

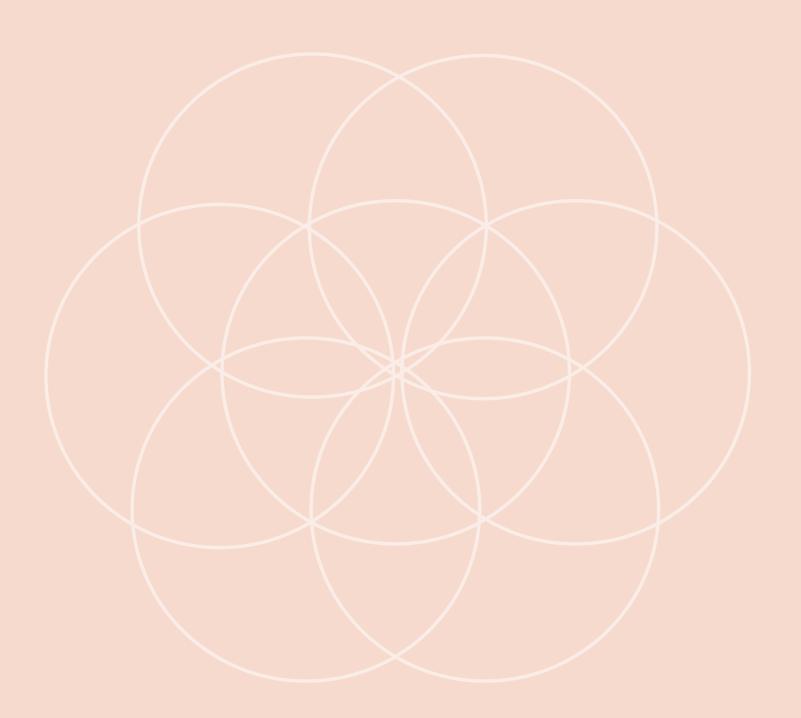
THE UNIVERSITY OF THE WEST INDIES

ST. AUGUSTINE CAMPUS



Mobilizing Knowledge, Catalyzing Impact

March 2015 Office of the Campus Principal





RDI Fund Mission

- To provide dedicated funding for projects that address pressing developmental needs
- To encourage projects to 'plan for impact' and 'mobilize knowledge for development'
- To support a more targeted, impact oriented, multidisiciplinary research agenda
- To foster a greater appreciation in our stakeholders of the value and impact of research, innovation and knowledge transfer
- To facilitate research which impacts on policy, practice, new products, services, ways of thinking, attitudes and behavior, which ultimately contribute to the improved well-being of society.

Our Vision

A research enterprise which facilitates research that can serve as an impetus for transformational change and development.

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Strengthening the
Synergy between
Scholarship and
Development Impact



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Impacting Lives - Early Highlights

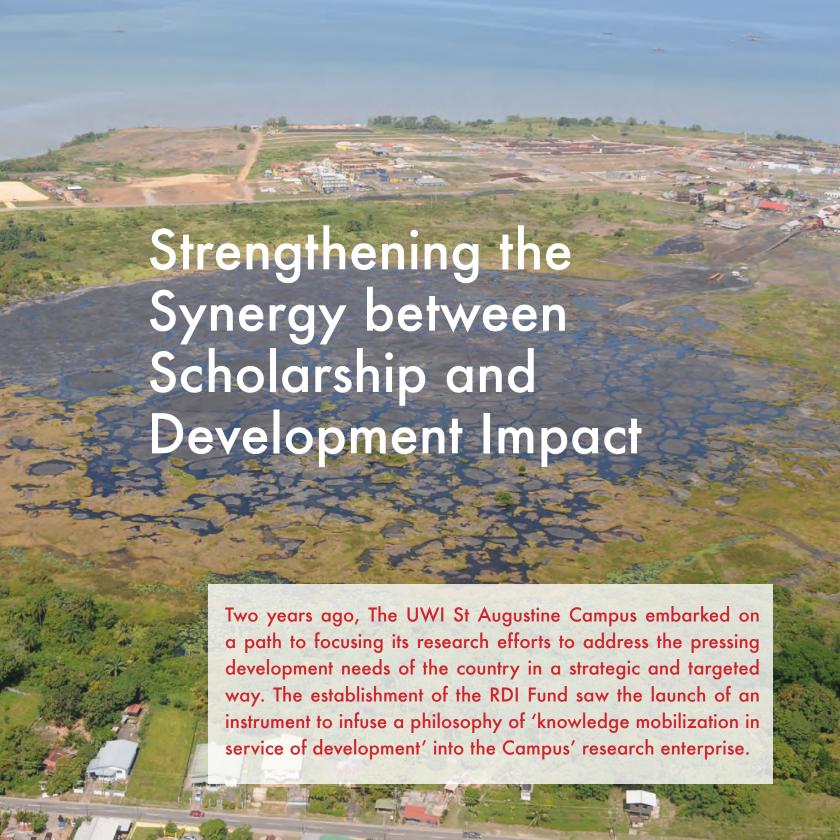
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Looking Ahead





Professor Clement Sankat Pro Vice Chancellor and Campus Principal

he University of the West Indies - Trinidad and Tobago Research and Development Impact 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.

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 throughout the process 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 measurable impact.

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, and by strengthening the linkages that are inherent in the research management system at The UWI St. Augustine Campus, the RDI Fund will continue to serve as a catalyst in the process of knowledge mobilization for greater research translation, application and uptake.



Principal harvesting first fruit from the demonstration citrus orchard established at The UWI South Campus, Penal-Debe, by the "Re-development of a Competitive Citrus Industry" project, led by Dr Govind Seepersad.



Ith 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.



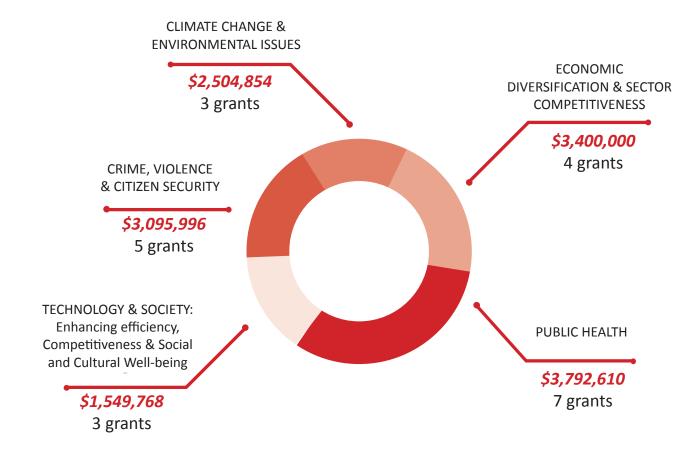
Overview of Project Portfolio

A total of 22 projects have been approved since the establishment of the RDI Fund, during the 1st and 2nd Call for Proposals (CfP) issued in 2012 and 2013 respectively.

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.

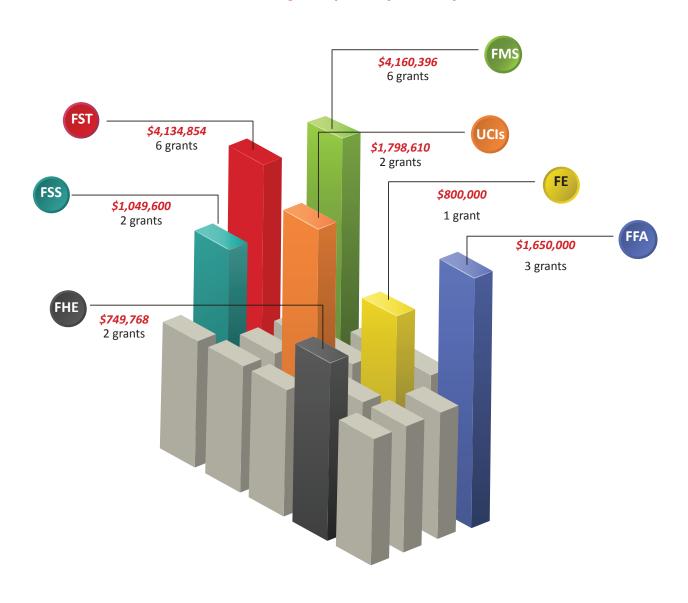
These projects have been awarded grant funding totaling \$14,343,228 and are all at varying stages of implementation. The evaluation of proposals submitted during the third call, issued in 2014, is ongoing.

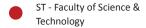
Funding/Projects by Thematic Area



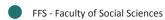


Funding/Projects by Faculty

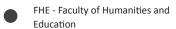




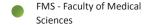
UCIs - Units, Centres and Institutes



FE - Faculty of Engineering



FFA - Faculty of Food and Agriculture





Approved Projects

CLIMATE CHANGE & ENVIRONMENTAL ISSUE	S			
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-Jun-15
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	30-Sep-15
Crime Victimization and Fear of Crime Survey in Trinidad and Tobago	Prof. Derek Chadee	\$549,600	29-May-13	15-Jul-15
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
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	22-May-15
TOTAL		\$3,095,996		
ECONOMIC DIVERSIFICATION AND SECTOR O	OMPETITIVENES	S		
Understanding Built and Cultural Heritage in East Port-of-Spain	Dr. Asad Mohammed	\$800,000	3-Sep-12	31-Mar-15
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-Mar-16
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	31-Jan-15
	TOTAL	\$3,792,610		
TECHNOLOGY & SOCIETY: ENHANCING EFFIC	CIENCY, COMPET	ITIVENESS & SOCIAL	AND CULTURA	L WELL-BEING
Documentation and Digital Development of Heritage Languages in Trinidad and Tobago	Dr. Benjamin Braithwaite	\$249,768	3-Sep-12	2-Apr-15
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-Sep-15
Capacity Building and Research on Smart Grid Technology in the Caribbean Region	Dr. Davinder Sharma	\$500,000	23-May-13	22-May-16
Т	OTAL	\$1,549,768		



he 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 an impact on policy, practice, new products, services, ways of thinking, attitudes and behavior, which ultimately contribute to improving the wellbeing of society.



PhD student Kyle De Freitas (centre) demonstrating the AgriExpenseTT app to a farmer at the NAMDEVCO Wholesale Market at Macoya.



MSc. student Reisha Boodram (front) engaging Felicity residents who utilize the resources of the Caroni Swamp on her Public Participatory GIS study.



Aimer Samaroo (right), MSc. student in Environmental Engineering, recording volatile organic compounds, hydrogen sulfide, carbon monoxide, nitrogen dioxide and sulfur dioxide concentrations at the Guanapo Landfill.

Post Graduate Training, Knowledge Transfer and Knowledge Mobilization

More than **66** graduate students have already benefitted from training and research experience as part of RDI Fund project teams.

Collectively, more than **19** conference presentations, **1** public policy paper, **7** MSc. theses and **7** peer reviewed publications have been produced thus far.



"Working on this RDI Fund project for the past 2 years has provided me with invaluable experiences and opportunities. Early in my program, I was granted funding for exceptional training at the Animal Health and Veterinary Laboratories Agency (AHVLA) at Weybridge, UK. Since then, my experimental work has steadily progressed until completion in February, 2015. I will be presenting a poster on my research at the upcoming 3rd International One Health Congress in Amsterdam, Netherlands."

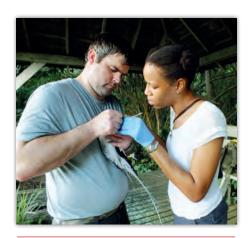
Jamie Sookhoo
MPhil student
Veterinary Microbiology
Identification of reservoirs of
animal influenza viruses in T&T



"We've gained valuable insights into grant writing and proposal development, project management, procurement, development of educational material on citriculture, and agronomic practices for establishment and maintenance of citrus orchards."

Malcolm Wallace (above right),
MPhil Agricultural Economics, and
Nkosi Felix (below right),
MSc. Marketing and Agribusiness
Re-Development of a Competitive
Citrus Industry





"I have been a member of this project team since February 2013. I am so thankful for the opportunity to conduct novel research here in T&T. I have been fortunate to receive much needed guidance, training and experiences through this RDI Fund grant while here at The UWI. At the end of this project, it is my hope that we can show how research has the ability to improve industry standards and management practices, thereby improving animal health in Trinidad & Tobago."

Arianne Brown
PhD student
Veterinary Microbiology
Identification of reservoirs of animal influenza viruses in T&T





"The Caroni Swamp RDI Fund Project gave me the opportunity to conduct a mist netting survey of migrant songbirds overwintering in the Caroni Swamp. This experience has facilitated my continued development as a researcher and has heightened my love for the environment. There is a great need for continued research in the Caroni Swamp and other wetland areas in our twin island Republic."

MSc. student Kareena Anderson (right) with master bird bander Mr. Carl Fitzjames (left) and Dr. Luke Rostant, Scientific Co-ordinator for the Economic Value of Caroni Swamp project (center).



Viveka Jackson, MPhil Volcanology student, conducting gas measurements at Sulphur Springs, Saint Lucia.



PhD student Nikita Sahadeo at the Gordon Research Conference on Tropical Infectious Diseases 2015, Galveston, TX, USA presenting her research on the Chikungunya virus.



PhD student and Graduate Research Assistant, Guy Marley, casting a net in the Caroni Swamp.

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, so as to facilitate knowledge uptake.



Dec 2012. Official Launching Ceremony and Stakeholder Consultation.

Re-development of a Competitive Citrus Industry



March 2014. Stakeholders engaged in data sharing for the development of a Participatory Three Dimensional Model for the East Port of Spain District by identifying the locations of various built and cultural heritage assets deemed important to them. Built and Cultural Heritage in EPOS



February 2014. Trinidad Stakeholder Consultation.

Crime Victimization & Fear of Crime



June 2014. Stakeholder Meeting.

Impact of Contaminants from Guanapo Landfill



November 2014. Public Lecture/Forum on Development of Trinidad & Tobago's Smart Grid.

Smart Grid Technology



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.

Partners and collaborators

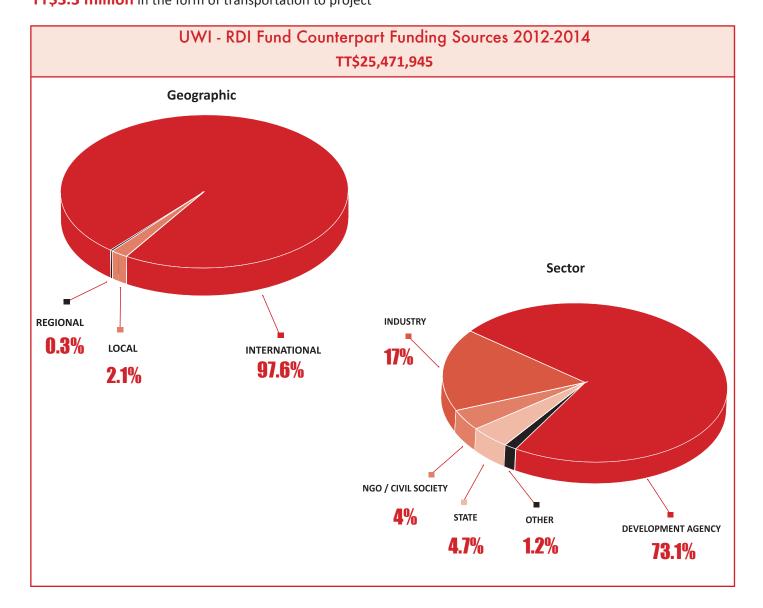
The Government of the Republic of Trinidad and Tobago (GORTT), the Water and Sewerage Authority (WASA), the Water Resources Agency (WRA), the Trinidad and Tobago Solid Waste Management Company (SWMCOL), the Caribbean Institute of Meteorology and Hydrology (CIMH), Guanapo Community and Environmental Development 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

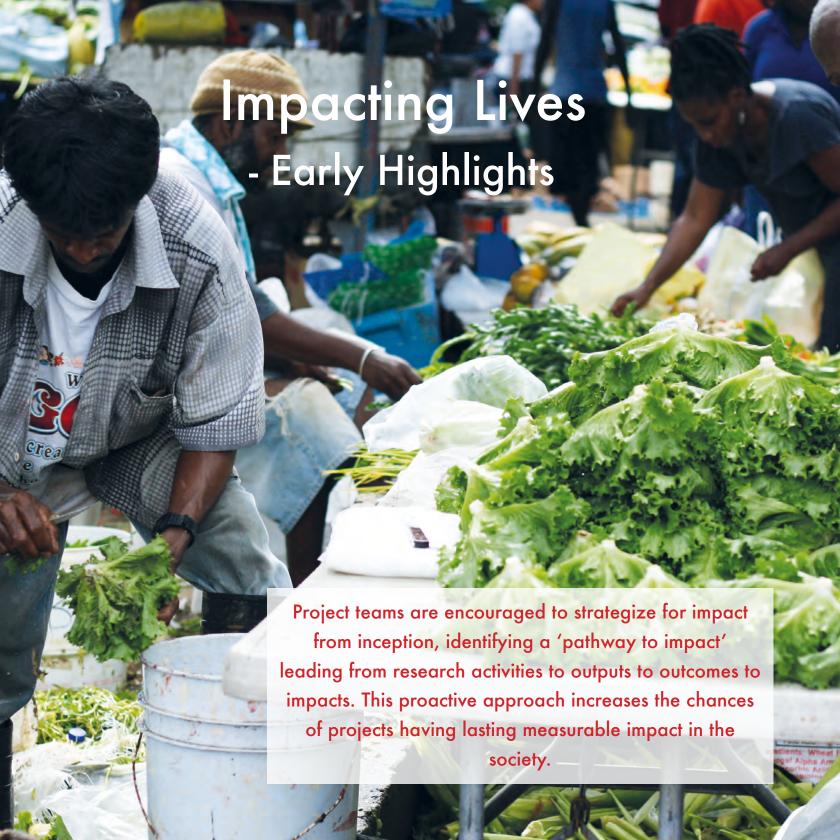
Geographic Reach of RDI Fund Projects

RDI Fund projects have had impact over a wide geographic area. Project teams have conducted activities, including Climate Change and surveys, sampling and training, in more than 200 Environmental Tobago communities throughout Trinidad and Tobago to date. Crime, Violence and Citizen Security Economic Diversification Diego Martin and Sector Laventille Tunapuna - Piarco Competitiveness **Port of Spain** Arima **Sangre Grande** Chaguanas Finance and Entrepreneurship Couva - Tabaquite - Talparo **Rio Claro - Mayaro** Public Health San Fernando **Princes Town Point Fortin** Penal - Debe Technology and **Siparia** Society: Enhancing Competitiveness, Social and Cultural Well-being

Counterpart Funding

RDI Fund projects have 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.

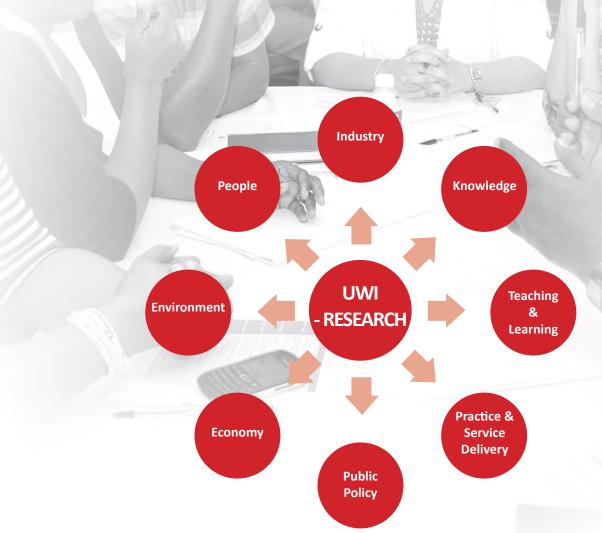




The RDI Fund, as its name suggests, is not simply a 'research' fund. Equally important, it is a research impact and development impact fund.

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.

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.





The Youth At Risk 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.

This project had active support from numerous stakeholders, including the Ministry of Education and the T&T Chamber of Commerce. 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



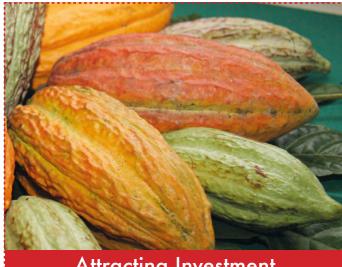
Informing Practice

The Volcanic Emissions Monitoring Network project sought to enhance the capacity of local health and disaster management authorities in Saint Lucia and to increase the awareness of residents living in volcanobased communities as well as tourists visiting such areas, so as to minimize the potential harmful health effects associated with exposure to such environments. The project also sought to investigate the feasibility of low cost monitoring and including communities in an active monitoring network.

Based on the research conducted, the project was able to identify specific hazards at Sulphur Springs, St Lucia, advise on mitigation methods, and develop educational material on hazard management at that site to be distributed to visitors, workers and residents. Additionally, two secondary schools have since adopted the low cost monitor developed by this project team as an ongoing teaching/ experimental tool in their CAPE syllabus.

https://www.youtube.com/watch?x-yt-ts=1422411861&v=xy0S5xJzDvE&x-yt-cl=84924572#t=149.





Attracting Investment

The Leveraging the International Cocoa Genebank project seeks 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 including the EU/ACP (€ 2.6 million), the ECA/ CAOBISCO/FCC (€500,000), MARS (US\$200,000), and the USDA (US\$120,000).

The CRC has also rebranded a chocolate bar, in collaboration with Woodblock Chocolate which 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/86526woodblock-chocolate-to-produce-100-chocolate-bar



Creating Entrepreneurial Solutions

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. 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. Persons have already begun downloading the app and the reviews have been positive. The project team has also developed an open data repository to house national level agriculture data.

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

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





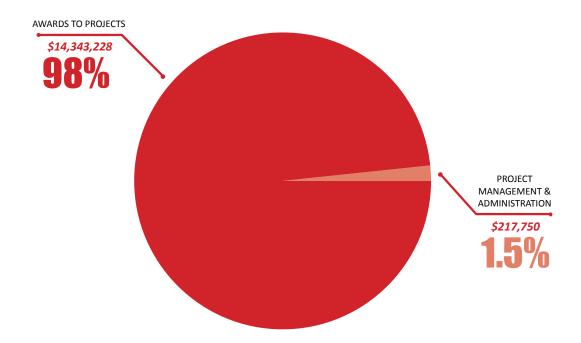
n important part of the execution of the projects and the mandate of the Fund is communication of the research activities and findings as well as the outputs, outcomes and impacts of the projects funded. By generating greater awareness of the relevance and impacts of the research being undertaken under 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.





RDI Fund Expenditure



he 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, managed by the Higher Education Research Agency, HERA.

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.

Although the Operational Guidelines stipulate that 5% of the Fund's annual allocation will be dedicated to supporting the activities of the Technical Evaluation Committee (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.



Priority Areas - 2015 and Beyond

- 1. Financial Sustainability
- 2. Project Monitoring & Evaluation
- 3. Support for Project Execution
- 4. Strengthening Linkages between Research and Development Impact
- 5. Strengthening the Fund's Operational and Governance Framework
- 6. Strategizing Research Commercialization
- 7. Managing Calls for Proposals
- 8. Informing Policy on Research Impact

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 Dissemination	Knowledge 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
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
60 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	Publications in peer-reviewed journals	1 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
Cocoa farmers benefited from training	200 Communities across T&T reached by RDI Fund project activities	Project websites With worldwide visitor traffic	Training videos introduced into the CSEC Agriculture Curriculum

For more information on the RDI Fund and its projects, visit http://sta.uwi.edu/rdifund/index.asp
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Editor / Art Director: Lois St Brice; Co-Editor: Debra Coryat-Patton; Graphic Designer: Kathryn Duncan; Photography provided by the RDI Fund project teams.