



ICT and Research Projects at The University of the West Indies (UWI)

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Open Science Data Cloud Workshop

University of Amsterdam

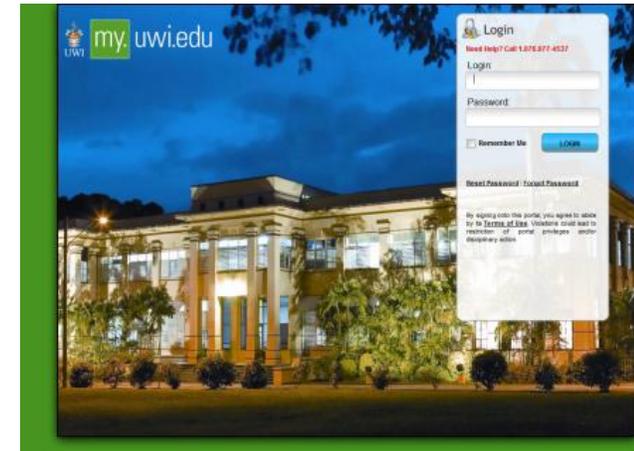
16-22 June 2014



General Information

www.uwi.edu

- Regional University with Four Campuses
 - Mona, Jamaica
 - Cave Hill, Barbados
 - St Augustine, Trinidad and Tobago
 - Open - distance campus with over 42 site located across the English speaking Caribbean
- Student population of over 50,000 undergraduate, graduate levels
- Seven Faculties Offering over 700 programmes
 - Medical Sciences
 - Law
 - Engineering
 - Science and Technology
 - Humanities and Education
 - Social Sciences
- Leading research university in the region
 - According to the UNESCO World Science Report 2010, 71% of CARICOM based publications cited by the Web of Knowledge originated from The UWI



N Caribbean Sea





The University of the West Indies Regional Headquarters Building





General Information - ICT

- Access to Research and Education Networks
 - Internet2 since 2009
 - Regional Research and Education Network- CKLN
- Members of Open Science Data Cloud since 2013
- Access to Eduroam – secure, world-wide roaming access service
- Single Virtual University Space - pilots
 - Telemedicine at Hugh Wynter Fertility Management Unit
 - SALISES – MSc Development Studies (students at Mona, Jamaica with lecturers from Barbados and Trinidad)
 - School of Education – Post-Graduate Diploma in Teaching (students from Jamaica, Bermuda, St Lucia)



www.uwi.edu/svus

Single Virtual University Space



Creating a more flexible
teaching/learning environment
for UWI Students & Staff

*Click the play button
to watch the video.*

HOME

TECHNOLOGICAL ENVIRONMENT

SVUS PILOTS

FAQS

SUGGESTION BOX

CONTACT US

Welcome to the Single Virtual University Space (SVUS), a technology-enabled environment that integrates the collective strengths and resources of the four campuses of The University of the West Indies (The UWI).

The SVUS allows students located anywhere in the region to access the best teaching and learning resources from any of UWI's campuses. Students will have greater access to more programmes/courses across the four campuses without having to leave their home countries.



Recent Researcher Awards



Dr. Maurice McNaughton
Director, Centre of Excellence for IT Enabled Innovation
maurice.mcnaughton@uwimona.edu.jm✉
Harnessing Open Data to Achieve Development Results in Latin America and the Caribbean

Dr Parris Lyew-Ayee Returns to Jamaica from Eisenhower Fellowship

Posted: June 02, 2014



Dr Parris Lyew-Ayee - Senior Lecturer and Director of the Mona Geoinformatics Institute of the University of the West Indies - has returned to Jamaica following a seven-week program in the United States to investigate ways to improve data-driven decision-making in Jamaica.

Dr Lyew-Ayee was sponsored by the prestigious Eisenhower Fellowships program, chaired by General Colin L. Powell, USA (Ret).

UWI Mona's Simone Badal McCreath receives prestigious Award for cancer research

Posted: April 10, 2014



Research Fellow at the Natural Products Institute at The University of the West Indies (UWI), Mona, Dr Simone Badal McCreath is one of five women chemists worldwide to be honoured with the Elsevier Foundation Awards for Early Career Women Scientists in the Developing World, for research that looks to nature for ways to address cancer and other medical problems.

Simone Badal McCreath's work covers the screening of Jamaican natural and synthetic compounds for potential anti-cancer and cancer-preventive properties. The anti-cancer research conducted was done under the supervision of Dr. Rupika Delgoda.



Caribbean Risk Atlas (CARISKA)

<http://cariska.mona.uwi.edu/>

- CARISKA is an online repository for spatial data on risk for hurricanes, earthquakes and floods in the Caribbean.
- A grant agreement was signed between the University of the West Indies (UWI) Disaster Risk Reduction Centre (DRRC) and the World Bank in June 2009 to aid in risk preparedness and research.
- The Institute of Sustainable Development is also a partner in the project
- Aim to strengthen the capacity in the Caribbean region to analyze disaster risk through the development of comprehensive risk management strategies

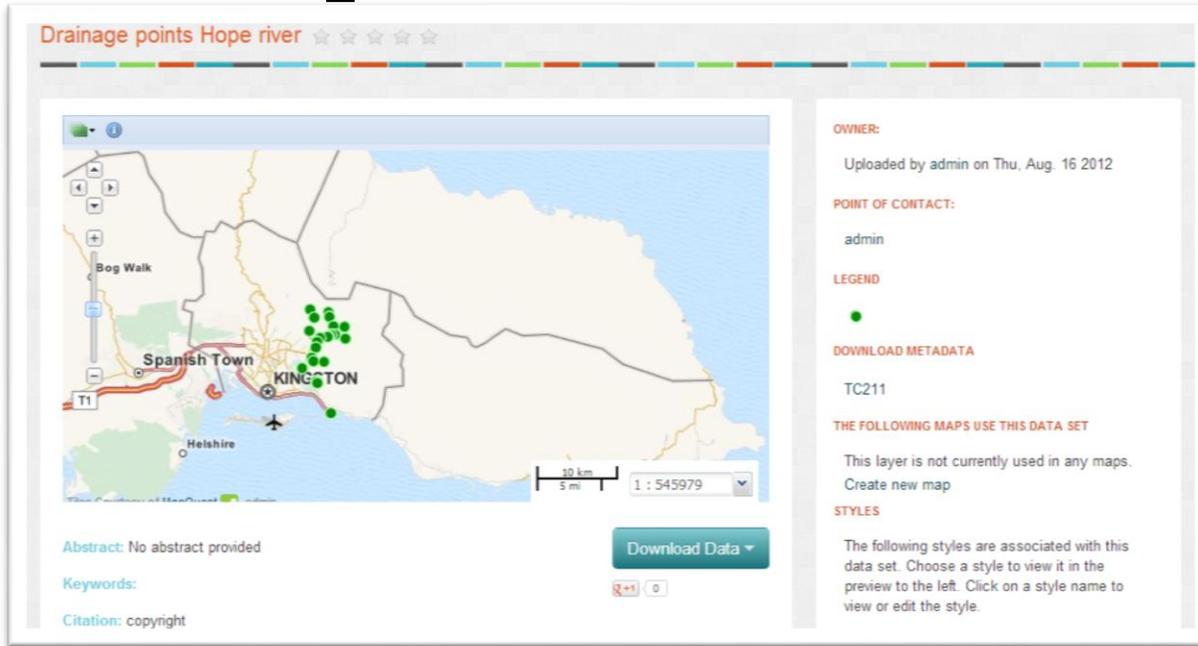
The screenshot shows the CARISKA website interface. At the top, there is a navigation bar with the CARISKA logo, a search bar, and a 'Go' button. Below the navigation bar, there are icons for 'HOME', 'DATA', and 'MAPS'. The main content area is divided into several sections:

- Welcome:** A section with a heading 'Welcome' and a paragraph: 'GeoNode is an open source platform for sharing geospatial data and maps. If you have any questions about the software or service, join our mailing list by emailing geonode@librelist.com.' Below this are three main actions: 'Upload Data', 'Create Map', and 'Explore Maps', each with a corresponding icon and a 'CREATE MAPS>>' button.
- ACTIVITY LOG:** A section with a heading 'ACTIVITY LOG' and a sub-heading 'DRAINAGE POINTS HOPE RIVER'. It includes a star rating, the user 'Admin', and the date 'THU 16 AUG 2012'. Below this is a map showing the location of the drainage points, with a 'More>>' button.



Caribbean Risk Atlas (CARISKA)

<http://cariska.mona.uwi.edu/>



CARISKA was developed based on the Geonode 1.2 platform, an open source geospatial content management system developed by World Bank

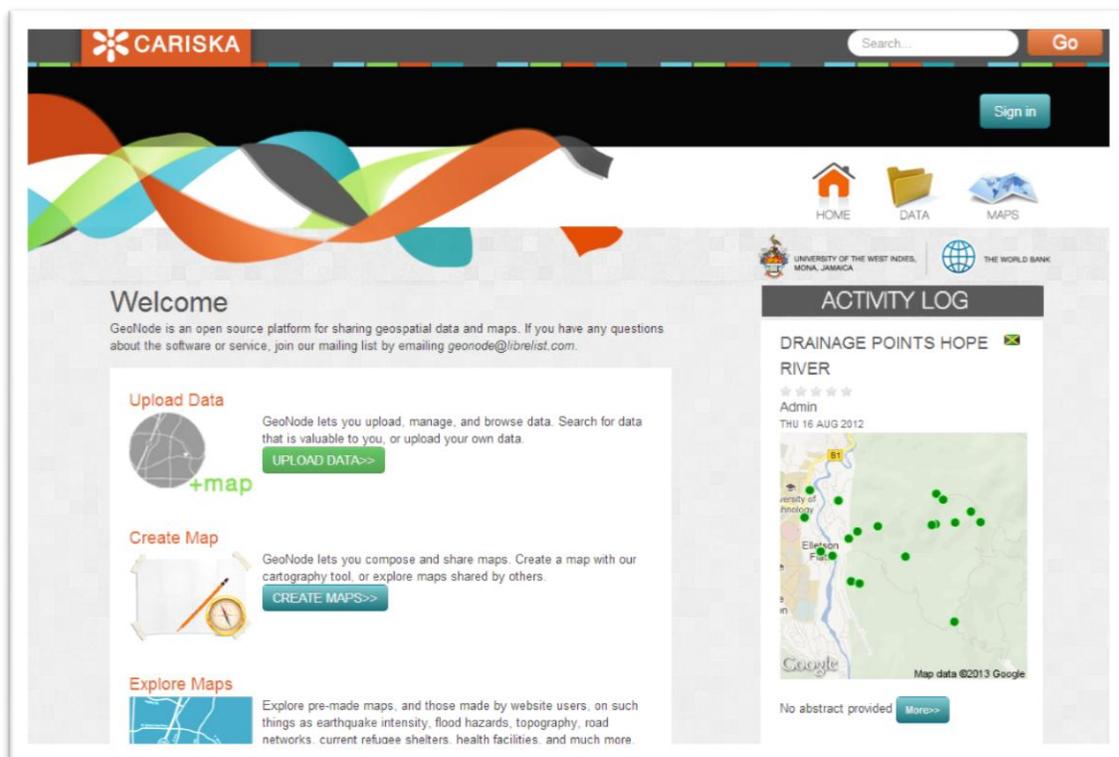
Further extensions were developed by Mona Geoinformatics to improve downloads, flagging, comments, logging and overall aesthetics

A rigid “model” system was implemented where users could propose models based on the hazard, exposure and vulnerability.

- Data stored as raster or vector images, enabling the production of high resolution maps and datasets from the Caribbean region.
- Users include physical planners, disaster managers, owners of data and persons involved in modelling risk
- CARISKA is currently deployed at the UWI Mona’s Cloud Facilities and managed by Mona Geoinformatics.
- **Contact Dr Parris Lyew-Ayee - parris.lyewayee@uwimona.edu.jm**



Impact of CARISKA - Proof of Concept



CARISKA has only tipped the iceberg in terms of Open Data integration in the Caribbean. More is still required in terms of the collection and production of data for upload across the Caribbean.

The administrator of the system is Dr David Smith (david.smith02@uwimona.edu.jm)

- Sharing of data within the Caribbean context is not always favoured due to privacy issues. CARISKA provides the ability to manage user restrictions, building confidence in researchers to share
- Data can be fully open to the public for viewing, modification and download, or private for use only by a group or variations in-between.
- CARISKA acts as the central source for the data used in multiple and widespread projects.
- Data such as soil's response to ground movement and the location of medical centres can be layered to develop new research data which identifies the vulnerabilities of the medical centres.



Open Data in the Caribbean

<http://caribbeanopeninstitute.org/content/open-data>



Open Data activities in the Caribbean are currently being implemented through a node of the Caribbean Open Institute, based at the Mona School of Business and Management, UWI.

- **Open Data** in the Caribbean could be a powerful catalyst for:
 - Enabling greater accountability and transparency
 - Improving public sector efficiency and service delivery
 - Stimulating economic development through the active, participatory innovation between regional governments and Caribbean civil society.
- Initiatives facilitated by the institute include:
 - [Open Data in Agriculture](#)
 - [Sports and Open Data](#)
 - [Edward Seaga Database](#)
 - [Virtual Trade Policy Portal](#) (Sridath Ramphal Centre, UWI)



Harnessing Open Data to Achieve Development Results in Latin America and the Caribbean

In collaboration with partners Fundacion Avina, ECLAC and the OAS

- March 2014-Aug 2016
- Client: International Development Research Centre
- Amount: CA\$329,500

Objectives

- Improve understanding of the demand and use of Open Data for development in the Caribbean
- Support the collaborative development of products and services between government, civil society, academic institutions and entrepreneurs
- Promote the development and adoption of emerging open standards that **enable open data initiatives to scale up**
- Explore mechanisms for **open data** to address the needs of marginalized groups, focusing particularly **on youth, women and urban poor**

....highlighting potential opportunities in open data to ultimately to influence and inform Government policy



Harnessing Open Data to Achieve Development Results in Latin America and the Caribbean

Description of Services

- Sector Mapping/Scoping Studies to identify Open Data impact opportunities and design strategic interventions to evaluate "theory of change" hypotheses
- Develop initiatives or experimental designs around three strategic areas: co-creation (innovation), standards development and capacity building (inclusion)
- Promote the development and adoption of emerging open standards that enable open data initiatives to scale up
- Conduct research evaluation & dissemination based on the outcomes of the strategic interventions

Contact: Dr Maurice McNaughton- email maurice.mcnaughton@uwimona.edu.jm



ESHARE - International Centre for Environmental and Nuclear Sciences

- EShare provides participating members with 2Tb system storage etc at no cost
- establish an open access digital repository service that stores, preserves, and provides a central point of distribution for base data sets relevant to the environment
- Soils datasets include crop data to indicate which crops to target for further research regarding elevated levels of trace elements which would restrict their use in international trade
- Other use of the data to investigate health implication for local populations eating food grown on these soils
- Data is made available to allow use by other research groups with other interests and commercial mining prospecting interests



UWI Usain Bolt Track





Geography/Geology student's doctorate research highlighted in NASA Publication



Achievements



Geography/Geology student's doctorate research highlighted in NASA Publication

- Mr Donovan Campbell (Department of Geography and Geology) was one of three international postgraduate students to receive an award for their doctoral research at the Third international Conference on Climate Change: impacts and responses, in Rio de Janeiro, Brazil in July 2011.
- His research on Climate Change and Small Farming in southern St.Elizabeth focuses on the impact of climate change on domestic food production, food security and the livelihood vulnerability of small farmers in Jamaica.
- The research utilizes both quantitative techniques (Livelihood Vulnerability Indices) and qualitative (ethnography) methods to understand how small farmers cope with and adapt to climatic variability and change. His research was also featured on the NASA on-line publication '*Sensing Our Planet: NASA Earth Science Research Features*'

Sources:

- <https://myspot.mona.uwi.edu/marcom/newsroom/entry/4312>
- VC Report 2010
- <https://earthdata.nasa.gov/featured-stories/featured-research/growing-jamaica>



The Cardiac Surgery Simulator

(U.S. Patented)



“Take a pig’s heart - add the genius of a cardiothoracic surgeon, the smarts of a computer scientist and an electrical engineer, the result... a mechanism by which cardiac surgery will be taught!”

Sources:

- <http://myspot.mona.uwi.edu/alumni/econnection/volume-3-issue-2/article/uwi-cardiac-surgery-simulator>
- VC Report 2010



Collaborative research on the impact of Climate Change on Reefs



Collaborative Research on the Impact of Climate Change on Reefs

Centre for Resource Management and Environmental Studies (CERMES) at the Cave Hill Campus was one of the main implementing institutions of the EU-funded project, The Future of reefs in a Changing Environment (FORCE) which began in January 2010 and ended May 2014.