

CARIBBEAN ACADEMY OF SCIENCES

Newsletter

Volume 5 Issue 2

November 11, 2022



S



Antigua



Barbados



Guyana



Jamaica



Trinidad



Guadeloupe



National Flower, Jamaica – Lignum Vitae,
Guaiacum officinale

A look inside this newsletter:

Spotlight:
Prof. Kit receives the Hummingbird Medal Gold –
engineering education and research....page 1

Biosafety Challenges to food and agriculture ... page 3

NIHERST S&T Indicators Publication ... page 5

Stories – Transformations to Sustainability (ISC)... page 6

Science Education for Sustainable Development ICSD
proceedings page 7

2022: International Year of the Basic Sciencespage 8

Environmental Managementpage 9
FFA Newsletter page 11

Spotlight

***The Hummingbird Medal, Gold, for Engineering Education and Research awarded to
Professor Kit Fia Pun, President of the Caribbean Academy of Sciences
Trinidad and Tobago Chapter***



Professor Pun is a Chartered Engineer and a Chartered Marketer in the UK, as well as a Registered Professional Engineer in Australia, Europe, Hong Kong, and The Republic of Trinidad and Tobago. He is the President of the Caribbean Academy of Sciences Trinidad and Tobago Chapter and a Fellow of CAS. Professor Pun is also a member of several professional bodies and learned societies (such as IEEE, IIE, ASME, ASQ, IET, BCS, CIM, IEAust, HKIE, HKSQ, and APE). He served as the Chairperson of the Technology and Engineering Management Society Chapter (formerly the Technology Management Council) of the IEEE Trinidad and Tobago Section (2003-2015), and Past Chair of the Mechanical & Industrial Division of the Association of Professional Engineers of Trinidad and Tobago (2004-2009). He was awarded the Hummingbird Gold Medal for his work in Engineering Education and Research at the 53rd Trinidad and Tobago 2022 National Awards Ceremony held on September 24th, 2022. The award was conferred by The Honourable Keith Rowley, Prime Minister of Trinidad and Tobago and Her Excellency Paula-Mae Weekes O.R.T.T., President of the Republic of Trinidad and Tobago.

Professor Kit Fai Pun has been instrumental in the development of many undergraduate and postgraduate courses in the UWI Faculty of Engineering and has been recognized as the most downloaded researcher in the Department of Mechanical and Manufacturing Engineering. He has headed the Trinidad and Tobago chapter of several local, regional and international science and engineering organisations.

Professor Pun stated that being honored as an awardee of the Hummingbird Gold Medal is incredibly gratifying and I am so thankful for this recognition in the spheres of Engineering Education and Research. The award belongs to the faculty, colleagues, researchers and everyone who devotes consistent work and commitments in the UWI community to foster 'Engineering Education and Research'.



CAS extends congratulations to Professor Kit Fai Pun.

Presentation at United Nations Office for Disarmament Affairs (UNODA) Conference, New Delhi, India - Biosafety Challenges to Food and Agriculture Security in the Caribbean

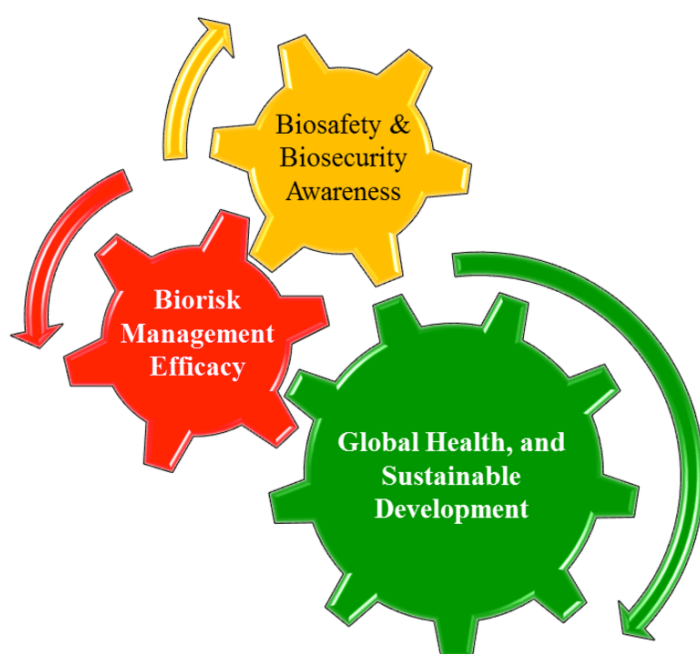
Professor Neela Badrie is a member of the biosecurity working group of the InterAcademy Partnership (IAP). She was invited to present at the conference on 'Advancements in Science and Technology: Benefits and Risks for the Biological Weapons Convention' on the 11th October 2022. This conference was organised by the United Nations Office for Disarmament Affairs (UNODA) in collaboration with the Ministry of External Affairs, Government of India and was held at the Manohar Parrikar Institute for Defence Studies and Analyses, New Delhi, India. Her presentation was on "Biosafety challenges to food and agriculture security in the Caribbean" and focused on the Caribbean Community Member Countries (CARICOM), agriculture/bio/food security challenges facing the Caribbean countries, some bio/food safety threats, towards the implementation of national biosafety frameworks in Caribbean countries and the establishment of the Caribbean Agricultural Health and Food Safety Agency (CAHFSA) as a regulatory agency for biosafety.

The Biological Weapons Convention (BWC) is the primary multilateral instrument to prevent the malicious use of biological agents and toxins and is at a crucial juncture with its Ninth Review Conference planned for 28 November to 16 December, 2022. The thematic sessions of the conference were on synthetic biology and biosecurity, agriculture and biosecurity, neuroscience, neurotechnology and biosecurity, biorisk surveillance, verification and mitigation, artificial intelligence and cyber-biosecurity, youth engagement and gender considerations in the BWC and open discussion on science-policy interface.

The conference aimed to assess the latest scientific and technological advances and their implications on the implementation of the BWC. It assessed the status and overall progress made under the Convention and would determine on how to further strengthen it in the context of existing and emerging challenges. One of the pivotal issues is how to take into account new and relevant scientific and technological developments in the implementation of the Convention, as required by its Article XII. The state parties will further discuss different proposals for establishing a scientific advisory mechanism. The science and technology discussion included the Tianjin Biosecurity Guidelines for the code of conduct of scientists,

dual use of research, biorisk assessment and management. Experts from academia and industry around the world shared their insights as speakers and panelists

Professor Badrie is an executive member and fellow of the Caribbean Academy of Sciences (CAS), is a researcher and lecturer in microbiology and food safety at the University of the West Indies, St. Augustine campus, Trinidad and Tobago and is an attorney-at-law.



Professor Neela Badrie

The National Institute of Higher Education, Research, Science and Technology (NIHERST), Trinidad and Tobago has published its latest edition of the S&T indicators which could be accessed for this link:

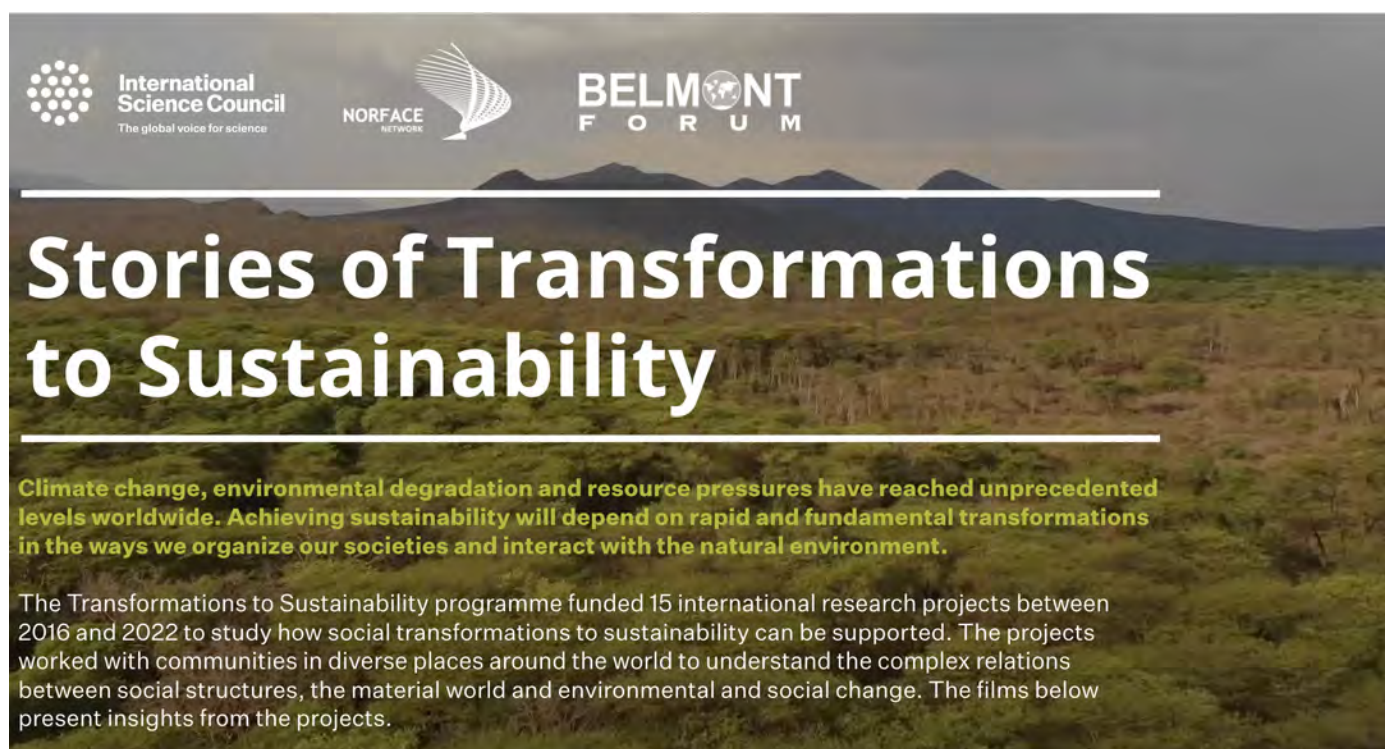
<https://www.niherst.gov.tt/resources/publications/MIST%20Booklet.pdf>

This publication captures data on two of the three components of scientific and technological activities (STA): Research and Experimental Development (R&D) and Scientific and Technological Services (STS).

With the dissemination of this publication, the Institute aims to inter alia, improve evidence-based decision-making by policy-makers, benchmark against developing and developed economies and serve as reference data.

The publication of this edition of S&T indicators was guided by the Network for Science and Technology Indicators –Ibero-American and Inter-American– (RICYT) and the UNESCO Institute for Statistics (UIS).





The International Science Council (ISC) forged partnerships to the seven stories of Transformations to Sustainability which can be viewed using the link below:

https://stories.council.science/transformations-sustainability/?utm_source=Email+footer&utm_medium=Text&utm_campaign=T2Sfilms

***International Conference on
Sustainable Development 2022
[ICSD], September 19th 2022***

Ms. Petal Punalall-Jetoo (CAS Secretary) presented at the International Conference on Sustainable Development 2022 (ICSD) on September 19th 2022 on the:

"Science Education for Sustainable Development - The impact of UN ESCO's Global Microscience Experiments Project in the Caribbean";



The Global Association of Master's in Development Practice Programs (MDP), Columbia University, in collaboration with Sustainable Development Solutions Network (SDSN), a global initiative for the United Nations, hosted the Tenth Annual International Conference on Sustainable Development (ICSD) on 19-20 September, 2022 virtually under the theme: A Decade of ICSD.

The aim of this annual conference is to bring together persons involved in research, policy, practice, and business. Participants shared practical solutions for achieving the SDGs at local and national levels. Ms. Punalall Jetoo, Secretary, CAS Executive Committee presented on the piloting and expansion of UNESCO's Global Microscience Experiments Project in the Caribbean.

Please access Conference Proceedings on: [Conference proceedings](#)

A publication on the Relevance of Science Diplomacy in the Caribbean can be viewed on: <https://www.diplomacy.edu/resource/science-diplomacy-capacity-development-book/relevance-of-science-diplomacy-in-the-caribbean/>

2022 – International Year of the Basic Sciences

"At a time when humanity must invent new ways of producing, travelling and heating, we know we need the basic sciences and the potential they possess.

More than ever, we must allow the basic sciences to expand in all directions to explore, investigate and experiment. For this capacity to imagine, innovate and discover will determine whether we are able to rise to the major challenges of our time"

Audrey Azoulay, Director-General of UNESCO

November 10, 2022 marked World Science Day for Peace and Development celebrated under the theme:

Basic Sciences for Sustainable Development

Contributions of Basic Sciences to Sustainable Development, UNESCO:

<https://www.unesco.org/en/year-basic-sciences/explainer>

Environment Management, Biodiversity and Ecosystem Services

Professor Raymond Jagessar, Keynote speaker,

University of Guyana School of Graduate Research Symposium on the 6th of October, 2022



Abstract

Environmental Management is a system that incorporates processes for monitoring, reporting, developing and executing environmental policies. The aim of encouraging an environmental management system is to ensure an healthy state of our planet for the present and future generations. It preserves all forms of life. Biodiversity or biological diversity is the variety and variability of life on the Earth. It's a measure of variation at the genetic (genetic variability), species (species diversity) and ecosystem diversity level. Ecosystem services or "eco-services" are defined as the goods and services provided by ecosystems to humans. This keynote presentation focuses on selective issues that affects the environment in Guyana and the Caribbean and policies that have been enacted or that can be put into place to ensure a sustainable environmental management framework that also conserve our biodiversity and maximise Ecosystem Services. Environmental issues include global warming, water contamination, garbage disposal, solid waste/solvent disposal, oil exploration etc. Global

warming must be minimized. The Caribbean and Guyana are mostly affected. Climate Change resulting from Global warming has affected food security in the region. Guyana like other Caribbean countries must have robust infrastructure to cushion the effects of Climate Change and develop climate smart agriculture practices. Water monitoring is essential to inform the Government, EPA and the populace of any imminent threat of water pollution and toxicity, so that the necessary procedures can be put in place to prevent hazardous effects. It also, provides the opportunity to enact policies to safeguard its status. Contaminants must be below the international threshold limit. Whilst the “brown economy” is flourishing, we need to continue to pursue the “Green economy”. In addition, enact policies to safeguard our marine ecosystem against effects of oil exploration and extraction. Guyana is blessed with a highly bio-diversified forest, whose selective flora can provide forest products, raw materials, biochemical, genetic and cultural services amongst others. For example, selective plants from the Guyanese flora have been screened for natural products and the antimicrobial/antidiabetic/antioxidant profile of some have been established. The forest provides a source for timber under a regularized agreement. The latter prevents deforestation or control deforestation. Through LCDs, our forest provides an international sink for carbon dioxide capture, whilst earning revenues. Policies must be put in place for a sustainable environmental management that protects our flora and fauna eco-diversity and providing a healthy environment for all. Saving our planet and our country is of paramount importance to all. Environmental management is everybody business.

Keywords: Environmental Management, Environmental policies, Ecosystem, Eco-services, brown and green economy.



To access the full newsletter, use this link: <https://tinyurl.com/FFANewsletterOctober22>

Reminders:

Membership Fees

Please remember to pay your membership fees to the local chapter to which you are affiliated by December 31, 2022. If you need assistance, please contact your local Chapter Executive.

Newsletter

Please submit articles, announcements, and other science related matters that you wish to publish in the newsletter.

Guidelines for Submission of Articles for CAS Newsletter

1. Articles should not exceed 1000 words (1 ½ pages)
2. Images should be submitted as separate files

Articles should be submitted to:

casexecutive2021@gmail.com

If you have questions, please reach out to us.

Call for the design and facilitation of short courses:

- Cybersecurity
- Statistics
- Renewable Energy
- Effects of COVID-19 on the Caribbean's education system

Please send your submission of interest to casexecutive2021@gmail.com December 31, 2022

Remuneration packages will be available for course designers and facilitators

CAS Executive Committee

President: Prof. Raymond Jagessar

Treasurer: Prof. Neela Badrie

Secretary: Petal Punalall Jetoo

Foreign Secretary: Prof. Emeritus Winston Mellowes

Public Relations Officer: Dr. Mark Wuddivira