# THE UNIVERSITY OF THE WEST INDIES TRINIDAD AND TOBAGO

## RESEARCH AND DEVELOPMENT IMPACT FUND



# ANNUAL REPORT

2012 - 2014

# Our Impact

Although the RDI Fund was formalized only two years ago, projects supported by the RDI Fund are already starting to achieve real development impact through capacity building, stakeholder engagement, and knowledge dissemination and mobilization.

Capacity Building	Stakeholder Engagement	Knowledge Knowledge Dissemination Mobilization			
Graduate students benefited from training and research experience	TT\$25 Million in counterpart funding	Conference presentations locally, regionally and internationally	100  Downloads  From the Google play store		
12 Prison Officers trained as lay Therapists	TT\$3.3  Million  in in-kind contributions	30 T&T Sign Language Classes conducted	80 Children received neurobehavioural screening		
<b>60</b> People  trained in chocolate  making	20 Stakeholder Workshops and Conferences in Trinidad and Tobago	MSc Theses successfully completed	Prison Inmates received psychiatric screening		
Citrus farmers introduced to new production techniques	New/strengthened partnerships and collaborations With local, regional and international institutions	<b>Publications</b> in peer-reviewed journals	Demonstration citrus orchard established		
50 Community based researchers trained in census methods	4000 Persons surveyed	Print media mentions  Local, regional and  international	191 At-risk youth received 10 weeks of music therapy interventions		
52 Cocoa farmers benefited from training	200 Communities across T&T reached by RDI Fund project activities	<b>7 Project website</b> s  With worldwide  visitor traffic	Training videos introduced into the CSEC Agriculture Curriculum		



# THE University of the West Indies - Trinidad and Tobago RESEARCH AND DEVELOPMENT IMPACT FUND

# ANNUAL REPORT

2012 - 2014

Produced by: The University of the West Indies - Trinidad and Tobago Research and Development Impact Fund

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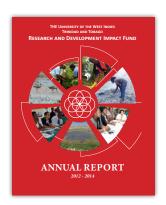
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#### The RDI Fund Logo Design

The Fund is represented as a "seed of life". From this seed sprouts new knowledge relevant to addressing pressing development needs, generated from cutting edge research projects supported by the Fund. The seven circles acknowledge the founding donor, the Government of the Republic of Trinidad and Tobago (GORTT), and represents the government's seven development pillars, as outlined in the GORTT Medium Term Policy Framework 2011-2014. The seven intersecting circles form a six-part flower at the centre of the design. Each part represents one of the six priority research areas of the Fund. The intersecting circles also connote "connection", "collaboration", "partnerships" and "multi/interdisciplinarity". The chosen colour palette, red, black and white, reflects the Fund's national (Trinidad and Tobago) roots.



#### The Cover

The RDI Fund Annual Report's cover showcases selected images from Fund activities over the reporting period: 2012-2014, all of which are grounded and linked by the Fund - represented at centre, by the Fund's logo.

# The University of the West Indies – Trinidad and Tobago Research and Development Impact Fund

The University of the West Indies - Trinidad and Tobago RDI Fund (UWI-TT RDI Fund) is positioned as the primary source of national funding for The UWI St Augustine Campus' research agenda. Established in 2012, the Fund's primary purpose is to support research projects which address pressing development needs in society. The supported projects should achieve recognizable and substantive impact in the short and medium term (3-5 years). The Fund also serves as a vehicle to demonstrate the Campus' responses to development challenges, thereby fostering a greater appreciation in our stakeholders of the value and impact of research, innovation and knowledge transfer.

In the 2005/2006 academic year, the Government of the Republic of Trinidad and Tobago (GORTT) signed an agreement with The UWI St. Augustine Campus establishing the predecessor of the RDI Fund, the Campus Research Scheme. Under this agreement, a total of 63 research grants were awarded during 2006-2008, totaling \$14.6 million. These grants were distributed across Faculties as well as Research Units, Centres and Institutes (UCIs).

With a view to enhancing the relevance and impact of the research agenda of The UWI, during 2009-2011 The UWI St Augustine Campus embarked upon a process of cross-Faculty consultation among the professoriate and active researchers of the Campus to build consensus on a more targeted, impact oriented approach to the allocation of research funding. Six priority research areas linked to national development were identified:



The adoption of priority research areas signaled a shift to defining a more focused and competitive approach and a more rigorous framework for the execution, monitoring and evaluation of research projects. In 2012, the research scheme was formally named The UWI-Trinidad and Tobago Research and Development Impact Fund and its Operational Guidelines were approved by the Campus Finance and General Purposes Committee (F&GPC).

This Annual Report is the Fund's first since its establishment and will cover the activities of the TEC, the Secretariat, and the projects funded during the calendar years January 2012 through December 2014.

Additional information on the RDI Fund, including the Fund's Operational Guidelines, can be found on the Fund's website, http://sta.uwi.edu/rdifund/index.asp.

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#### **Contents Statement**

This Annual Report, which covers the period from January 2012 to December 2014, has been prepared by The UWI-TT RDI Fund Secretariat in accordance with the Operational Guidelines of the Fund. This report has been submitted to the Technical Evaluation Committee and approved by the Chair, Pro Vice-Chancellor and Principal of The UWI St Augustine Campus, Professor Clement Sankat. All dollar amounts used in this Annual Report are current Trinidad and Tobago (TT) dollars unless otherwise specified. Throughout this report, the terms "UWI-TT RDI Fund", "RDI Fund" and "Fund" refer to The University of the West Indies – Trinidad and Tobago Research and Development Impact Fund.

# Acronyms and Abbreviations

ACP	African, Caribbean, and Pacific Group	NIHERST	National Institute of Higher Education,
	of States		Research, Science and Technology
CAOBISCO	Association of the Chocolate, Biscuits	OECD	Organization for Economic
	and Confectionery Industries of Europe		Co-operation and Development
CARICOM	Caribbean Community	PCR	Polymerase chain reaction
CCIB	Cocoa and Coffee Industry Board	PRRSV	Porcine reproductive and respiratory
CfP	Call for Proposals		syndrome virus
CIMH	Caribbean Institute for Meteorology &	RE	Renewable Energy
	Hydrology	RT-qPCR	Quantitative reverse transcription
CRC/U	Cocoa Research Centre/Unit		polymerase chain reaction
CSO	Central Statistical Office	SG	Smart Grid
CUF	Caribbean Urban Forum	SME	Small and Medium-Sized Enterprise
DENV	Dengue Virus	SO <sub>2</sub>	Sulfur Dioxide
EC	European Commission	SWMCOL	Trinidad and Tobago Solid Waste
ECA	European Cocoa Association		Management Company
EMA	Environmental Management Authority	T&TEC	Trinidad and Tobago Electricity
EPOS `	East Port of Spain		Commission
EU	European Union	TEC	Technical Evaluation Committee
F&GPC	Finance and General Purposes	TEV	Total Economic Valuation
	Committee	THA	Tobago House of Assembly
FCC	Federation of Cocoa Commerce Limited	TT/ T&T	Trinidad and Tobago
GORTT	Government of the Republic of Trinidad	TTMA	Trinidad and Tobago Manufacturers
	and Tobago		Association
HERA	Higher Education Research Agency	TTSL	Trinidad and Tobago Sign Language
ICGT	International Cocoa Genebank,	TTPS	Trinidad and Tobago Police Service
	Trinidad Accessions	UCIs	Units, Centres, and Institutes
ICT	Information and Communications	UNDP	United Nations Development
	Technology		Programme
IDB	Inter-American Development Bank	USDA	United States Department of Agriculture
MOU	Memorandum of Understanding	USAID	United States Agency for International
NAMDEVCO	National Agricultural Marketing and		Development
	Development Corporation	WASA	Water and Sewerage Authority
NGC	National Gas Company of Trinidad and		
	Tobago Limited		

# Letter of Transmittal to the Technical Evaluation Committee

December 4th 2014

Professor Clement Sankat
Pro Vice-Chancellor and Campus Principal
The University of the West Indies
St Augustine Campus

Dear Principal,

On behalf of the Secretariat of The UWI-TT Research and Development Impact Fund, it is my distinct honor to transmit for consideration by the Technical Evaluation Committee the RDI Fund's first Annual Report, covering the period 2012 – 2014.

During 2012-14, the Fund has sought to develop the processes and procedures necessary for establishing, maintaining, monitoring and evaluating a portfolio of projects. The projects funded have committed to a research process which seeks to go beyond the achievement of academic outputs to impacting on the developmental needs of the country and the region.

The annual report has been prepared in accordance with the requirements of the RDI Fund's Operational Guidelines, referred to in section 8.1.i, which mandates the Fund's Secretariat to prepare periodic reports on the performance of the Fund and its projects.

Sincerely,

#### Ms. Lois St Brice

Project Management Officer
Office of the Campus Principal
The University of the West Indies
St. Augustine Campus







# MESSAGE FROM THE TECHNICAL EVALUATION COMMITTEE CHAIR

Two years ago, The UWI St Augustine Campus embarked on a path to focusing its research efforts to address the pressing development needs of the country in a strategic and targeted way. The establishment of the RDI Fund saw the launch of an instrument to infuse a philosophy of 'knowledge mobilization in the service of development' into the Campus' research enterprise.

One of the priorities for The UWI St. Augustine Campus identified in our Strategic Plan 2012-2017 is to position our Campus as the leader in producing relevant and impacting research, particularly in new and emerging areas linked to national and regional development. The University of the West Indies has for several decades produced outstanding research and sought to communicate new knowledge through various channels including teaching, conferences, public lectures, consultancies and public service. Given today's highly competitive tertiary education landscape, this has become even more essential if the university is to distinguish itself from its competitors locally, regionally and internationally.

A key goal of the RDI Fund is to facilitate the strengthening of the synergy between scholarship and development impact. The application of research, the engagement of key stakeholders, and the effective communication of research outputs to diverse audiences are all critical elements in this process, in addition to the availability of dedicated research funding.

By emphasizing this approach, multi-disciplinary research teams are encouraged to establish connections between university research, knowledge users and decision makers so that research can have an impact on policy, practice, new products, services, ways of thinking, attitudes and behavior and ultimately contribute to improving the well-being of society.

Although it is still early in its implementation, the Fund is already being cited as an emergent Best Practice model for research funding in the region. It is my hope that the early successes documented in this Annual Report will serve to demonstrate the immediate impact of the investment of the Fund's sole donor to date, the Government of the Republic of Trinidad and Tobago. The accomplishments reported herein also underscore the importance of

providing dedicated seed funding for research and the benefits to be gained from additional financial resources being committed to this model of grant research funding.

Moving forward, in keeping with good governance practice, it is important for the Fund to seriously consider the resource implications of the work programme put forward to support the objectives of the Fund. To date the RDI Fund has been managed by a small Secretariat using existing staff of the Office of the Campus Principal. In order to channel as much funding as possible to supporting research projects, only minimal funding has been allocated to support the work of the RDI Fund (although this is provided for under point 8.1 of the Fund's Operational Guidelines). However, as the number of projects-in-execution increases, so too will the need to monitor the activities being implemented and to work with project teams to ensure the effective dissemination of the research findings and outcomes of these projects. Additional support in the areas of project management, communications, knowledge dissemination, outreach and capacity building will, therefore, be necessary.

The Technical Evaluation Committee would also need to consider dedicating resources for the commissioning of technical studies that would strengthen the policy framework on research and development impact and, in turn, serve as useful instruments for evidence-based policy and decision-making and collaborations between academia, the public and private sectors and civil society.

In 2013, the GORTT decided to establish a national Higher Education Research Agency (HERA) and to channel its annual UWI contribution of approximately TT\$7 million to HERA, which is expected to provide research funding on a competitive basis to all research institutions in Trinidad and Tobago. In order to ensure the sustainability of the RDI Fund, it is therefore critical that new donors be brought on board to support The UWI's strategic focus on relevant and impacting research and to expand the RDI Fund's portfolio of projects.

Through the execution of a multi-pronged programme of activities that support quality research, efficient project execution, increased knowledge uptake and a stronger policy framework for achieving research impact, the RDI Fund will continue to serve as a catalyst in the process of knowledge mobilization for greater research translation, application and uptake. By strengthening the linkages that are inherent in the research management system at The UWI St. Augustine Campus, the RDI Fund will continue to work towards achieving its overall objective of supporting multidisciplinary research that produces an impact on areas critical to national and regional development.

I firmly believe that it is only by connecting knowledge products with stakeholders and by creating opportunities for greater understanding and application of research findings that research can serve as an impetus for transformational change and development.

#### **Professor Clement Sankat**

Pro Vice-Chancellor and Campus Principal
The University of the West Indies,
St. Augustine Campus



# Members of the Technical Evaluation Committee



Chair – Professor Clement Sankat Pro Vice-Chancellor and Campus Principal, University of the West Indies, St Augustine



Professor Wayne Hunte Pro Vice-Chancellor, Research University of the West Indies



Ms. Patricia Harrison
Campus Bursar
University of the West Indies,
St Augustine



Professor Samuel Ramsewak
Dean
Faculty of Medical Sciences
University of the West Indies,
St Augustine



Professor Kit Fai Pun Campus Coordinator for Graduate Studies and Research University of the West Indies, St Augustine



Professor Funso Aiyejina Former Dean (Retired) Faculty of Humanities and Education University of the West Indies, St Augustine



Mrs. Maureen Manchouck President The National Institute of Higher Education, Research, Science and Technology (NIHERST)



Dr. Rolph Balgobin
NGC Chair in Innovation and
Entrepreneurship
University of the West Indies,
St Augustine

Not pictured: Ms. Wynda Chandler, Head of Community Relations, The National Gas Company of Trinidad and

Tobago Limited (NGC)

Past Members: Professor Dyer Narinesingh, Professor Ian Robertson, Dr. Rohit Doon, Mr. Nyron Seaton

# Members of the RDI Fund Secretariat



Mrs. Stacy Richards-Kennedy Senior Programme Manger Office of the Campus Principal University of the West Indies St Augustine



Ms. Lois St Brice Project Management Officer Office of the Campus Principal University of the West Indies St Augustine



Ms. Karisse Jackman Senior Secretary Office of the Campus Principal University of the West Indies St Augustine

# Governance Structure and Management

Consistent with the sharpened focus of the Fund, the management of the RDI Fund is guided by a set of governance mechanisms to preserve the integrity of the Fund's processes and to ensure transparency and accountability to the donor(s) and other stakeholders. The Fund has a dual governance structure, comprising of a Technical Evaluation Committee (TEC), chaired by the Campus Principal, and a Secretariat.

The Technical Evaluation Committee serves as the Board of the RDI Fund. As such, it is the main decision-making body regarding the management of the RDI Fund and its Secretariat. The TEC provides oversight of all Fund activities and sets policy direction for the Fund. It also conducts the technical assessment of eligible proposals during a Call for Proposals and can be assisted in this exercise by specially invited technical experts where appropriate.

The TEC is chaired by the Campus Principal (or his designate) and comprises The UWI Pro Vice-Chancellor for Research, the Campus Bursar, the Campus Coordinator for Graduate Studies and Research, the Chair of the Committee of Deans, the Director of the Office of Research Development and Knowledge Transfer, a UWI Professor Emeritus (or retired professor) and a representative from the public and/or private sector (business/industry). The last

two TEC member categories attend committee meetings on the invitation of the Chair. They are invited to serve on the basis of their technical expertise and experience as these relate to the main disciplines/thematic areas of the Concept Notes and Project Proposals submitted for specific Calls for Proposals.

The Secretariat is primarily responsible for the day-to-day management of the Fund's activities. It is also responsible for disseminating general information on the Fund, compiling proposals, preparing evaluation packages for the Technical Evaluation Committee and drafting minutes of meetings as well as periodic reports on the performance of the Fund and its projects. The Secretariat is also responsible for commissioning periodic financial audits, evaluations and impact assessments by independent experts to ensure monitoring and evaluation of approved projects and financial transparency and accountability.

The Operational Guidelines of the Fund stipulate that a small percentage (5%) of the annual RDI Fund allocation will be used to support the activities of the administration of the RDI Fund Secretariat. To date, this has only been minimally utilized as the Committee has committed to dedicating as much funding as possible to the research projects, given the current economic climate as well as the financial position of the Fund.

# Overview of RDI Fund Project Portfolio

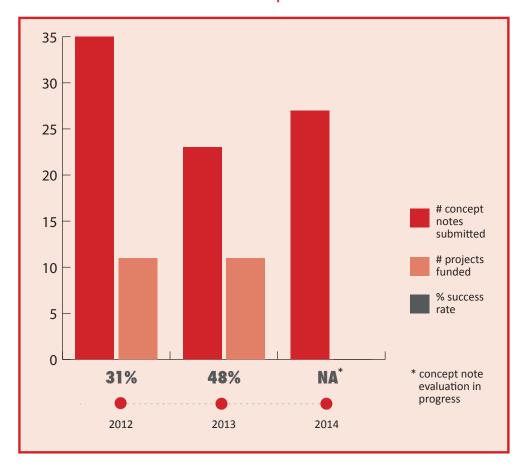
Since the Fund's establishment in 2012, three Calls for Proposals (CfPs) have been issued. The first CfP was launched in March 2012, the second in February 2013, and the third in September 2014.

In total, eighty five concept notes have been submitted in response to these three CfPs and twenty two projects were approved during the first two calls, representing an average success rate of approximately 40%.

The evaluation of concept notes submitted during the third call is ongoing.

During the 1st CfP in 2012, \$9,004,018 was approved for disbursement to 11 projects. An additional 11 projects were awarded \$5,339,210 during the 2nd CfP in 2013. Brief profiles on each of the approved projects are included in Appendix 1.

#### Success rate of concept notes submitted





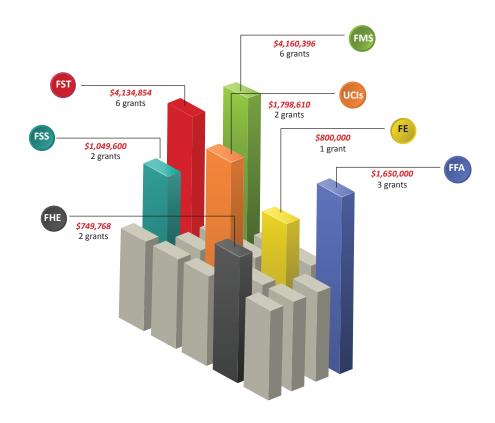


RDI Fund Team Leaders' group photos from the UWI-NGC Research Awards Ceremonies held in 2012 (top) and 2014 (bottom)

The approved projects have project leads from all the Faculties except the recently created Faculty of Law; the Units, Centres and Institutes (UCIs) are also represented. Projects have been approved in each of the research

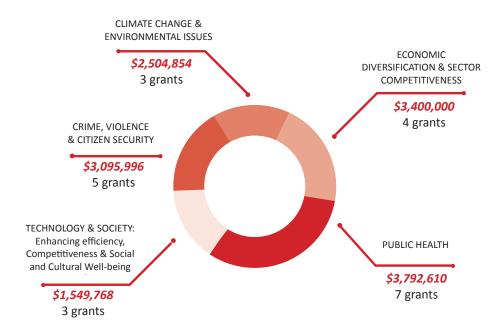
priority areas except in Finance and Entrepreneurship. Many of the approved projects address more than one thematic area.

#### Funding/Projects by Faculty



- FST Faculty of Science & Technology
- UCIs Units, Centres and Institutes
- FFS Faculty of Social Sciences
- FE Faculty of Engineering
- FHE Faculty of Humanities and Education
- FFA Faculty of Food and Agriculture
- FMS Faculty of Medical Sciences

#### Funding/Projects by Thematic Area



The approved projects all boast of multidisciplinary teams, stakeholder partnerships and student engagement. In addition, all projects have either already secured counterpart support, in cash or kind, or are actively in negotiations to secure same.

#### Project Monitoring and Evaluation

Projects are at varying stages of implementation due to the spread of official start dates and the range of approved project durations. Nineteen projects are scheduled to be completed by the end of 2015. Projects have been reporting to the Secretariat every six months by submitting progress reports as well as attending progress monitoring meetings. Projects approved during the 1st Call for Proposals (2012) have submitted four progress reports thus far (March 2013, November 2013, March 2014, and September 2014), while those approved in the 2nd Call for Proposals (2013) have submitted two progress reports (January 2014 and July 2014). Although most projects have

been compliant in this regard, one project has been placed on a financial hold due to a failure to comply with reporting requirements in a timely manner and another project has been cancelled due to a failure to start. Because of the high demand for research funding, maintaining a steady project execution rate and ensuring periodic reporting are considered critical by the Secretariat, in keeping with its oversight responsibility.

#### **Project Execution**

With regard to project execution, it has been noted that a significant number of projects have experienced a somewhat lengthy mobilization phase. This can be attributed to a number of factors including challenges with the ethics approval process, protracted contract approvals, navigating University/departmental processes, difficulty in recruiting graduate students, reticence among stakeholders, lack of primary data, season-dependent sampling, lack of physical space, inordinate delays



in ordering, and challenges managing collaborators. However, once the project team has been mobilized, projects have shown steady progress and are working towards achieving stated objectives. To date, four projects have been granted non-funded extensions. Based on

experiences thus far, the Fund will need to pay particular attention to assisting project leads in the area of research project management to ensure that projects complete approved activities under budget and, more importantly, within their approved implementation timeframe.

#### **Approved Projects**

CLIMATE CHANGE & ENVIRONMENTAL ISSUES						
Title of Concept Note	Team Leader	Amount Awarded (\$TTD)	Official Start Date	Scheduled End Date		
Evaluation of the Economic Value of Caroni Swamp: Implications of Climate Change using the UNEP TEEB protocol	Prof. John Agard	\$954,854	3-Sep-12	2-Sep-15		
The Impact of the contaminants produced by the Guanapo Landfill on the surrounding environment	Dr. Denise Beckles	\$1,000,000	3-Sep-12	2-Sep-14		
Terrestrial Flood Risk and Climate Change in the Caroni river basin: Adaptation Measures for Vulnerable Communities	Dr. Matthew Wilson	\$550,000	3-Jul-13	2-Jul-15		
	TOTAL	\$2,504,854				
CRIME, VIOLENCE & CITIZEN SECURITY						
Analysis of Intervention and Counseling for At Risk Youth to Reduce Crime, Violence and to Improve Outcomes for the Individual, The Schools, and the Family	Dr. Sandra Celestine	\$500,000	3-Sep-12	2-Sep-13		
A Multi-centre phase 3 cluster randomized controlled trial of a manualized anger management intervention for prisoners at risk for uncontrolled anger and aggression	Dr. Tony Bastick	\$999,396	1-Oct-12	31-Aug-15		
<sup>1</sup> Crime Victimization and Fear of Crime Survey in Trinidad and Tobago	Prof. Derek Chadee	\$549,600	29-May-13	28-Dec-14		
<sup>2</sup> Adult Sexual and Physical Intimate Partner Violence Survey & Public Health Intervention (ASaP IPV Survey & Public Health Intervention)	Prof. Gerard Hutchinson	\$547,000	5-Jun-13	27-Oct-14		
<sup>3</sup> A Matter of Survival: A life course approach to understanding the decision-making and economic livelihoods of school dropouts in T&T	Dr. Priya Kissoon	\$500,000	22-May-13	21-Mar-15		
	TOTAL	\$3,095,996				
ECONOMIC DIVERSIFICATION AND SECTO	R COMPETITIVE	NESS				
<sup>4</sup> Understanding Built and Cultural Heritage in East Port-of-Spain	Dr. Asad Mohammed	\$800,000	3-Sep-12	31-Mar-15		
<sup>5</sup> Towards Re-development of a Competitive Citrus Industry in Trinidad and Tobago and the Greater CARICOM Area	Dr. Govind Seepersad	\$600,000	3-Sep-12	30-Sep-14		
Leveraging the International Cocoa Gene Bank to Improve Competitiveness of the Cocoa Sector in the Caribbean, using modern genomics	Prof. Pathmanathan Umaharan	\$1,500,000	1-Oct-12	30-Sep-15		

Language and Competitiveness: Positioning T&T for Sustainable Development	Dr. Beverly- Anne Carter	\$500,000	22-May-13	21-May-15	
	TOTAL	\$3,400,000			
PUBLIC HEALTH					
Use of next generation molecular and evolutionary epidemiology to strengthen surveillance and develop models to predict and prevent the spread of Dengue	Prof. Christine Carrington	\$800,000	3-Sep-12	2-Sep-15	
Identification of the reservoirs of animal influenza viruses in Trinidad and Tobago	Prof. Christopher Oura	\$800,000	3-Sep-12	2-Sep-15	
Surveillance, characterization and management of antibiotic resistance in common bacterial pathogens in Trinidad and Tobago	Prof. Jayaraj Jayaraman/ Dr. Patrick E. Akpaka/ Dr. Adesh Ramsubhag	\$550,000	3-Jun-13	2-Jun-16	
Noise Induced Hearing Loss in Various Occupations / Environments in T&T	Dr. Ricardo Clarke/ Dr. Nikolay Zyuzikov	\$330,000	5-Jun-13	4-Jun-15	
Mitigating the Dementia Tsunami in Trinidad and Tobago	Dr. Gershwin Davis/ Dr. Nelleen Baboolal	\$550,000	29-May-13	28-May-15	
An investigation into the Trajectory of Neurobehavioural Development of Primary School Children in T&T	Dr. Farid Youssef	\$464,000	22-May-13	21-May-16	
A New Volcanic Emissions Monitoring Network: Integrating Community Engagement and Public Health Hazard Mgnt through the application and transfer of low-cost technology	Dr. Erouscilla Joseph	\$298,610	22-May-13	21-Nov-14	
	TOTAL	\$3,792,610			
TECHNOLOGY & SOCIETY: ENHANCING EFFICIENCY, COMPETITIVENESS & SOCIAL AND CULTURAL WELL-BEING					
<sup>6</sup> Documentation and Digital Development of Heritage Languages in Trinidad and Tobago	Dr. Benjamin Braithwaite	\$249,768	3-Sep-12	2-Mar-14	
AgriNett, An Agriculture Knowledge ePortal: Research on Intelligent Decision Support for enhancing Crop and Livestock Enterprise Management	Dr. Margaret Bernard	\$800,000	3-Sep-12	2-Mar-15	
Capacity Building and Research on Smart Grid Technology in the Caribbean Region	Dr. Davinder Sharma	\$500,000	23-May-13	22-May-16	
	TOTAL	\$1,549,768			

<sup>&</sup>lt;sup>1</sup>Granted a 5 month extension <sup>2</sup>Project Cancelled <sup>3</sup>Granted a 2 month extension <sup>4</sup>Granted a 6 month extension <sup>5</sup>Granted a 12 month extension <sup>6</sup>Project on financial hold

#### Project Disbursement and Expenditure

The levels of disbursement of the approved grant funding to the project accounts as well as the projects' expenditure levels have generally been slower and lower than ideal. This has been due in large part to many of the factors previously cited which result in delays in project implementation and repressed spending. However, in some cases, the low

expenditure levels are due to the resourcefulness of some of our researchers, sourcing and employing counterpart funds as well as exploiting synergies at the departmental level, in an attempt to preserve the grant funding for critical research activities at a later stage in the project cycle.

#### Project Disbursement and Expenditure<sup>7</sup>

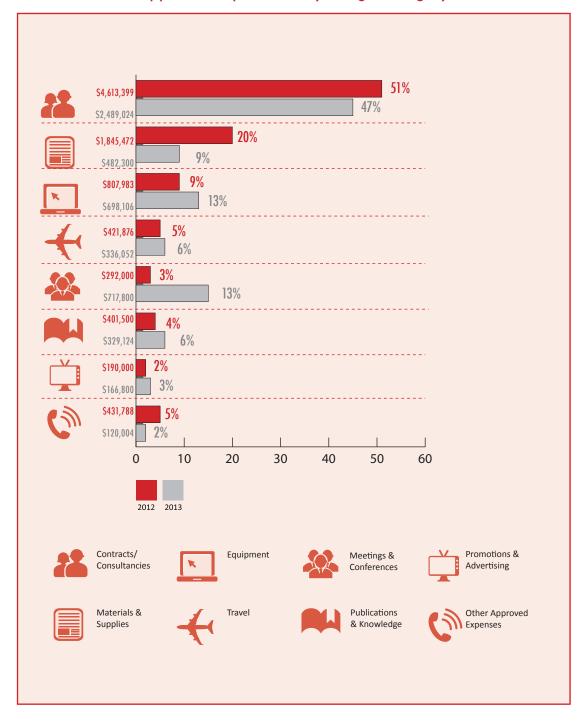
PROJECT	APPROVED	DISBURSED	% DISBURSED	SPENT	%SPENT
G. Seepersad - Citrus Ind in T&T	\$600,000	\$600,000	100%	\$596,879	99%
P.Umaharan - Comp. of Cocoa Sector	\$1,500,000	\$591,210	39%	\$447,439	30%
B. Braithwaite - Heritage Lang T&T	\$249,768	\$103,768	42%	\$85,583	34%
A. Mohammed - Heritage East POS	\$800,000	\$800,000	100%	\$658,590	82%
T. Bastick - Trial for Prisoners	\$999,396	\$306,778	31%	\$ 189,204	19%
C. Carrington - Spread of Dengue	\$800,000	\$471,000	59%	\$392,614	49%
C. Oura - Animal Infl. Viruses T&T	\$800,000	\$500,000	63%	\$332,038	42%
J. Agard -Econ value Caroni Swamp	\$954,854	\$604,962	63%	\$541,125	57%
D. Beckles - Guanapo Landfill	\$1,000,000	\$300,000	30%	\$245,402	25%
M. Bernard - AGRINETT	\$800,000	\$440,000	55%	\$327,243	41%
S. Celestine - At Risk Youth	\$500,000	\$400,000	80%	\$323,124	65%
P. Kissoon - School Dropouts in T&T	\$500,000	\$274,154	55%	\$269,577	54%
M.Wilson- Flood Risk & Climate chan	\$550,000	\$295,000	54%	\$74,370	14%
B. Carter - Lang & Competitiveness	\$500,000	\$254,500	51%	\$54,923	11%
G. Davis/N. Baboolal - Dementia T&T	\$550,000	\$550,000	100%	\$314,187	57%
G. Hutchinson -Partner Violence Svy	\$547,000	\$54,700	10%	\$0	0%
F. Yousef -Neurobehav Dev P/S Child	\$464,000	\$46,400	10%	\$3,864	1%
D. Sharma - Smart Grid Technology	\$500,000	\$196,500	39%	\$51,342	10%
J. Jayaraman et. al - Antibiotic Resistance	\$550,000	\$420,000	76%	\$279,264	51%
R. Clarke/N.Yukiov - Hearing Loss	\$330,000	\$33,000	10%	\$0	0%
D.Chadee -Crime Victimization T&T	\$549,600	\$479,960	87%	\$128,162	23%
E. Joseph - Volcanic Emissions	\$298,610	\$216,861	73%	\$164,462	55%
TOTAL	\$14,343,228	\$7,938,793	55%	\$5,479,393	38%

<sup>&</sup>lt;sup>7</sup>As of October 31st 2014

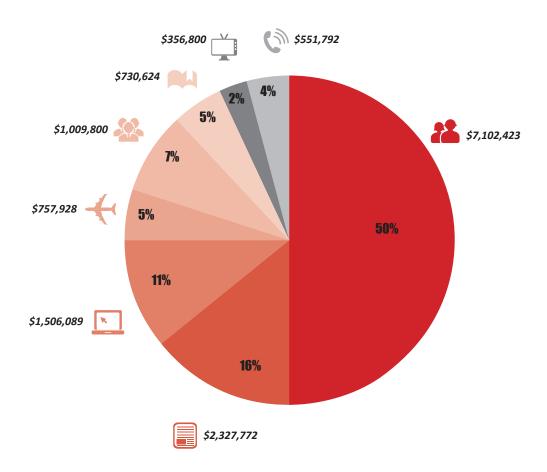
In examining the proposed expenditure approved by the TEC in the first two calls, the largest expense category across the projects has been Contracts and Consultancies (50%), followed by Materials and Supplies (16%) and Equipment (11%). The approved expenditure in the

remaining five categories averaged less than 10% each, across all the approved projects. Notably, there was a 10% increase in the expenditure approved for Meetings and Conferences in 2013 as compared to in 2012.

#### Approved expenditure by budget category



#### Total approved expenditure by budget category



The Secretariat will continue to monitor disbursement and expenditure levels. The experiences gained in monitoring and executing the projects currently in implementation will provide valuable guidance on budgeting for projects approved in future calls. Capacity building amongst UWI

researchers in the application of project management principles to research projects should also address some of the mobilization issues so that these can be more easily overcome in future calls.





# KNOWLEDGE MOBILIZATION AND STAKEHOLDER ENGAGEMENT

The RDI Fund encourages projects to 'plan for impact' by embedding this approach throughout all stages of the research process and 'to mobilize knowledge for development' by directly engaging key stakeholders and widely disseminating research findings and outputs. By emphasizing this approach, multi-disciplinary research teams are encouraged to establish connections between university research, knowledge users and decision makers so that research can have measurable impact.

Given the non-linear and diffuse process for achieving knowledge transfer and uptake, and the fact that many projects are still in early stages of execution, it is too early to ascertain the full impact of all the Fund's approved projects. However, several notable achievements have already been reported by the projects approved in 2012 and 2013 currently in implementation:

- PG Training and Knowledge transfer: More than 66 graduate students have already benefitted from training and research experience as part of RDI Fund project teams.
- Knowledge Mobilization: Collectively, more than 19 conference presentations, 1 public policy paper, 7 MSc. theses and 7 peer reviewed publications have been produced thus far.
- Stakeholder Engagement: Stakeholder consultations are ongoing with most of the projects, with more than 20 events hosted to date. Some projects have already held training workshops and/or conferences to share key findings and facilitate knowledge uptake.

#### Stakeholder Engagement Events Hosted by RDI Fund Projects

#### Aug 2012

Stakeholder sensitization workshop. Built & Cultural Heritage in EPOS

#### Dec 2012

Official Launching Ceremony and Stakeholder Consultation. Re-development of a Competitive Citrus Industry

#### March 2013

**Guanapo Landfill** 

Stakeholder meeting - Launch of Project.

Impact of Contaminants from

#### June 2013

Stakeholder Conference. Youth at Risk



#### June 2014

Stakeholder Meeting.
Impact of
Contaminants from
Guanapo Landfill

#### May 2014

Training Workshop
- Cocoa Disease
Management:
Understanding,
Managing and
Preventing the Spread
of Cocoa Diseases.
Leveraging the
International Cocoa
Gene Bank to Improve
Competitiveness

#### May 2014

Smart Grid Stakeholder Meeting. Smart Grid Technology

#### April 2014

Tobago Stakeholder Consultation. Crime Victimization & Fear of Crime



TTMA Workshop.

Language and

Competitiveness

#### October 2014

Launch of AgriExpenseT T App for World Food Day. AGRINETT



#### November 2014

Public Lecture/Forum on Development of Trinidad & Tobago's Smart Grid. Smart Grid Technology

#### October 2013

UWI Research Expo Mini-Workshop: Smart Grid Technology. Smart Grid Technology

#### October 2013

UWI Research Expo Mini-Workshop: Targeting Dementia. **Mitigating Dementia** 

#### October 2013

UWI Research Expo Mini-Workshop: Chinese Business Etiquette. Language and Competitiveness

#### October 2013

UWI Research Expo Mini-Workshop: Deaf Sign Language: An Introduction To Signing. Heritage Language Documentation & Digital Development



#### March 2014

Stakeholder sensitization workshop. Built & Cultural Heritage in EPOS

#### February 2014

2<sup>nd</sup> Agriculture Open Data Workshop - End Users and Software Developers. AGRINETT

#### February 2014

Trinidad Stakeholder Consultation. Crime Victimization & Fear of Crime

#### November 2013

1<sup>st</sup> Agriculture Open Data Workshop -Data Providers. **AGRINETT** 



A sample of these events is collated in Appendix 2. RDI Fund project teams have conducted activities, including surveys, sampling and training, in more than **200** communities throughout Trinidad and Tobago. More detail on the geographic spread of RDI Fund projects is included in Appendix 3.

Partnerships & Collaborations: These RDI Fund projects have led to new/strengthened collaborations with more than **56** local, regional and international partners. Some of these have led to formal MOUs with The University of the West Indies, St Augustine Campus. These institutions include other tertiary education institutions, government agencies, development agencies, private sector organizations, non-governmental organizations and civil society groups, among others. A list of some of the partners is included in Appendix 2.

• External Funding: Most notably, these projects attracted more than TT\$25 million in counterpart funding from various local, regional and international funding partners. They have also received in-kind contributions valued at more than TT\$3.3 million in the form of transportation to project sites, videography, data, as well as the supply of reagents and equipment. Additionally, project teams have been able to leverage their project experiences and successes to attract external funding for new projects.

As some of the projects approved during the 1st and 2nd CfPs come to a close, significant effort will be placed on supporting the project teams with knowledge transfer and uptake and conducting more in-depth analysis of project outputs, outcomes and impacts.

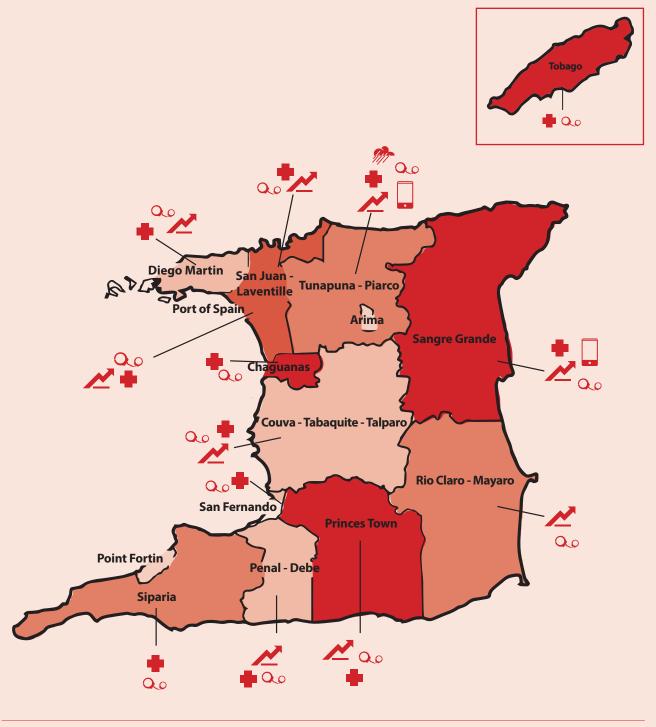
#### Partners and collaborators

The Government of the Republic of Trinidad and Tobago (GORTT), the Water and Sewerage Authority (WASA), the Water Resources Agency (WRA), the Trinidad and Tobago Solid Waste Management Company (SWMCOL), the Caribbean Institute of Meteorology and Hydrology (CIMH), Guanapo Community and Environmental Development Organisation (GCEDO), University of Hamburg (Germany), City University of New York (USA), Stanford University (USA), Mars (USA and Europe), United States Department of Agriculture, the World Cocoa Foundation, The Brazilian Agricultural Research Corporation (EMPRAPA), University of Texas Medical Branch (USA), University of Stanford (USA), Kings College (UK), United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), Swansea University (UK), the J. Craig Venter Institute (USA), the Center for Disease Control and Prevention (USA), Citizens for Conservation, the Organization of American States (OAS), the Trinidad and Tobago Chamber of Industry and Commerce, Families in Action, Trinidad and Tobago Unified Teachers Association, The Ministry of Education, The Ministry of Finance, The Ministry of National Security, the Ministry of Food Production, The Ministry of Health, The Ministry of Energy and Energy Affairs, the Ministry of Foreign Affairs, the Trinidad and Tobago Manufacturers Association (TTMA), the Embassy of the People's Republic of China, the Urban Development Company of Trinidad and Tobago (UDeCOTT), the Livestock and Livestock Products Board, the Poultry Association of Trinidad and Tobago, the Trinidad Layers Association, the Poultry Surveillance Unit, the Animal Health Veterinary Laboratory Agency (UK), the Point-a-Pierre Wild Fowl Trust, Trinidad and Tobago Electricity Commission (T&TEC), Power Generation Company of Trinidad and Tobago (POWERGEN), the Telecommunications Authority of Trinidad and Tobago, Nvidia Corporation (USA), the Trinidad and Tobago Police Service, Soufriere Regional Development Foundation (Saint Lucia), National Emergency Management Organisation (Saint Lucia), Montserrat Volcano Observatory (MVO), Women's Institute for Alternative Development (WINAD), National Institute of Higher Education, Research, Science and Technology (NIHERST), Office of Disaster Preparedness and Management, National Infrastructure Development Company (NIDCO), Trinidad and Tobago Network Information Centre, the Central Statistical Office (CSO), the Environmental Management Authority (EMA),

the National Parent Teacher Association



## Geographic Reach of RDI Fund Projects



Climate Change and Environmental



Crime, Violence Citizen Security

Economic Diversification and Sector Competitiveness



Finance Entrepreneurship



Public Health

Technology and Society: Enhancing Competitiveness, Social and Cultural Well-being











# PATHWAY TO IMPACT -PROJECT HIGHLIGHTS

#### **Defining Impact**

The Research and Development Impact Fund, as the name suggests, is not simply a 'research' fund. Equally important, it is a **research impact** and **development impact** fund. The RDI Fund seeks to place knowledge mobilization, community engagement and development impact squarely at the centre of The UWI St Augustine Campus' research enterprise.

**Research impact**, as defined by the Australian Research Council is "the demonstrable contribution that research makes to the economy, society, culture, national security, public policy or services, health, the environment, or quality of life, beyond contributions to academia"<sup>8</sup>.

Project teams engaged in RDI Fund projects are encouraged to strategize for impact from the inception of the project as opposed to waiting until the completion of the project's research activities and hoping for impact. This strategic approach involves the identification of a 'pathway to impact' leading from research activities to outputs to outcomes to impacts.

**Activity:** Actions taken or work performed through which inputs, such as funds, technical assistance and other types of resources are mobilized to produce specific outputs<sup>9</sup>.

**Output:** The products, capital goods and services which result from an activity<sup>10</sup>.

**Outcome:** The observable short-term and medium-term effects of the outputs on beneficiaries<sup>11</sup>.

**Impact:** The results of a project which affect the big picture issues, problems, or challenges that it was designed to ameliorate and which are attributable to its activities. Impacts may be positive and negative, primary and secondary long-term effects produced directly or indirectly, intended or unintended <sup>12</sup>.

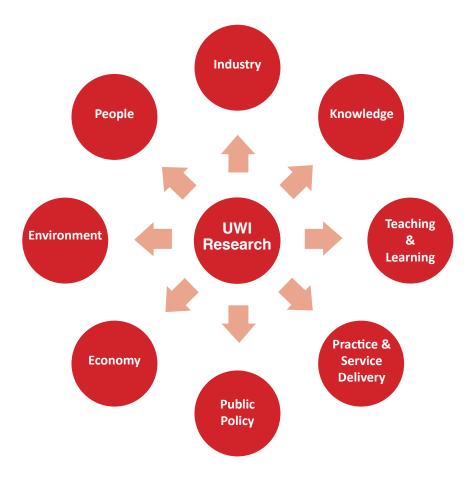
<sup>8</sup> Australian Research Council Annual Report 2012-2013

<sup>9</sup> World Bank Definition

<sup>10</sup> Ibid

<sup>11</sup> Ibio

<sup>12</sup> Adapted World Bank, OECD and EC Definition



By outlining these connections at the start and during the execution of the project, the project teams are incentivized to be more receptive and flexible in designing research methodologies and adopting project objectives that are responsive to the particular development needs of their respective stakeholder communities. This proactive approach increases the chances of projects having lasting measurable impact in the society.

#### **Facilitating Impact**

Research on its own does not bring about Impact... people do! The Fund and its projects need to:

- Connect evidence and data to key decision makers and potential beneficiaries,
- Increase access to knowledge produced by research projects,

- Expand the range of knowledge products by synthesizing and re-packaging, and
- Facilitate translation of knowledge into action by targeting end-users.

Stimulating development impact is about bridging knowledge-sharing gaps. The RDI Fund is an important catalyst in this process through its facilitation of:

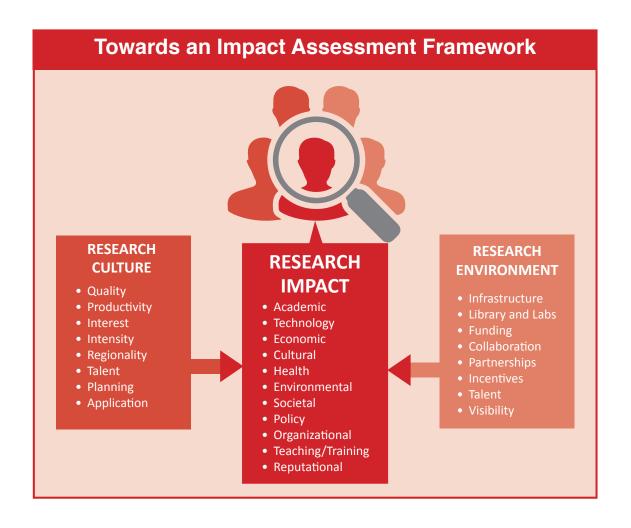
- Targeted Funding
- Stakeholder Engagement
- · Facilitating Partnerships and Collaborations
- · Project Monitoring and Evaluation
- Knowledge Mobilization



#### **Assessing Impact**

As projects come to a close and the Fund considers the independent evaluation of the impact of the projects funded, a working framework for impact assessment within the unique context of Trinidad and Tobago and the wider Caribbean region must be developed. The skeleton of this framework hinges upon the connections between the elements of research culture and research environment which can either accelerate or impede research impact.

Bearing in mind that the Fund operates within an existing University structure, the insights gained from the execution of the projects in the Fund's portfolio must be taken into account at the Campus and University levels to improve the processes and procedures which determine the research culture and environment in order to achieve meaningful impact.



#### Early Highlights

The RDI Fund supports projects designed to have impact in the short to medium term (3-5 years). Since the Fund was only established 2 years ago, it is still quite early and thus difficult to identify the impacts accruing to the projects funded. However, even at this early stage, tangible

research and development impacts are already being realized. To illustrate these impacts, a few case studies are presented. Details on some of the early successes of the projects funded are included in Appendix 1.

#### **Influencing Policy**



Launch of the
Youth At Risk Project
at the Trinidad and Tobago
Chamber of Commerce

The **Youth At Risk project**, led by Dr. Sandra Celestine, sought to test the use of a multi-modal approach to therapeutic counselling to address youth misbehavior and school crime and violence. The project team found that there is a strong relationship between community violence, community trauma and increased high risk behavior in children. By targeting at risk students in hot spot communities and using a mix of individual, family and peer group counselling, the project was able to demonstrate a successful short term intervention method which brought about positive change in the youth and their families. The incorporation of music therapy in the interventions also proved to be very successful and insightful.

The project's early results were quite encouraging, with 40% of students who participated in the intervention reporting improved behavior. The team was also able to identify the specific issues causing a student to misbehave in over 95% of the cohort involved in the intervention. Initial data clearly shows that in order to eradicate

student misbehavior and school violence, successful interventions must include counselling for both the child at risk, as well as their family. The team also found that peer counselling produced faster results than individual counselling.

This project was able to garner strong and active support from numerous stakeholders. Collaborators on this project included the Ministry of Education, the Trinidad and Tobago Chamber of Commerce, Families in Action, the Ministry of National Security, the Ministry of National Diversity and Social Integration, the National Parent Teacher Association, the Trinidad and Tobago Unified Teacher's Association, the United Nations Development Programme, British Petroleum and Republic Bank. This team organized and sponsored a conference held in June 2013 to present the findings of a public policy paper developed out of the work conducted during this project.

In April 2013, the Ministry of Education announced that the Cabinet of the GORTT had taken a decision to commit \$90.7 million over three years to hire 500 specialist staff, inclusive of clinical psychologists and social workers, to address behavioural issues among schoolchildren.

http://www.trinidadexpress.com/news/Cabinet-okays-90m-to-tackle-school-bullying-202791721.html

#### **Attracting Investment**



Cocoa Research Centre display at the UWI Research Expo 2013 The research activities being conducted by the Cocoa Research Centre (CRC) as part of its RDI Fund grant are already attracting significant international attention. This has allowed this project to emerge as a star among the projects funded by the RDI Fund in terms of attracting counterpart funding to support the research mandate of the CRC.

In 2012, the CRC proposed to leverage the genetic resources of the over 2200 varieties of cocoa held in the International Cocoa Genebank to transform the CRC into a world renowned research centre. The destiny of the CRC is very intricately woven into the RDI Fund project as the project is engineered to stimulate research in the functional research groups of the Centre: Conservation, Genomics, Pathology, Quality, Agronomy, Form and Function and Value Addition.

The overall goal of the project is to understand the genetic control and the identifying markers for various functional traits of cocoa including yield, pod characteristics, disease resistance, cadmium

bioaccumulation, rooting characteristics and flavor. Ready access to the largest collection of cocoa varieties in the world presents a significant comparative advantage in the performance of these genomic studies. Many major global players are taking note of this and are coming onboard to support the CRC's research mandate.

Based on the early research successes of the project, the EU/ACP has committed € 2.6 million to establish the International Fine Cocoa Innovation Centre. The Centre will seek to seed innovations along the entire cocoa value chain based on CRC's research output and international best practices. Through this Centre, the CRC will provide training on all aspects of the value chain, serve as a pilot demonstration facility for showcasing best practices, and provide a range of technology and business services which will include traceability, certification, incubation and other technology services. This three year project commenced in March 2014.

The CRC was also able to leverage on its early results on cadmium bioaccumulation to secure €500,000 in funding from ECA/CAOBISCO/FCC for a 5 year project on mitigation of cadmium in cocoa. The project was initiated in June 2014 and has already garnered interest throughout the Caribbean and Latin America, due to the implications of cadmium bioaccumulation in cocoa as a food safety issue and the potential effects it can have on cocoa exports from these regions to the lucrative European market.

The MARS chocolate company is also funding a joint cocoa genome sequencing project, where the CRC/UWI has partnered with Stanford University in the US. This project has received US\$200,000 in funding and, upon its completion, will position cocoa at the forefront of genomics with the most accumulated genomic information for any crop. The USDA has also provided US\$120,000 in funding to the CRC to conduct additional genomic studies to map genes for self-incompatibility, a trait that adversely affects cocoa yield.

Based on the fermentation research activities in the CRC's RDI Fund project, the CRC has also launched a chocolate bar which has been widely acclaimed as a top bar. The bar is currently being rebranded in collaboration with Woodblock Chocolate based in the USA and will be launched in Oregon USA as a conservation bar to be sold at US\$100 per bar. All proceeds from the sale of the Trinidad Fundare bar will contribute to the maintenance and sustainability of the International Cocoa Genebank's "living library" of cacao.

http://www.candyindustry.com/articles/86526-woodblock-chocolate-to-produce-100-chocolate-bar



#### **Creating Entrepreneurial Solutions**



"Trinidad is doing it well. Tried the app as I'm new to farming and helps out a lot."

Robert Lander
Posted October 22, 2014. Google Play Store.

The AgriNeTT project aims to empower the agriculture sector through the use of ICT, especially by developing mobile applications (apps) that assist farmers and policy makers. This project has been keenly supported by key stakeholders, particularly the Ministry of Food Production, the National Agricultural Marketing and Development Corporation (NAMDEVCO), the National Food Crop Farmers Association and the Trinidad and Tobago Network Information Centre. The project's partnership with the Ministry and NAMDEVCO led to the signing of a formal MoU in February 2014.

In October 2014, the project team launched its first mobile app, *AgriExpenseTT*, available for Android phones free of charge from the Google Play Store. This app is a handy tool which allows farmers to record crop expenses on the go, and monitor cost of production per unit harvested. The app eases some of the burdens of record keeping, making it faster, easier and more easily accessible. The ability to keep better and more current records will help farmers make more informed

decisions regarding the selling price of their produce. It can also prove to be useful when applying for loans and/ or subsidies.

The launch of the app was widely reported on and generated a lot of interest among both the agriculture and technology community in the country and throughout the region. Persons have already begun downloading the app, with over 100 downloads noted already and the reviews have been positive.

#### https://play.google.com/store/apps/details?id=uwi.dcit.AgriExpenseTT

In the course of app development, the project team recognized that the data required to inform policies are either unavailable or available in small pockets, mainly through surveys. To address this issue, the project team developed an Open Data Repository. This repository would house agriculture data on a national level including farm level production data, commodity prices and volumes, farm land spatial data, soils, weather, and pest and diseases tracking data. By creating this open access platform, the project hopes to encourage local developers to build applications, including mobile apps, which are useful to the national community.

http://data.tt and http://maps.tt

#### **Documenting Impact**

Upon completion, projects are required to submit a completion report and project leads participate in an exit interview. Project leads may also be required to submit annual impact reports, up to a period of 5 years post project completion. All completed projects will be required

to participate in independent impact evaluation exercises at the request of the Fund. All of these processes will aid in the identification and documentation of the impact of the projects funded and inform the Fund's decision making to ensure it remains true to its founding philosophy and mandate.





# CONNECTING WITH OUR STAKEHOLDERS

An important part of the execution of the projects and the mandate of the Fund is communication of the research activities and findings as well as the outputs, outcomes and impact of the projects funded. By generating greater awareness of the relevance and impact of the research being undertaken under the auspices of the Fund, the opportunities for transmission of knowledge generated and the subsequent utilization by beneficiaries and stakeholders multiply.

Many channels have been utilized to increase the visibility of the RDI Fund projects in the wider public domain: project websites, social media presence, morning TV show appearances, youtube, online news items, features in UWI publications, and articles in the Express *Research in Action Series* and other print media. A detailed listing of media mentions is included in Appendix 5.

By showcasing the quality and diversity of research being undertaken at The UWI St Augustine Campus through the lens of impact, the institution can begin to address a frequently posed question from the public and taxpayers: "What is The UWI doing and how does it affect me?"

An aggressive and multipronged communications strategy to disseminate information on the projects in progress and the activities of the Fund will help to:

- deepen the understanding of research impact tools and techniques;
- aid in the mobilization of research for development;
- strengthen linkages and stimulate opportunities for future engagement, collaboration, funding and partnerships;
- identify and exploit synergies; and
- encourage more researchers and students to engage in research.

#### **Project Websites**

#### Prof. Agard

Evaluation of the Economic Value of Caroni Swamp: Implications of Climate Change using the UNEP TEEB protocol

http://caroniswamprdi.org/



Dr. Baboolal and Dr. Davis

Mitigating the Dementia Tsunami in Trinidad and Tobago

http://www.dartt.org.tt/



Dr. Bernard

AgriNett, An Agriculture Knowledge ePortal: Research on Intelligent Decision Support for enhancing Crop and Livestock Enterprise Management

http://sta.uwi.edu/agrinett/



Dr. Brathwaite

Documentation and Digital Development of Heritage Languages in Trinidad and Tobago

http://languageblag.com/



Dr. Mohammed

Understanding Built and Cultural Heritage in East Port-of-Spain

http://bluespacecaribbean.com/ projects-main/rdifund-project/



Dr. Sharma

Capacity Building and Research on Smart Grid Technology in the Caribbean Region

http://smartgrid.tt



Prof. Umaharan

Leveraging the International Cocoa Gene Bank to Improve Competitiveness of the Cocoa Sector in the Caribbean, using modern genomics

http://sta.uwi.edu/cru/GORTT.asp



#### **Media Mentions**









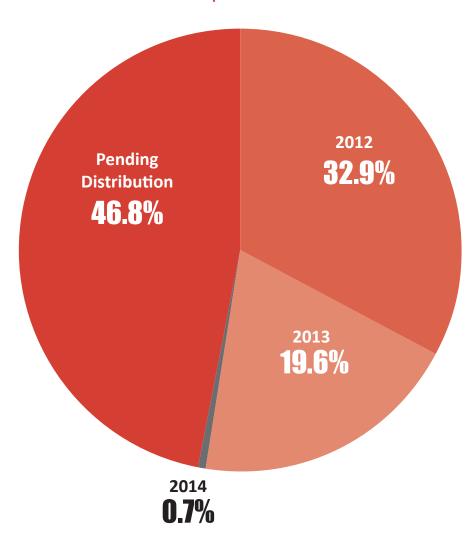


## **Our Finances**

The RDI Fund was operationalized with a balance of approximately TT\$22 million carried over from its predecessor, the Campus Research Scheme, as well as yearly subventions in the 2011/2012 and 2012/2013 academic years of approximately TT\$7 million each year. In 2013 the sole donor, the GORTT, took a decision to redirect the funding committed to The UWI St Augustine Campus to a competitive national research funding

scheme, open to applications for funding from all national tertiary institutions. This scheme is to be managed by the Higher Education Research Agency (HERA). To date, this facility is yet to be operationalized. Moving forward, it is imperative for the Fund to engage in strategic fundraising efforts with a view to bringing additional donors on board to secure the financial sustainability of the Fund.

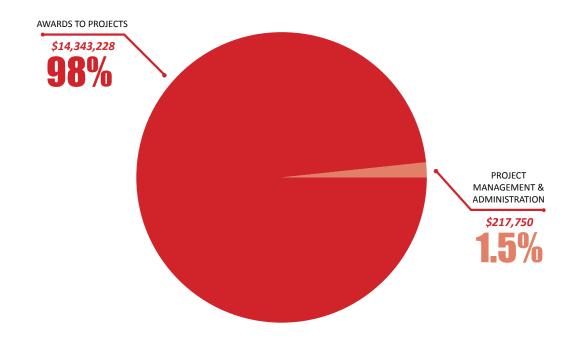
#### **Fund Capital Distribution**



Although the Operational Guidelines stipulate that 5% of the Fund's annual allocation will be dedicated to supporting the activities of the TEC and the Secretariat, this provision has been extremely underutilized thus far, with only 1.5% being used for administration and project management while the vast majority of the available funding, 98.5%, has been awarded as grants to projects.

With the financial standing of the Fund in mind, as well as the general economic and strategic environment, the TEC has taken a position that as much of the Fund's financial resources as possible will be dedicated to funding projects. It is expected, however, that at least some of the funds allocated will be used in future reporting periods for capacity building for researchers. As projects come to completion, some funding will also need to be dedicated to impact evaluation, communication and knowledge dissemination, mobilization and uptake.

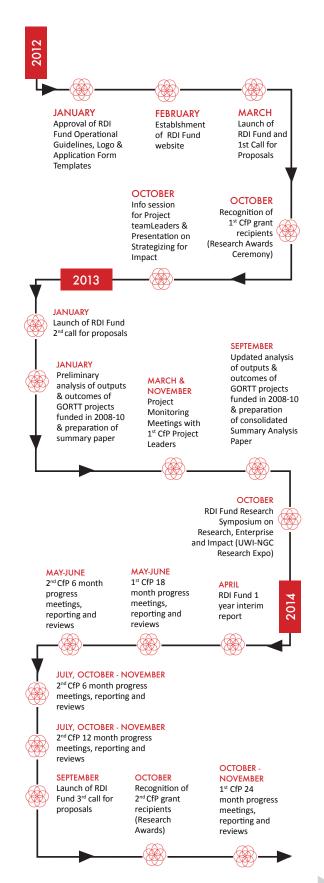
## **RDI Fund Expenditure**



# RDI Fund Work Programme 2012-2014: Documenting Progress

The RDI Fund has made considerable progress against the work programmes proposed in 2012, 2013 and 2014 by virtue of the activities undertaken by the Fund's TEC and Secretariat. In addition, demonstrable progress has also been made in fulfilling the three main objectives of the Fund, as itemized in the Fund's Operational Guidelines:

- To provide substantial grant funding to support multi-disciplinary projects under the 6 priority research areas of The UWI St. Augustine Campus.
- To support projects which will achieve recognizable and substantive impact in the short and medium term (3-5 years). The projects will also be expected to clearly demonstrate the synergy between scholarly quality and impact on policy and practice, for the benefit of communities in Trinidad and Tobago and the wider Caribbean.
- To focus on research-directed action, thereby placing knowledge transfer and the development effectiveness of research funding at the centre of UWI's research enterprise at St. Augustine.



## Status of 2012 Work Programme Activities

Approval of RDI Fund Operational Guidelines, Logo & Application Form Templates	January 2012
Establishment of RDI Fund Website	February 2012
Launch of RDI Fund and 1st Call for Proposals	March 2012
Management of Call for Proposals Cycle	April – August 2012
Development of project monitoring tools and templates	May 2012 - present
Recognition of 1st CfP grant recipients (Research Awards Ceremony)	October 2012
Info Session for Project Team Leaders & Presentation on Strategizing for Impact	October 2012
Development of RDI Fund online project management toolkit	October 2012
e-Photo Library for RDI Fund projects	October 2012 – present
Collaboration with CITS to develop website template for projects	November 2012 - January 2013
Collaboration with M&C to develop promotional support tactics for RDI Fund projects	October 2012 – present
Development of schedule for the 2nd Call for Proposals & template/Website updates	December 2012
Compilation of Project Update Reports for projects previously funded by the GORTT grant	November – December 2012

## Status of 2013 Work Programme Activities

Launch of RDI Fund 2 <sup>nd</sup> Call for Proposals	January 2013	
Development of a Communications Strategy for the RDI Fund	January 2013	
Compilation of Project Update Reports for projects previously funded by the GORTT grant	January – May 2013	
Preliminary analysis of outputs and outcomes of GORTT projects funded in 2008-10 & Preparation of Summary Paper	January 2013	
lanagement of Call for Proposals Cycle February – July 2013		
Project Monitoring Meetings with 1st CfP Project Leaders  March & November 201		
Review of 1st Cfp progress reports submitted March & November 201		
ganization of Research Symposium as part of the UWI Research Expo  April – October 2013		
Development of FAQs for RDI Fund Website	d Website May 2013	
Resolution of issues with ethics approvals process	vals process May – September 2013	
ated analysis of outputs and outcomes of GORTT projects funded in 2008-10 September 2013 eparation of Consolidated Summary Analysis Paper		
RDI Fund Research Symposium on Research, Enterprise and Impact (UWI-NGC Research Expo)  October 2013		
Prepare first annual report	Incomplete	

## Status of 2014 Work Programme Activities

RDI Fund 1 year interim report	April 2014
1st CfP 18 month Progress Meetings, Reporting and Reviews	May - June 2014
2nd CfP 6 month Progress Meetings, Reporting and Reviews	May - June 2014
2nd CfP 12 month Progress Meetings, Reporting and Reviews	July, October – November 2014
RDI Fund 3rd CfP Rollout Preparation August 2014	
Review and Amend Operational Guidelines	July – September 2014
RDI Fund 3rd Call for Proposals – Management of Cycle	September – December 2014
Development of RDI Fund Brochure	September – December 2014
Preparation of RDI Fund Annual Report September – December	
Recognition of grant recipients (Research Awards Ceremony)  October 2014	
1st CfP 24 month Progress Meetings, Reporting and Reviews  October – November 201-	
Development of Research Briefs – design and content ongoing	
Secretariat support for project execution	ongoing
Website Updates and Maintenance	ongoing
e-Photo Library for RDI Fund projects ongoing	
Update of Online RDI Fund Project Management Toolkit	ongoing
Development of Project Monitoring and Evaluation Systems ongoing	
Collaboration with M&C to develop promotional support tactics for RDI Fund	angoing
projects	ongoing
Strategic Fundraising	ongoing
Strategizing research commercialization (compiling lessons learnt)	Non-starter
Informing policy on research impact through commissioned studies	Non-starter

## Looking Ahead - RDI Fund Priorities in 2015

The RDI Fund will seek to build on the significant advances made in the first two years of its existence by focusing on improving its processes and procedures, particularly in the areas of monitoring and evaluation, capacity building, information dissemination and knowledge mobilization.

The RDI Fund's work programme in 2015 will be centered on the following objectives:

- i. Financial Sustainability To actively engage in strategic fundraising with key donor organizations with a view to broadening the resource base of the Fund and enhancing the sustainability of the RDI Fund for future Calls for Proposals.
- ii. Project Monitoring & Evaluation (M&E) To monitor the execution of approved projects (via the timely submission of progress reports and meetings with project teams, where necessary) and to ensure that agreed project deliverables and milestones are met.
- **iii. Support for Project Execution** To provide technical and administrative assistance and guidance to project teams during the execution phase with a view to reducing the administrative burden on research teams and facilitating project execution.
- iv. Strengthening linkages between research and development impact To develop and execute a strategy for:
  - a. information dissemination on RDI project research outputs and outcomes;
  - b. knowledge mobilization to increase opportunities for knowledge uptake that are critical to ensuring development impact;
  - c. increased visibility and awareness of the RDI Fund as a model for supporting targeted research linked to national and regional development priorities;
  - d. project and programme evaluation with a focus on impacts; and
  - e. facilitating capacity building for researchers, particularly in the areas of research project management, planning for impact, and knowledge mobilization strategies.
- v. Strengthening the Fund's Operational and Governance Framework To revisit and update the Operational Guidelines with the aim of strengthening efficiency, accountability and transparency based on the experience gained from managing three Calls for Proposals and closely monitoring project execution. A framework for capturing and assessing the diverse range of impacts from RDI Fund projects would need to be developed and approved by the Technical Evaluation Committee as this would guide the evaluation of completed projects.
- vi. Strategizing Research Commercialization To work with project teams to compile lessons learnt from execution of RDI Fund projects, which would be useful for developing Campus and University processes that support the commercialization of research.
- vii. Call for Proposals (CfPs) To efficiently manage CfPs and the processes related to the evaluation and approval of new projects, as well as provide project management support for the projects in execution.
- viii. Informing Policy on Research Impact To strengthen the policy agenda on 'research for development' in Trinidad and Tobago and the Caribbean through evidence based studies that inform the university and our key stakeholders on relevant issues related to research, impact and the pathways for strengthening research uptake and stakeholder engagement.





## APPENDICES

## Appendix 1. Approved Project Profiles

## Projects Approved during the 1st Call for Proposals

Project Title	The Economic Value of the Caroni Swamp using the UNEP-TEEB protocol: implications of Climate Change
Name of Project Team Leader	Professor John Agard
Faculty and Department	Faculty of Science & Technology, Department of Life Sciences
Date on Letter of Approval	September 3, 2012
Scheduled End Date	September 2, 2015
Project Objective	To perform an economic evaluation of Caroni Swamp using the Total Economic Valuation (TEV) system adopted in the UNEP's "The Economics of Ecosystems and Biodiversity" (TEEB) global initiative.
Anticipated Impacts	<ul> <li>Provide one of the first comprehensive attempts to assign an economic value to the biodiversity and ecosystem goods and services provided to the national community by a model ecosystem, the Caroni Swamp.</li> <li>Provide a model for mainstreaming ecosystem valuation in Trinidad and Tobago.</li> <li>Address an information gap that is relevant to the National Climate Change Policy (2011), with respect to the value of potential losses of ecological goods and services and sustainable livelihoods, due to climate change.</li> <li>Provide key information for assessing the scale of investments required for national adaptation strategies to climate change, and for assessing the economic viability of competing adaptation strategies.</li> <li>Provide key technical support to the Government to develop ecological baselines, management plans and monitoring protocols for the Caroni Swamp protected area in anticipation of work currently being planned by the Ministry of Housing and the Environment, with regard to the implementation of the National Protected Areas Policy (2011).</li> </ul>
Achievements to date	<ul> <li>Contracted by the EMA to conduct wildlife surveys in Trinidad, based on initial findings and methods development from this project. The THA has since requested a similar exercise be conducted in Tobago.</li> <li>Provided technical advice for the following national policy documents:         <ul> <li>Planning and Facilitation of Development Bill 2013;</li> <li>National Spatial Development Strategy for Trinidad and Tobago.</li> </ul> </li> <li>Invited to present and advise on incorporating ecosystem valuation into national accounting systems by the Minister of Finance.</li> </ul>
Total Approved RDIF Funding (TT\$)	\$954,854

Project Title	A multi-centre phase 3 cluster randomized controlled trial of a manualized anger management intervention for prisoners at risk for uncontrolled anger and aggression.
Name of Project Team Leader	Dr. Tony Bastick
Faculty and Department	Faculty of Medical Sciences  Department of Clinical Medical Sciences
Date on Letter of Approval	October 1, 2012
Scheduled End Date	August 31, 2015
Project Objective	To reduce public fear of crimes against the person and public fear of violent victimization against the person in Trinidad and Tobago.
Anticipated Impacts	<ul> <li>Reduce public fear of violent crimes against the person and fear of violent criminal victimisation against the person following dissemination of the programme's success.</li> <li>Spawn 'train-the-trainer' programmes spreading to the majority of prison officers.</li> <li>Reduce in-prison aggression and anger which will add to prisoner and staff safety, and increase prisoners' quality of life and improve prison officers' working conditions.</li> <li>Reduce violent crimes against the person, with corresponding justified reduction in public fear of such violent crimes.</li> <li>Provide opportunities for cost saving, up to 65% from not maintaining reoffenders, and further cost reductions resulting from maintaining a reduced prison population.</li> <li>Resultant positive community contributions from released prisoners due to continued anger management programmes and other integrative restorative inprison programmes based on routine education, psychological and psychiatric assessment of inmates' needs.</li> </ul>
Achievements to date	<ul> <li>Prison Service Management has indicated interest in continuing the intervention programme on a consultancy basis.</li> <li>Members of the Judiciary have taken note of the programme and at least 1 person has been referred to the anger management programme.</li> </ul>
Total Approved RDIF Funding (TT\$)	\$999,396

Project Title	The Impact of the contaminants produced by the Guanapo Landfill on the surrounding environment
Name of Project Team Leader	Dr. Denise Beckles
Faculty and Department	Faculty of Science & Technology, Department of Chemistry
Date on Letter of Approval	September 3, 2012
Scheduled End Date	September 2,2014
Project Objective	To assess the extent of contamination from the Guanapo Landfill to the air, water and soil, as well as identify the potential impacts of this contamination to ecological and human receptors. The results of this study will be used to guide recommendations to address the environmental and public health issues in the Guanapo district.
Anticipated Impacts	<ul> <li>Provide national stakeholders in the area of solid waste management with vital, current and accurate data concerning the level of contamination occurring around the Guanapo Landfill in Trinidad, and the likelihood of public health problems associated with this landfill.</li> <li>Predict the likely issues at the other major landfills in both Trinidad and Tobago using data generated from this project.</li> <li>Provide guidance for future policy and management decisions on solid waste disposal.</li> </ul>
Achievements to date	<ul> <li>Initial findings from this study are already informing changes in SWMCOL's landfill management policies and pollution mitigation strategies.</li> <li>Data from the project has enhanced WASA's modelling capabilities and has assisted them in determining if and how the water sources under its control have been impacted.</li> <li>Signed an MOU with CIMH.</li> <li>Several members of the community have been trained in environmental monitoring techniques.</li> <li>A spin-off project has been funded by the UNDP.</li> </ul>
Total Approved RDIF Funding (TT\$)	\$1,000,000

Project Title	AgriNeTT, An Agriculture Knowledge ePortal: Research on Intelligent Decision Support for Enhancing Crop and Livestock Enterprise Management
Name of Project Team Leader	Dr. Margaret Bernard
Faculty and Department	Faculty of Science and Technology, Department of Computing & Information Technology
Date on Letter of Approval	September 3, 2012
Scheduled End Date	March 2, 2015
Project Objective	To develop an e-agriculture Information System that can serve as a platform for solutions which will engender improved communication, efficiency and effectiveness of the Agriculture sector.
Anticipated Impacts	<ul> <li>Build a fully functioning agriculture information system which will be able to: <ul> <li>keep track of and expertly analyze farm level data;</li> <li>provide techniques to identify and control crop diseases;</li> <li>provide techniques to determine losses of assets due to natural disaster; and</li> <li>create an online farm management environment.</li> </ul> </li> <li>Improve productivity and cost efficiency in the agricultural sector and increase competitiveness and agribusiness opportunities.</li> <li>Reduce farmers' risk and uncertainty.</li> <li>Decrease food price inflation due to the streamlining of agricultural and agribusiness processes leading to more cost effective operations.</li> <li>Assist financing institutions to better understand farmers' financial needs in real time, enabling them to make funding more readily available.</li> </ul>
Achievements to date	<ul> <li>1 mobile app, AgriExpenseTT, successfully launched for android phones.</li> <li>Established an open data repository.</li> <li>Signed an MOU with the Ministry of Food Production and NAMDEVCO.</li> </ul>
Total Approved RDIF Funding (TT\$)	\$800,000

Project Title	Documentation and Promotion of Three Endangered Languages of Trinidad and Tobago
Name of Project Team Leader	Dr. Benjamin Braithwaite
Faculty and Department	Faculty of Humanities and Education, Department of Modern Languages and Linguistics
Date on Letter of Approval	September 3, 2012
Scheduled End Date	March 2, 2014 (PROJECT ON FINANCIAL HOLD)
Project Objective	To contribute to the documentation of three endangered languages, Trinidad & Tobago Patois, Trinidadian Bhojpuri, and Trinidad & Tobago Sign Language, before they disappear, and to raise public awareness of the status of the languages, their users, and the issues surrounding language death.
Anticipated Impacts	<ul> <li>Provide direction on how to meaningfully address language endangerment and other language issues.</li> <li>Transform public understanding and public perceptions of Trinidad &amp; Tobago Patois, Trinidadian Bhojpuri, and Trinidad &amp; Tobago Sign Language.</li> <li>Provide linguistic descriptions and language resources for TTSL including an online dictionary and teaching materials.</li> <li>Produce Smartphone apps to assist in interactions between hearing impaired persons and medical practitioners, and for learning Patois vocabulary.</li> <li>Attract a new generation of motivated students into the Linguistics programmes of The University of the West Indies.</li> <li>Generate interest in the new Undergraduate Diploma in Caribbean Sign Language Interpreting, and the two undergraduate French Lexicon Creole courses.</li> <li>Help to establish the International Centre for Caribbean Language Research (ICCLR) as an internationally recognised leader in the field of language documentation.</li> </ul>
Achievements to date	<ul> <li>New classes in Patois and TTSL on offer through CLL.</li> <li>Online dictionary for TTSL launched.</li> <li>Secured additional funding from USAID to facilitate TTSL interpreter training and augmenting the online dictionary.</li> </ul>
Total Approved RDIF Funding (TT\$)	\$249,768

Project Title	Use of next generation molecular and evolutionary epidemiology to strengthen surveillance and develop models to predict and prevent the spread of Dengue
Name of Project Team Leader	Prof. Christine Carrington
Faculty and Department	Faculty of Medical Sciences, Department of Preclinical Sciences
Date on Letter of Approval	September 3, 2012
Scheduled End Date	September 2, 2015
Project Objective	To facilitate improved dengue diagnostics and surveillance systems, and to develop models to predict and prevent the spread of dengue in T&T.
Anticipated Impacts	<ul> <li>Provide feedback and recommendations regarding the performance of dengue diagnostic testing at participating health institutions.</li> <li>Provide crucial insights into the emergence, dispersal and maintenance of dengue and thus impact on monitoring, surveillance and control of the virus.</li> <li>Generate maps of changing dengue virus evolution and spatiotemporal distribution which will allow for the identification of hotspots, understanding the factors underlying epidemic behaviour and making predictions about the behaviour for future outbreaks.</li> <li>Build capacity for infectious disease research.</li> <li>Build a publicly accessible database which will form the basis of an infectious disease database for Trinidad and Tobago.</li> </ul>
Achievements to date	<ul> <li>Evaluation and implementation of a novel DENV specific RTqPCR method that may have commercial applications.</li> <li>Draft database CaPSID ("Caribbean Portal for Sequences and Integrated metaData from viruses, their hosts and vectors") has been developed.</li> </ul>
Total Approved RDIF Funding (TT\$)	\$800,000

Project Title	Analysis of Intervention And Counseling For At Risk Youth To Reduce Crime, Violence And To Improve Outcomes For The Individual, The Schools, and The Family.
Name of Project Team Leader	Dr. Sandra Celestine
Faculty and Department	Faculty of Social Sciences, Department of Behavioural Sciences
Date on Letter of Approval	September 3, 2012
Scheduled End Date	September 2, 2013
Project Objective	To derive empirical data of successful counseling therapies for at risk secondary school students.
Anticipated Impacts	<ul> <li>Create a statistical database on at risk youth.</li> <li>Provide empirical evidence of the value of counseling to help at risk youth.</li> <li>Policymakers can use the study to create a better policy framework for at-risk youth.</li> <li>Improve the lives of youths taking part in study. The counselling services provided during the study will assist at risk youth to improve their negative behaviors and perform better in school and society.</li> <li>Improve Trinidad's business climate indirectly. Although the scope and funding of the program will not allow us to track and measure these outcomes, it is clearly arguable that improvements in student performance and reductions in violence and crime will improve business investment climate, reduce capital outlay for security, increase the pool of available workers and thereby increase domestic investment.</li> </ul>
Achievements to date	<ul> <li>Influenced policy in the Ministry of Education, which has committed to spending \$90 Million over a 3 year period to hire 500 specialist staff to address behavioural issues among school children.</li> <li>Collaborative team continues to support interventions in 2 schools, led by Families in Action.</li> </ul>
Total Approved RDIF Funding (TT\$)	\$500,000

Project Title	Leveraging built and cultural heritage for economic development in East Port of Spain
Name of Project Team Leader	Dr. Asad Mohammed
Faculty and Department	Faculty of Engineering, Department of Geomatics Engineering and Land Management
Date on Letter of Approval	September 3, 2012
Scheduled End Date	March 31, 2015
Project Objective	To facilitate the implementation of the GORTT Heritage City Growth Pole Initiative (HCGPI) in East Port of Spain by improving the understanding of the built and cultural Heritage in the area in order to leverage these assets for economic development.
Anticipated Impacts	<ul> <li>Create an innovation model to provide the way forward for leveraging economic development from the built and cultural heritage assets.</li> <li>Refine the methodologies for working in depressed inner city areas to facilitate successful outcomes for proposed development infrastructural projects.</li> <li>The proposed IDB and GORTT infrastructural works.</li> <li>Improve the lives of the residents of EPOS by facilitating sustainable and transformational economic development built around their built and cultural assets by providing a greater understanding of the history and contributions of the EPOS area, engendering a sense of pride in the community and creating a different perception of the area rather than as a hotspot for crime and criminality.</li> <li>Provide a well-researched and tested model for inner-city redevelopment utilizing cultural and creative industries that can possibly be replicated in other Caribbean Cities.</li> </ul>
Achievements to date	<ul> <li>Completed and screened a documentary (The City on the Hill: Laventille) at CUF 2014 in Barbados.</li> <li>Created a map detailing Heritage sites in Belmont, Picadilly and Laventille.</li> <li>Created a database of over 200 maps and scans of Trinidad including 20 maps of the study area, dating as early as 1700.</li> </ul>
Total Approved RDIF Funding (TT\$)	\$800,000

Project Title	Identification of the reservoirs of animal influenza viruses in Trinidad and Tobago
Name of Project Team Leader	Dr. Chris Oura
Faculty and Department	Faculty of Medical Sciences, Department of Basic Veterinary Sciences
Date on Letter of Approval	September 3, 2012
Scheduled End Date	September 2, 2015
Project Objective	To gain a better understanding of the animal reservoirs, the epidemiology and the risks associated for public and veterinary health of influenza in Trinidad and Tobago and to set up standardised techniques related to surveillance sampling and laboratory testing for animal Influenza viruses in T&T.
Anticipated Impacts	<ul> <li>Contribute to the prevention of lethal disease outbreaks in domestic poultry and disease affecting efficient swine production.</li> <li>Help prevent contacts between humans and infected birds/swine/poultry and reduce the risk of a pandemic influenza outbreak in humans.</li> <li>Improve understanding of the circulation of influenza viruses in different animal reservoirs in T&amp;T.</li> <li>Develop science-based risk assessments to aid in the successful prevention, management and control of future influenza outbreaks within the region.</li> <li>Improve the understanding of the epidemiology of other viral infections affecting animals in T&amp;T which have similar reservoirs.</li> <li>Improve diagnostic capacity and capability by ensuring that T&amp;T is able to respond rapidly to future outbreaks of animal Influenza viruses (and other veterinary viruses), using the latest suite of molecular and virological tests, through improved laboratory capacity and capability.</li> <li>Enable the setting up of a joint molecular diagnostic lab (shared between the Ministry and UWI) to rapidly detect all the viral pathogens of importance within the Caribbean region. This will help to forward the vision of The UWI (School of Veterinary Medicine) / The Ministry of Agriculture of setting up the first international reference laboratory for selected key diseases (including Influenza), in order to serve the diagnostic needs of T&amp;T and the wider Caribbean region.</li> </ul>
Achievements to date	<ul> <li>Established a diagnostic lab in collaboration with the Ministry of Agriculture.</li> <li>Able to secure funding for a spin off project funded by the EU-ACP.</li> </ul>
Total Approved RDIF Funding (TT\$)	\$800,000

Project Title	Towards Re-development of a Competitive Citrus Industry in Trinidad and Tobago and the Greater CARICOM Area
Name of Project Team Leader	Dr. Govind Seepersad
Faculty and Department	Faculty of Food and Agriculture, Department of Agricultural Economics and Extension
Date on Letter of Approval	September 3, 2012
Scheduled End Date	September 30, 2014
Project Objective	To develop and implement a new model for the sustainable development of the Citrus Industry in Trinidad and Tobago.
Anticipated Impacts	<ul> <li>Produce a new industry development plan and model for the re-construction of the Citrus Industry in Trinidad and Tobago. Once adopted, the benefits will make substantial contributions to food and nutritional security, income generation for rural households, stability to the economy in the countryside, foreign exchange savings and earnings and also bring back citrus production and processing at the forefront of the academic curriculum.</li> <li>Review the citrus industry policy portfolio and make recommendations for adoption by policy makers.</li> <li>Expand local agricultural production, food services and agro-processing base.</li> <li>Facilitate reverse substitution, taking back market space now occupied by imported fruits in the food consumption basket.</li> <li>Produce a manual, videos and other AV material documenting and disseminating Industry Best Practices.</li> <li>Develop training courses and online training material that can be used at the industry, technical and tertiary level institutions.</li> <li>Train Trainers in Trinidad and Tobago, and the wider CARICOM area.</li> <li>Develop a plan for a citrus research / production model towards implementation at UWI field stations.</li> </ul>
Achievements to date	<ul> <li>Established 8.5 acre high density citrus demonstration plot at The UWI South Campus (~2000 plants).</li> <li>Several Training videos completed/ near completion on citrus production technology in Brazil, Budding and Grafting, Production Techniques at the The UWI South Campus Demonstration Plot.</li> <li>Citrus Reference Book almost completed.</li> <li>Facilitated farmer and student field visits at the demonstration plot (7 farmers, 49 UWI students).</li> <li>Held two training workshops for secondary school teachers (100 participants).</li> </ul>
Total Approved RDIF Funding (TT\$)	\$600,000

Project Title	Leveraging the International Cocoa Gene Bank to Improve Competitiveness of the Cocoa Sector in the Caribbean, using modern genomics
Name of Project Team Leader	Prof. Pathmanathan Umaharan
Faculty and Department	Faculty of Food and Agriculture, Cocoa Research Unit
Date on Letter of Approval	October 1, 2012
Scheduled End Date	September 30, 2015
Project Objective	To improve the productivity and quality of cocoa through the development of genetic markers and agronomic strategies to improve the competitiveness of the local cocoa industry.
Anticipated Impacts	<ul> <li>Alleviate the effects of cadmium in cocoa.</li> <li>Safeguard the industry against climate change impacts.</li> <li>Improve the productivity and sustainability of cocoa production.</li> <li>Develop methodologies for improving yield and yield components and a breeding strategy to utilize the genetic variation available at the International Cocoa Genebank, Trinidad Accessions.</li> <li>Be the first to identify robust markers for selecting for resistance to two important cocoa diseases. The tools for genomic selection developed in this study can be immediately used in improving the prebreeding population held at the University Cocoa Research Station towards developing superior genotypes.</li> <li>Establish a competitive local value added industry by aiding access to more lucrative markets by facilitating branding and certification.</li> <li>Establish a library of novel flavour profiles yet to be exploited. The project also provides markers so that such unique profiles can be preserved in the national breeding programme, contributing to value addition locally and giving products produced here a competitive advantage.</li> <li>Establish a brand new health chocolate industry by establishing genotypes with high levels of such nutraceuticals.</li> <li>Facilitate the use of comparative genomics and functional genomics to identify candidate genes for all the various traits of cocoa. This provides an opportunity for CRU/UWI and Trinidad and Tobago to take centre stage in the development of this knowledge industry. There are considerable side benefits to be had with such development, such as the development of lucrative biotechnology industries in Trinidad and Tobago.</li> </ul>
Achievements to date	<ul> <li>Providing technical support for 52 partner famers throughout Trinidad.</li> <li>Manufacturing chocolate bars.</li> <li>Providing training opportunities in chocolate making, disease management, budding, value addition etc. throughout the Caribbean.</li> <li>Attracted significant grant funding from numerous partners to further the research</li> </ul>
Total Approved RDIF Funding (TT\$)	mandate of the CRC. \$1,500,000



## Projects Approved during the 2<sup>nd</sup> Call for Proposals

Project Title	Language and Competitiveness: Positioning T&T for Sustainable Development
Name of Project Team Leader	Dr. Beverly Anne Carter
Faculty and Department	Faculty of Humanities and Education, Centre for Language Learning
Date on Letter of Approval	May 22, 2013
Scheduled End Date	May 21, 2015
Project Objective	To enhance country/sector competitiveness and foster sustainable economic development by promoting language and intercultural competence in trade and education.
Anticipated Impacts	<ul> <li>Provide empirical baseline data to guide policy development in the area of language and competitiveness.</li> <li>Derive an economic valuation of language competencies in Trinidad and Tobago and demonstrated multiplier benefits (or costs) from (not) capitalizing on these language skills in terms of increasing trade opportunities and/or competitiveness.</li> <li>Raise awareness among SMEs about ways to enhance export marketing.</li> <li>Introduce and strengthen the concept of localization as a marketing strategy in the SME sector.</li> <li>Sensitize employers to the value of language skills and encourage them to rethink their recruitment and language management strategies.</li> <li>Create a linguistic map of the country.</li> <li>Influence policy change at the CSO to include a question on languages spoken at home other than English in future national census exercises.</li> <li>Influence curriculum and programme development at the Confucius Institute.</li> </ul>
Achievements to date	Invited to give presentations to the TTMA, CARICOM Standing Committee on Statistics, and the Caribbean Tourism Organization .
Total Approved RDIF Funding (TT\$)	\$500,000

Project Title	Crime Victimization and Fear of Crime Survey in Trinidad and Tobago
Name of Project Team Leader	Prof. Derek Chadee
Faculty and Department	Faculty of Social Sciences, Department of Behavioural Sciences
Date on Letter of Approval	May 29, 2013
Scheduled End Date	December 28, 2014
Project Objective	To undertake a Survey on Crime Victimization and Fear of Crime in Trinidad and Tobago to understand the dynamics of victimization and responses to and strategies in dealing with victimization.
Anticipated Impacts	<ul> <li>Enable the development of police and other governmental interventions (such as Public Service Announcements) that can more effectively address issues of victimization and diffuse unfounded fears about criminal activity while also ensuring that citizens are provided with effective means for ensuring their security.</li> <li>Enable better and more effective strategic planning in policing to address criminal victimization and reduction in crimes associated with intervention based on criminal statistics.</li> <li>Create greater sensitivity to the recording and generalization of crime statistics.</li> <li>Foster greater awareness of factors that influence fear of crime at the community level.</li> <li>Provide crime victimisation data to the police and other stakeholders to assist them in implementing more targeted programmes to curb specific crimes leading to a reduction in crime rate as well as an improved quality of life.</li> <li>Provide training for police officers to re-orient them towards acceptance of the fact that not all victims are willing to report their experiences to their official agency.</li> <li>Provide a more accurate portrait of the crime situation in Trinidad and Tobago, and contribute to the development of relevant policies.</li> </ul>
Achievements to date	<ul> <li>Held numerous stakeholder consultations in Trinidad and Tobago to finalise survey instrument.</li> <li>Secured significant counterpart funding from the TTPS.</li> </ul>
Total Approved RDIF Funding (TT\$)	\$549,600

Project Title	Mitigating the Dementia Tsunami in Trinidad and Tobago
Name of Project Team Leader	Dr. Gershwin Davis and Dr Nelleen Baboolal
Faculty and Department	Faculty of Medical Sciences, Department of Para-Clinical Sciences/ Department of Clinical Medical Sciences
Date on Letter of Approval	May 29, 2013
Scheduled End Date	May 28, 2015
Project Objective	To determine the impact of dementia and its prevalence in persons aged 60 and above in all municipalities in Trinidad and Tobago. This study will also determine the associated cost and implications for the family and caregivers, health care system and economy of Trinidad and Tobago.
Anticipated Impacts	<ul> <li>Provide accurate assessment of the number of dementia cases in Trinidad and Tobago, allowing government and health and welfare organizations to plan adequate services.</li> <li>Identify the prevalence of dementia subtypes in Trinidad and possible risk factors.</li> <li>Describe the living circumstances and care arrangements of people with dementia, including informal care (by family members) and use of health and social services.</li> <li>Quantify the economic cost of dementia for households.</li> <li>Allow policy makers to comprehend both the current prevalence and impact of dementia.</li> <li>Enable demographic projections based on expected changes in the age structure of the underlying population.</li> <li>Detail the needs of the individual and households affected by dementia with a view to enhancing the welfare and wellbeing of such individuals and households.</li> <li>Assess differences and similarities with respect to the cost of caring for an aged person by geographic region, household income and income generating capacity, gender, access to social programmes and household structure.</li> <li>Facilitate Trinidad and Tobago becoming the first nation in the Caribbean and Latin America to sign and implement a National Dementia Plan.</li> <li>Inform individuals of the benefits of timely diagnosis and care, promote the prevention of dementia, and reduce social exclusion and discrimination.</li> <li>Encourage behaviour change in terms of appropriate help-seeking and help provision, leading individuals to seek early diagnosis.</li> <li>Facilitate the adoption of interventions to reduce caregiver loss of productivity by introducing programs, which build caregiver skills and support programs.</li> </ul>
Achievements to date	<ul> <li>Training Manual completed.</li> <li>Field workers recruited and trained.</li> <li>Census exercise completed.</li> </ul>
Total Approved RDIF Funding (TT\$)	\$550,000

Project Title	Adult Sexual and Physical Intimate Partner Violence Survey & Public Health Intervention (ASaP IPV Survey & Public Health Intervention)
Name of Project Team Leader	Professor Gerard Hutchinson
Faculty and Department	Faculty of Medical Sciences, Department of Clinical Medical Sciences
Date on Letter of Approval	June 5, 2013
Scheduled End Date	June 4, 2015 (PROJECT CANCELLED)
Project Objective	To conduct a national survey of adult sexual and physical violence that will inform public health policy development and practice aimed at preventing IPV.
Anticipated Impacts	<ul> <li>Develop a research methodology for investigating adult physical and sexual IPV in Trinidad with regional applicability.</li> <li>Increase public health agency and professional capacity for treating adult physical and sexual IPV.</li> <li>Reduce intimate partner violence and enhance protective home environments for adults and children.</li> </ul>
Achievements to date	None.
Total Approved RDIF Funding (TT\$)	\$547,000

Project Title	Surveillance, characterization and management of antibiotic resistance in common bacterial pathogens in Trinidad and Tobago
Name of Project Team Leader	Dr. Jayaraj Jayaraman, Dr. Patrick E. Akpaka, Dr. Adesh Ramsubhag
Faculty and Department	Faculty of Science and Technology/ Medical Sciences , Department of Life Sciences/ Para-Clinical Sciences
Date on Letter of Approval	June 3, 2013
Scheduled End Date	June 2, 2016
Project Objective	To initiate a thorough study of antibiotic resistant strains of two commonest bacterial pathogens, Staphylococcus aureus and Streptococcus pneumonia occurring in T&T.
Anticipated Impacts	<ul> <li>Characterize prevailing antibiotic resistant strains and continuously monitor the emergence or introduction of novel strains within the country.</li> <li>Generate genomic information on the local antibiotic resistant strains for characterization and development of rapid detection of clinical infections caused by such strains.</li> <li>Develop rapid identification techniques and diagnostic tools as well as derivation of treatment regimes.</li> <li>Develop rapid diagnostic procedures particularly employing PCR to enable diagnosis of samples within a few hours and avoid delays and cost associated with examination of samples overseas.</li> <li>Enable training of students and health personnel on advanced diagnostic tools and techniques.</li> </ul>
Achievements to date	<ul> <li>Nearly 130 isolates of Staphylococcus aureus and Streptococcus pneumoniae collected, identified and characterized.</li> <li>Nearly 15% of the Staphylococcus strains collected were MRSA.</li> </ul>
Total Approved RDIF Funding (TT\$)	\$550,000

Project Title	A New Volcanic Emissions Monitoring Network: Integrating Community Engagement and Public Health Hazard Management through the application and transfer of low-cost technology
Name of Project Team Leader	Dr. Erouscilla Joseph
Faculty and Department	Seismic Research Centre
Date on Letter of Approval	May 22, 2013
Scheduled End Date	November 21, 2014
Project Objective	To strengthen the capacity of The UWI-SRC to reduce the cost and impact of disasters through enhanced disaster preparedness by the application of low cost technologies in vulnerable communities of volcanic islands of the Lesser Antilles.
Anticipated Impacts	<ul> <li>Provide a pilot study of community engagement in emissions monitoring and health hazard management that could be adopted in the other volcanic islands of the arc.</li> <li>Provide a tool that can be used to monitor the health impacts of chronic exposure to volcanic pollutants and establish a water quality monitoring network.</li> <li>Build the capacity of local health authorities and communities living in volcanic islands of the Lesser Antilles to develop evidence-based policies to mitigate the impacts of exposure.</li> <li>Strengthen the capacity of The UWI-SRC to monitor volcanic activity and provide early warning to vulnerable communities in volcanic islands of the Lesser Antilles, by enabling the transfer and application of a low-cost technology option to improve the sustainability of, and expand its volcanic monitoring programme.</li> <li>Demonstrate to key stakeholders how individuals, communities, and societal/environmental concerns can be integrated to constitute a model of adaptive capacity based on community engagement and knowledge transfer in the region.</li> </ul>
Achievements to date	<ul> <li>An SO<sub>2</sub> monitoring network was successfully established for both the low-cost and commercial samplers.</li> <li>Trained guides of Sulphur Springs in the collection of the SO<sub>2</sub> samples.</li> <li>Quantified exposure to residents, staff and tourists.</li> </ul>
Total Approved RDIF Funding (TT\$)	\$298,610

Project Title	A Matter of Survival: A life course approach to understanding the decision-making and economic livelihoods of school dropouts in T&T
Name of Project Team Leader	Dr. Priya Kissoon
Faculty and Department	Faculty of Food and Agriculture, Department of Geography
Date on Letter of Approval	May 22, 2013
Scheduled End Date	March 21, 2015
Project Objective	To investigate the life-course trajectories and complex decision-making of school dropouts in Trinidad & Tobago in order to analyze their economic productivity and livelihoods and suggest interventions that can improve their income-generating capabilities and prospects.
Anticipated Impacts	<ul> <li>Reduce the numbers of school dropouts and increase the viability or income-earning potential amongst school dropouts.</li> <li>Create early interventions to improve educational retention among at-risk youth and the skills relevance of out-of-school alternatives.</li> <li>Identify the qualities and characteristics of a school dropout in Trinidad &amp; Tobago. to aid the targeting of at-risk youth for early intervention and remediation.</li> <li>Direct and increase the efficiency of government spending or investments in the formal educational system and "out of school" programmes.</li> <li>Reform educational curricula to better meet changing labour market needs and support entrepreneurial aspirations.</li> <li>Clarify and dispel the commonly held perceptions of dropouts as belonging to a specific socio-economic and geographic group.</li> </ul>
Achievements to date	<ul> <li>Trained a cadre of 160 community based researchers who would be available and equipped to work on other research projects in the future.</li> <li>Surveyed 1200 persons in over 150 communities across the country.</li> </ul>
Total Approved RDIF Funding (TT\$)	\$500,000

Project Title	Capacity Building and Research on Smart Grid Technology in the Caribbean Region
Name of Project Team Leader	Dr. Davinder Sharma
Faculty and Department	Faculty of Science and Technology, Department of Physics
Date on Letter of Approval	May 23, 2013
Scheduled End Date	May 22, 2016
Project Objective	To undertake Capacity Building and Research in the area of Smart Grid (SG) Technology to enhance the efficiency and reliability of current electrical power networks within the Caribbean Region.
Anticipated Impacts	<ul> <li>Identify and examine strategies and make recommendations for introducing renewable energy into the local energy mix.</li> <li>Assist policy makers to prepare the guidelines for implementation of SG technology within the region.</li> <li>Assist the government to implement its RE policy within the country.</li> <li>Initiate the process of modernizing T&amp;T's existing electricity grid which will be capable of handling uncertainties in schedules and power transfers across regions, accommodating renewables to cut the cost of electricity and to reduce the emission of greenhouse gases, optimizing the transfer capability of the transmission and distribution networks, meeting the demand for increased quality and reliable supply, and managing and resolving unpredictable events and uncertainties in operations and planning more aggressively.</li> <li>Train field professionals working in the area of RE, Power Generation, Transmission &amp; Distribution (PGTD) and ICT to understand the concepts and technical requirements of smart grid technology and get help to handle the challenges of integration of energy, information and communication systems into the existing grid.</li> <li>Create awareness in the general public about Smart Grid Technology, its benefits and what they can do to create a greener environment.</li> </ul>
Achievements to date	<ul> <li>Influencing policy change in the area of integration of renewable energy producers on the grid (Bills being drafted by the Ministry of Energy, the Regulated Industries Commission and T&amp;TEC).</li> <li>Providing training to professionals in the field.</li> </ul>
Total Approved RDIF Funding (TT\$)	\$500,000

Project Title	Terrestrial Flood Risk and Climate Change in the Caroni river basin: Adaptation Measures for Vulnerable Communities
Name of Project Team Leader	Dr. Matthew Wilson
Faculty and Department	Faculty of Food and Agriculture, Department of Geography
Date on Letter of Approval	July 3, 2013
Scheduled End Date	July 2, 2015
Project Objective	To assess current and potential future flood risk in the Caroni river basin, and the vulnerability of communities to such risks.
Anticipated Impacts	<ul> <li>Facilitate improvements to flood risk management in Trinidad &amp; Tobago.</li> <li>Encourage a coordinated effort to address water resources management, drainage, irrigation, flooding, water capture, conservation and sustainable food production.</li> <li>Provide the necessary tools to allow for effective planning of flood risk management strategies. The tools and strategies developed for flood risk management in this project will incorporate social vulnerability at their centre, take into account the potential impacts of climate change, and address the potential disparity between flood risk protection of agricultural lands and the urban environment.</li> <li>Produce a set of recommendations regarding the mitigation of flood risk and adaptation measures under climate change.</li> <li>Facilitate a review of urban planning and drainage policy.</li> <li>Develop a Regional Climate Model for the Southern Caribbean with a focus on Trinidad.</li> <li>Initiate a research group in climate change for UWI St. Augustine, to complement the Climate Studies Group at UWI Mona, with a focus on the southern Caribbean.</li> </ul>
Achievements to date	Constructed a database of flood events to raise awareness of flood risk in study communities.      Development of rainfall-rupoff model and flood inundation model completed.
Total Approved RDIF Funding (TT\$)	Development of rainfall-runoff model and flood inundation model completed.  \$550,000

Project Title	An investigation into the Trajectory of Neurobehavioural Development of Primary School Children in T&T
Name of Project Team Leader	Dr. Farid Youssef
Faculty and Department	Faculty of Medical Sciences, Department of Preclinical Sciences
Date on Letter of Approval	May 22, 2013
Scheduled End Date	May 21, 2016
Project Objective	To describe the trajectories of neurobehavioral development of Trinidad & Tobago (T&T) children from entry into primary school onwards.
Anticipated Impacts	<ul> <li>Assess the neurobehavioral capacities of T&amp;T children.</li> <li>Raise awareness of the unique and uniquely diverse learning experiences of T&amp;T's children.</li> <li>Characterize the trajectories of neurobehavioral development of typically developing children in the T&amp;T setting.</li> <li>Improve identification of both children with talent that should be nurtured and children in need of services to optimize their progress.</li> <li>Provide the Government of T&amp;T, via the Ministry of Education, with state-of-the-art knowledge to inform pedagogy, educational policy and investment in educational resources in T&amp;T that can be evaluated against international educational benchmarks.</li> <li>Provide a basis for identifying specific learning differences.</li> <li>Facilitate the optimization of resource utilization in the educational sector.</li> </ul>
Achievements to date	Eighty children tested to date.
Total Approved RDIF Funding (TT\$)	\$464,000

Project Title	Noise Induced Hearing Loss in Various Occupations / Environments in T&T		
Name of Project Team Leader	Dr. Ricardo Clarke/Dr. Nikolay Zyuzikov		
Faculty and Department	Faculty of Science and Technology, Department of Physics		
Date on Letter of Approval	June 5, 2013		
Scheduled End Date	June 4, 2015		
Project Objective	To assess the level of hearing loss of individuals working in noisy environments, to examine the existing legislation on noise limits in Trinidad and Tobago and to recommend adequate amendments to the policy and to sensitize the general public and advise individuals on the risk of exposure to certain levels of noise.		
Anticipated Impacts	<ul> <li>Improve the lives of all citizens and those working in noisy environment and the monitoring and recommendations of best practice.</li> <li>Make recommendations to amend existing legislation on noise levels in collaboration with the EMA.</li> <li>Initiate and build a database to test hearing abilities and to minimize the risk of hearing loss.</li> <li>Prepare high quality specialists in audiometry.</li> <li>Establish an audiology lab to serve people and companies for audiometry and calibration of sound equipment.</li> <li>Give recommendations for safe playing of steel pans.</li> <li>Develop recommendations for improvement of health and safety at work and leisure to the different authorities in Trinidad and Tobago.</li> </ul>		
Achievements to date	Two technicians trained in the measurement of hearing loss.		
Total Approved RDIF Funding (TT\$)	\$330,000		

## Appendix 2. Stakeholder Engagement Events hosted by RDI Fund Projects

PROJECT LEADER	EVENT	VENUE	DATE HELD
Dr. Mohammed	Stakeholder sensitization workshop	East Port of Spain Regional Complex	August 9th 2012
Dr. Seepersad	Official Launching Ceremony and Stakeholder Consultation	Rudranath Capildeo Learning Resource Centre, Couva	December 11th 2012
Dr. Beckles	Stakeholder Meeting - Lauch of project	Guanapo	March 14th 2013
Dr. Bastick	Stakeholder Meeting	Faculty of Medical Sciences, UWI	April 2013
Dr. Celestine	At Risk Youth Conference	Crowne Plaza Hotel, Port of Spain	June 17th 2013
Dr. Sharma	UWI Research Expo Mini-Workshop: Smart Grid Technology	Engineering Building Room 105	October 3 <sup>rd</sup> 2013
Dr. Davis & Dr. Baboolal	UWI Research Expo Mini-Workshop: Targeting Dementia	Engineering Building Room 106	October 3 <sup>rd</sup> 2013
Dr. Carter	UWI Research Expo Mini-Workshop: Chinese Business Etiquette	Engineering Room 107	October 3 <sup>rd</sup> 2013
Dr. Braithwaite	UWI Research Expo Mini-Workshop: Deaf Sign Language: An Introduction To Signing	Engineering Room 107	October 3 <sup>rd</sup> 2013
Dr. Bernard	1 <sup>st</sup> Agriculture Open Data Workshop - Data Providers	The Health and Economic Unit, UWI	November 7th 2013
Prof. Chadee	Trinidad Stakeholder Consultation	Teaching and Learning Centre, UWI	February 1st 2014
Dr. Bernard	2 <sup>nd</sup> Agriculture Open Data Workshop - End Users and Software Developers	The Health and Economic Unit, UWI	February 20th 2014
Dr. Mohammed	Stakeholder sensitization workshop	East Port of Spain Regional Complex	March 15th 2014
Prof. Chadee	Tobago Stakeholder Consultation	Works Conference Room, Division of Infrastructure and Public Utilities, Shaw Park, Tobago	April 2nd 2014
Dr. Sharma	Smart Grid Stakeholder Meeting	Faculty of Engineering, UWI	May 7th 2014
Prof. Umaharan	Training Workshop - Cocoa Disease Management: Understanding, Managing and Preventing the Spread of Cocoa Diseases	Teaching and Learning Centre, UWI	May 28th 2014
Dr. Beckles	Stakeholder Meeting	Guanapo	June 17th 2014
Dr. Carter	TTMA Workshop	TTMA Building, Barataria	October 22 <sup>nd</sup> 2014
Dr. Bernard	Launch of AgriExpenseTT App for World Food Day	Macoya Farmers Market	October 19th 2014
Dr. Sharma	Public Lecture/Forum on Development of Trinidad & Tobago's Smart Grid	Noor Hassanali Auditorium, Faculty of Law, UWI	November 6th 2014

## Appendix 3. Geographic Spread of RDI Fund Project Activities

RDI Fund projects have had impact over a wide geographic area in terms of the numbers of communities that have been reached by their activities. To date, more than 200 communities have been reached. A sample is provided below.

- Music therapy interventions in 3 schools in Port of Spain
- 52 partner cocoa farmers in Brasso Seco, Gran Couva, Biche, Rio Claro, Rancho Quemado, Maracas Valley, Santa Cruz, Toco, Lopinot Valley, and Moruga
- Genetic material sampled from cocoa plants in La Reunion, Carapo
- 4. Wild birds sampled at Wild Fowl Trust Point a Pierre, Maraval, Mucurapo, and Caroni
- 5. Samples from pigs collected at abattoirs in Port of Spain, San Juan, Valencia, Erin and Scarborough
- 6. Environmental sampling conducted at Guanapo Landfill
- Antibiotic resistance samples collected at San Fernando General Hospital and Eric Williams Medical Sciences Complex
- Dengue and Chikungunya samples collected at San Fernando General Hospital and Eric Williams Medical Sciences Complex
- Agriculture app demonstrated at NAMDEVCO's Wholesale Market in Macoya
- 10. Children in St Augustine received neurobehavioural tests
- Communities' vulnerability to flood risk assessed in Bangladesh, Valsayn and Bamboo
- Micro-organisms sampled in Plum Mitan, Nariva, Manzanilla, and Caroni for Microbial Fuel Cell Development
- 13. Prison interventions in Arouca
- 14. Wildlife surveys conducted in Caroni
- Documentation of built and cultural heritage sites in East Port of Spain
- 16. Citrus demonstration plot established in Debe
- 17. Language Documentation activities in Paramin, Tabaquite, Moruga, and Petit Valley.

- 18. Drop-outs surveyed in all Regional Corporations in Trinidad. Communities surveyed include: Arima, Chaguanas, Brazil, Brasso Venado, Preysal, Gran Couva, Tabaquite, Chase Village, Las Lomas, Esperanza, California, Gasparillo, Freeport, San Pedro, Diego Martin, Maraval, Petit Valley, Mayaro, San Pedro, Cushe, Guayaguayare, Penal, Morne Diablo, Rio Claro, Barrackpore, San Francique, Debe, Monkey Town, Point Fortin, Port of Spain, Belmont, Cocorite, Tableland, Marac, Moruga, Princes Town, San Fernando, St Anns, St Barbs, Laventille, Morvant, Barataria, San Juan, El Socorro, Cascade, Beetham, Maracas, Mt Hope, Santa Cruz, Toco, Cumuto, Biche, Sangre Grande, Valencia, Fyzabad, Siparia, Los Iros, Erin, Los Bajos, Vance River, Santa Flora, La Brea, Cedros, St Joseph, Tunapuna, St Augustine, Macoya, Maloney, Lopinot, Curepe, Arouca, Dabadie, La Horquetta, Champs Fleur, St Helena, Mausica.
- 19. Individuals surveyed on Fear of Crime in all Regional Corporations in Trinidad. Communities surveyed include: Charlieville, Felicity, St James, Sea Lots, Guaico, Manzanilla, Turure, Sam Boucaud, Petit Bourg, Petit Café, Malgretoute, Powder Magazine, La Puerta, Carenage, L'Anse Mitan, Golconda, Friendship, Capde-Ville, Malabar, Cocoyea, Vistabella, Marabella, Mon Desir, Chatam, Claxton Bay, Bejucal, Wallerfield, Peytonville, Blanchisseuse, Kandahar, Caura, Santa Margarita, and El Dorado. Individuals were also surveyed in the following parishes in Tobago St George, St Mary, St Andrew, St Patrick, St David, St Paul, and St John.
- 20. Poultry farms have been sampled in Palo Seco, New Grant, Hindustan, San Francique, Penal, Las Lomas, Sangre Grande, Cunupia, Charlieville, Freeport, Princes Town, Piparo, Carlsen Field, Wallerfield, Talparo, Caparo, Siparia, Kelly Village, Santa Cruz, Claxton Bay, and Fyzabad.

## Appendix 4. Partnerships and Collaborations

RDI Fund projects have led to new/strengthened collaborations with numerous local, regional and international partners including:

The Water and Sewerage Authority (WASA), the Water Resources Agency (WRA), the Trinidad and Tobago Solid Waste Management Company (SWMCOL), the Caribbean Institute of Meteorology and Hydrology (CIMH), Guanapo Community and Environmental Development Organisation (GCEDO), University of Hamburg (Germany), City University of New York (USA), Stanford University (USA), Mars (USA and Europe), United States Department of Agriculture, the World Cocoa Foundation, The Brazilian Agricultural Research Corporation (EMPRAPA), University of Texas Medical Branch (USA), University of Stanford (USA), Kings College (UK), United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), Swansea University (UK), the J. Craig Venter Institute (USA), the Center for Disease Control and Prevention (USA), Citizens for Conservation, the Organization of American States (OAS), the Trinidad and Tobago Chamber of Industry and Commerce, Families in Action, Trinidad and Tobago Unified Teachers Association, the Ministry of Education, the Ministry of Finance, the Ministry of National Security, the Ministry of Food Production, the Ministry of Health, the Ministry of Energy and Energy Affairs, the Ministry of Foreign Affairs, the Trinidad and Tobago Manufacturers Association, the Embassy of the People's Republic of China, the Urban Development Company of Trinidad and Tobago (UDeCOTT), the Livestock and Livestock Products Board, the Poultry Association of Trinidad and Tobago, the Trinidad Layers Association, the Poultry Surveillance Unit, the Animal Health Veterinary Laboratory Agency (UK), the Point-a-Pierre Wild Fowl Trust, Trinidad and Tobago Electricity Commission (T&TEC), Power Generation Company of Trinidad and Tobago (POWERGEN), the Telecommunications Authority of Trinidad and Tobago, Nvidia Corporation (USA), the Trinidad and Tobago Police Service, Soufriere Regional Development Foundation (St Lucia), National Emergency Management Organisation (St Lucia), Montserrat Volcano Observatory (MVO), Women's Institute for Alternative Development (WINAD), National Institute of Higher Education, Research, Science and Technology (NIHERST), Office of Disaster Preparedness and Management, National Infrastructure Development Company (NIDCO), Trinidad and Tobago Network Information Centre, the Central Statistical Office (CSO), the Environmental Management Authority (EMA), and the National Parent Teacher Association.

## Appendix 5. Media Mentions

#### 1) At Risk Youth, Dr. Sandra Celestine

- a) Guardian, April 12<sup>th</sup>, 2013 http://www.guardian.co.tt/ business/2013-04-12/businesses-should-get-involvedmentorships
- b) Guardian, April 13<sup>th</sup>, 2013 http://www.guardian.co.tt/ editorial/2013-04-13/promising-move-education-ministry
- c) Newsday, May 2<sup>nd</sup>, 2013 http://www.newsday.co.tt/businessday/0,177119.html
- d) Guardian, June 17<sup>th</sup>, 2013 http://www.guardian. co.tt/news/2013-06-18/adolescence-period-risksays%E2%80%88uwi-lecturer
- e) Newsday, June 18th, 2013 http://www.newsday.co.tt/ hotline/0,179348.html
- f) UWI Today, July 2013 https://sta.uwi.edu/uwiToday/archive/ july\_2013/article16.asp
- g) Express, UWI Research in Action Column, June 10<sup>th</sup>, 2014 http://www.trinidadexpress.com/featured-news/Music-onthe-teen-mind-262453201.html

#### 2) Guanapo Landfill, Dr. Denise Beckles

- a) Newsday, March 16<sup>th</sup>, 2013 http://www.newsday.co.tt/ politics/0,174930.html
- UWI Today, April 28th, 2013 http://sta.uwi.edu/uwitoday/ article9.asp
- Eureka!, January 2014, http://sta.uwi.edu/fst/documents/ Eureka\_2014\_January.pdf

#### 3) Competitiveness of Cocoa, Prof. Pathmanathan Umaharan

- a) UWI Today, September 29<sup>th</sup> 2013 http://sta.uwi.edu/ uwiToday/archive/september\_2013/article10.asp
- Confectionery News, January 23<sup>rd</sup>, 2014 http://www. confectionerynews.com/R-D/Lindt-backed-researchdiscovers-method-to-authenticate-premium-chocolate

#### 4) Spread of Dengue, Prof. Christine Carrington

 a) UWI Today, April 28th, 2013 http://sta.uwi.edu/uwiToday/ archive/april\_2013/article6.asp

#### 5) Identification of Animal Influenza Viruses, Prof. Chris Oura

 Express, May 21<sup>st</sup>, 2014 http://www.trinidadexpress.com/ featured-news/A-call-to-action--260193641.html

#### 6) Citrus Industry in T&T, Dr. Govind Seepersad

- a) UWI Today, January 2013 https://sta.uwi.edu/uwitoday/ archive/january 2013/article6.asp
- Daily Express, October 1<sup>st</sup>, 2013 http://www.trinidadexpress. com/featured-news/The-National-Citrus-Project-225913021. html

#### 7) AGRINeTT, Dr. Margaret Bernard

- a) Guardian, January 22<sup>nd</sup>, 2014 http://digital.guardian. co.tt/?iid=85873&startpage=page0000074#folio=74
- Trinidad and Tobago Technology Blog, February 20<sup>th</sup>, 2014 http://techtt.hassantt.com/2014/02/agrinett-workshop-forend-users-and.html
- Guardian, June 9<sup>th</sup>, 2014 http://www.guardian.co.tt/ lifestyle/2014-06-09/tt-region-playing-catch-digitaltechnology
- d) Express, UWI Research in Action Column, October 21st, 2014

- http://www.trinidadexpress.com/featured-news/Using-ICT-to-improve-agriculture--279848762.html
- e) Guardian, October 26<sup>th</sup>, 2014 http://www.guardian.co.tt/ business/2014-10-27/new-app-farmers-launched-macoya
- TV6, October 26<sup>th</sup>, 2014 http://www.tv6tnt.com/sevenpmnews/-Farmers-Market---279726052.html

#### 8) Built and Cultural Heritage in EPOS, Dr Asad Mohammed

 a) Express, UWI Research in Action Column, November 4<sup>th</sup>, 2014 http://www.trinidadexpress.com/featured-news/Richhistory-of-East-PoS-281396141.html

#### 9) Heritage Languages, Dr. Benjamin Braithwaite

- a) Daily Express, September 10<sup>th</sup>, 2013 http://sta.uwi.edu/ asdlu/documents/Helpingthemhearthroughthesilence..
   AbettersocietyfortheDeaf.pdf
- Express, UWI Research in Action Column, July 8<sup>th</sup>, 2014 http://www.trinidadexpress.com/featured-news/Protectingthe-heritage-languages-of-TT-266127001.html

#### 10) Dementia, Dr. Gershwin Davis and Dr. Nelleen Baboolal

- Express, UWI Research in Action Column, September 16<sup>th</sup>, 2013 http://www.trinidadexpress.com/featured-news/ Targeting-Alzheimers-224003961.html
- b) Guardian, October 10<sup>th</sup>, 2014 http://www.guardian.co.tt/lifestyle/2013-10-09/coping-dementia
- UWI Today, August 2014 http://sta.uwi.edu/uwitoday/ archive/august\_2014/article11.asp

#### 11) Language and Competitiveness, Dr. Beverly-Anne Carter

 Newsday, June 26<sup>th</sup>, 2014 http://www.newsday.co.tt/ businessday/0,196798.html

#### 12) Volcanic Emissions Monitoring, Dr. Erouscilla Joseph

- Yahoo! News, March 25<sup>th</sup>, 2014 http://news.yahoo.com/ scientists-measure-gases-st-lucia-volcano-193320739.html
- St. Lucia News Online, March 25<sup>th</sup>, 2014 http://www. stlucianewsonline.com/new-volcanic-gas-monitoringsystem-launched-in-saint-lucia/
- UWI Today, April 2014 (page 13) https://sta.uwi.edu/ uwitoday/pdfs/UWItodayAPRIL2014.pdf

#### 13) Dropouts, Dr Priya Kissoon

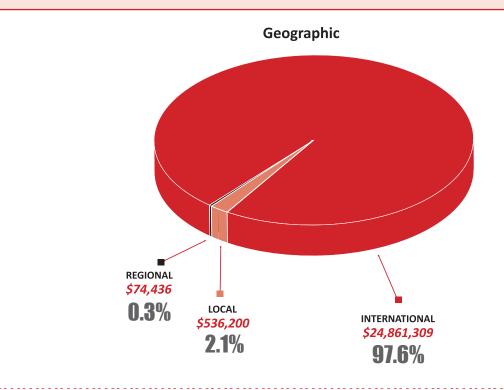
- a) Newsday, June 5<sup>th</sup>, 2014 http://www.newsday.co.tt/ businessday/0,195804.html
- b) Newsday, September 21st, 2014 http://newsday.co.tt/sunday\_special\_report/0,200670.html

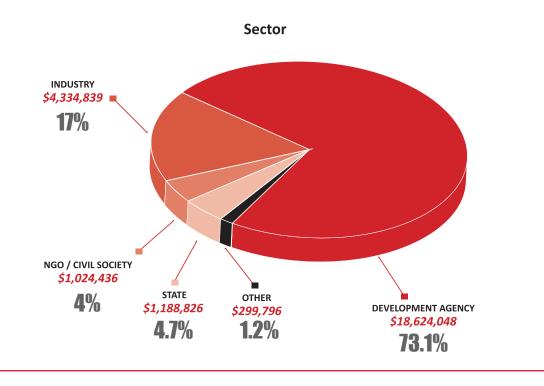
#### 14) Smart Grid, Dr Davinder Sharma

- a) UWI Today, October 2014 http://sta.uwi.edu/uwitoday/ archive/october 2014/article8.asp
- Guardian, November 2<sup>nd</sup>, 2014 http://digital.guardian. co.tt/?iid=105769#folio=57



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