University and a Doctor of Business from Manchester Business School, the University of Manchester. He also holds a Diploma in Corporate Governance from

the ACCA. He has written two books, several scholarly papers as well as newspaper articles. He has led national research on competitiveness with the World Economic Forum, pioneering the relationship which has seen Trinidad and Tobago ranked annually in the Global Competitiveness Report.



PANEL 3 - ENGAGING OUR COMMUNITIES

Ms. Terhi Karvinen,
Programme Coordinator
Delegation of the European
Union to the Republic of
Trinidad and Tobago

BIOGRAPHY

Ms. Terhi Karvinen coordinates the bilateral cooperation portfolio between Trinidad and Tobago and the European Commission. This portfolio consists of support to the private sector development, to diversification of the sugar producing sector, to environment and to the establishment of the innovation framework. Before Trinidad and Tobago, she was posted in Guyana.



PANEL 1 - CREATING ENTERPRISING SOLUTIONS

Dr. Natasha Ramkissoon
Chairman,
National Entrepreneurship
Development Company
Limited

BIOGRAPHY

Dr. Natasha Ramkissoon is a Lecturer of Entrepreneurial Studies at the Department of Management Studies at The University of the West Indies St. Augustine Campus. At the UWI she lectures in the areas of small business management, entrepreneurship and marketing. Dr. Ramkissoon is also the Chairman of the National Entrepreneurship Development Company (NEDCO). She is an Entrepreneurship Development Specialist and has extensive experience in the business development sector of Trinidad and Tobago for over 12 years. Her core areas of expertise

include programme evaluation, entrepreneurship research and training, innovation conceptualization for business enterprises and formulating customer service strategies for private and public sector organizations. She was a member of the Government of the Republic of Trinidad and Tobago Subcommittee for Vision 2020 on Entrepreneurship and Industrial Development and is currently a member of the Innovation Network at the University of Liverpool and Cardiff University. Dr. Ramkissoon-Babwah has an MBA from the University of Reading Henley Management Business School UK and a PhD in Management from the University of Wales with a focus on Entrepreneurship Policy for Developing Countries.



PANEL 2 - FACILITATING EVIDENCE-BASED POLICY MAKING

Professor Rose-Marie Belle Antoine
Dean,
Faculty of Law
The University of the West
Indies, St. Augustine

BIOGRAPHY

Professor Rose-Marie Belle Antoine is the Dean of the Faculty of Law, UWI St Augustine. She holds the Chair as Professor of Labour Law and Offshore Financial Law at the Faculty of Law, University of the West-Indies, and was the Deputy-Dean and the former Program Director of the LLM programme at the Cave Hill Campus. Antoine is a two-time recipient of the prestigious UWI Vice-Chancellor’s Regional Award for Excellence, winning for Research in 2006 and Public Service in 2013.

Professor Antoine holds a doctorate from Oxford University, an LL.M. from

Cambridge and an LL.B. from the University of the West-Indies. She is a Cambridge Scholar, an Oxford Commonwealth Scholar and a Cambridge Fellow. She also holds diplomas and certificates with distinction in international human rights from the International Institute of Human Rights in Strasbourg, France and was elected as Commissioner on the Inter-American Commission on Human Rights, OAS in 2010.

Professor Antoine’s specialist subject areas are Offshore Financial Law, Labour Law, Anti-Discrimination Law, Public Law and Legal Systems. She has served as a legal consultant to virtually all of the governments of the Commonwealth Caribbean, to governments outside of the region, and to several international and regional organizations. These include the EU, OAS, IADB, the World Bank, CARICOM, OECS, UNICEF, ILO, UNIFEM, PanCap and UNDCP. She is the author of well-known Reports on regional issues including Discrimination, Constitutional Reform, Public Service Reform, Police, Children’s Rights/ Juvenile Justice, Mutual Legal Assistance, Women’s Rights, Labour Law, Free Movement of Labour, HIV, Financial Law, Health and Anti-Corruption. She has also drafted a number of important statutes on diverse areas of law including on the financial sector, health, public service, education, child justice, labour, financial law,

human trafficking and trusts. Professor Antoine has written eleven books and several articles in international legal journals on numerous subjects, notably, Confidentiality in Offshore Financial Law and Trusts and Related Tax Issues in Offshore Financial Law, both published by the prestigious Oxford University Press. Her first book, Commonwealth Caribbean Law and Legal Systems, published by Routledge Cavendish, London, is now into its second edition and is used by universities worldwide. She is also the author of the well-known CARICOM Harmonisation in Labour Law Report 1992, which formed the basis of the Commonwealth Caribbean's (CARICOM) model laws and the blueprint and catalyst for labour law reform in the Commonwealth Caribbean.



PANEL 3 - ENGAGING OUR COMMUNITIES

Mrs. Cassandra Patrovani Sylvester

Vice President, Human and Corporate Relations
The National Gas Company of Trinidad and Tobago Limited

BIOGRAPHY

Cassandra Patrovani Sylvester has over 20 years of work experience, during which she has developed strengths and capabilities in the functional areas of Human Resources and Corporate Relations. In her last role, she was the Senior Human Resources Business Partner, Caribbean and Operations at British American Tobacco Caribbean and Central America. Cassandra joined the BAT Group after a 5½ year stint at One Caribbean Media (OCM) Limited, where she was the Group Executive, Human Resources and Corporate Communications.

She holds a Post-Graduate Diploma in Organisational Behaviour from the University of London in England and a Diploma in Marketing. She is specialized in the areas of Strategic Human Resource Management, Change Management, Behavioural and Relational Analysis, Groupwork, Group Development and Facilitation.

She has worked extensively with local and international enterprises such as First Citizens Bank Limited, Cocoa Cola and BpFord in the areas of Strategic Planning, Performance Management, Succession Planning, Change Management, Corporate Relations and Communications, Leadership Development and Organisational Transformation.



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