



INTERNATIONAL CONFERENCE ON TROPICAL SCIENCES: **CONTRIBUTIONS TO SUSTAINABILITY**

TropSc™ 2021

25-27 October 2021

Follow us on



AKADEMI SAINS MALAYSIA



Mahathir Science Award Foundation (MSAF)



Mahathir Science Award Foundation (MSAF)



@mahathirscienceaward

For more updates visit : msa-foundation.org/TropSc2021 or please contact,

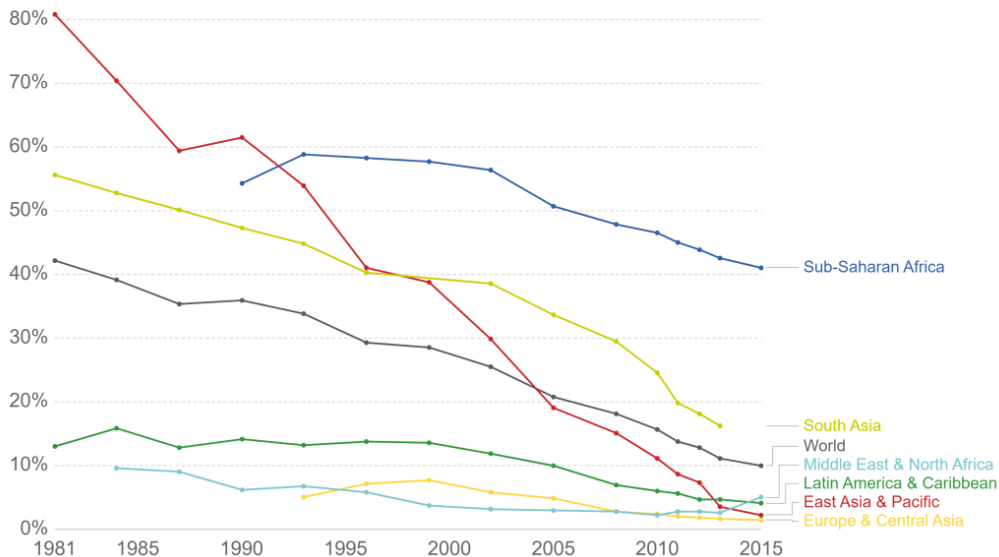
Ms Aliya Nabil (aliya@msa-foundation.org)

**WHY ARE THE
TROPICS IMPORTANT ?**

Poverty is rampant in the Tropics

Share of population living in extreme poverty by world region

Extreme poverty is defined as living with less than 1.90\$ per day (in 2011 International Dollar). International dollars are adjusted for price differences across countries and across time.



Source: World Bank – World Development Indicators

POPULATION GROWTH

- **3 billion people** (42% of the world's population) live in the Tropics
- By 2050, **two thirds of the world's children (67%)** will live in the Tropics

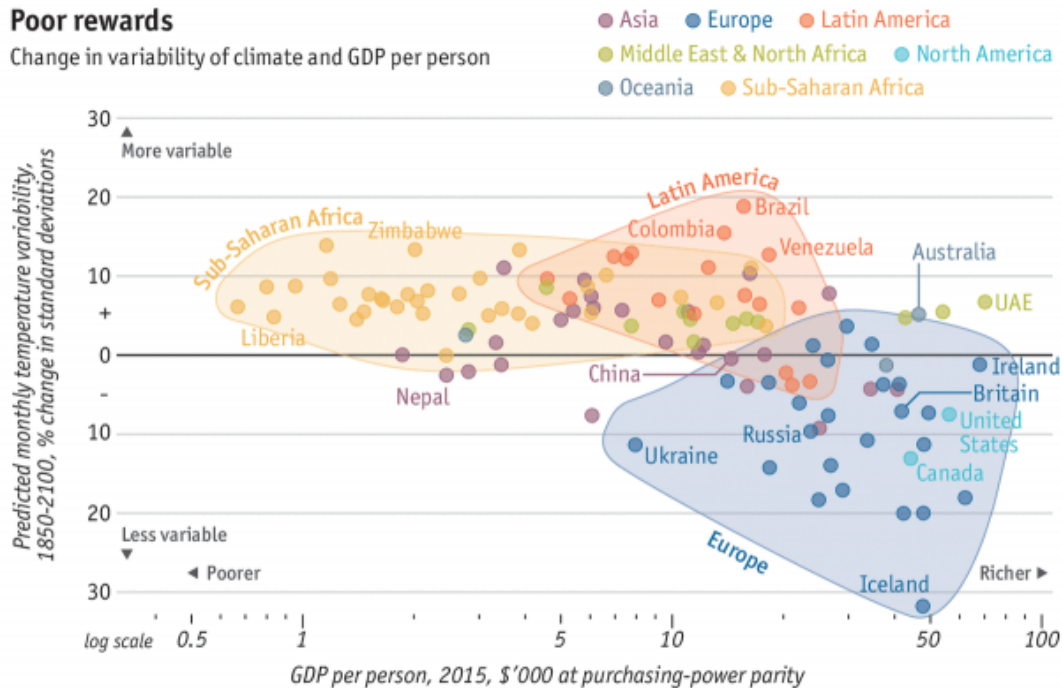
FOOD SECURITY

- **25 %** of the world's population rely on the **Tropical rainforests** to generate food and income
- The Tropics covers **40%** of the world's agricultural area

Countries in the Tropics are most affected by climate change

Poor rewards

Change in variability of climate and GDP per person



Source: Climate models predict increasing temperature variability in poor countries by Sebastian Bathiany et al. (2018)

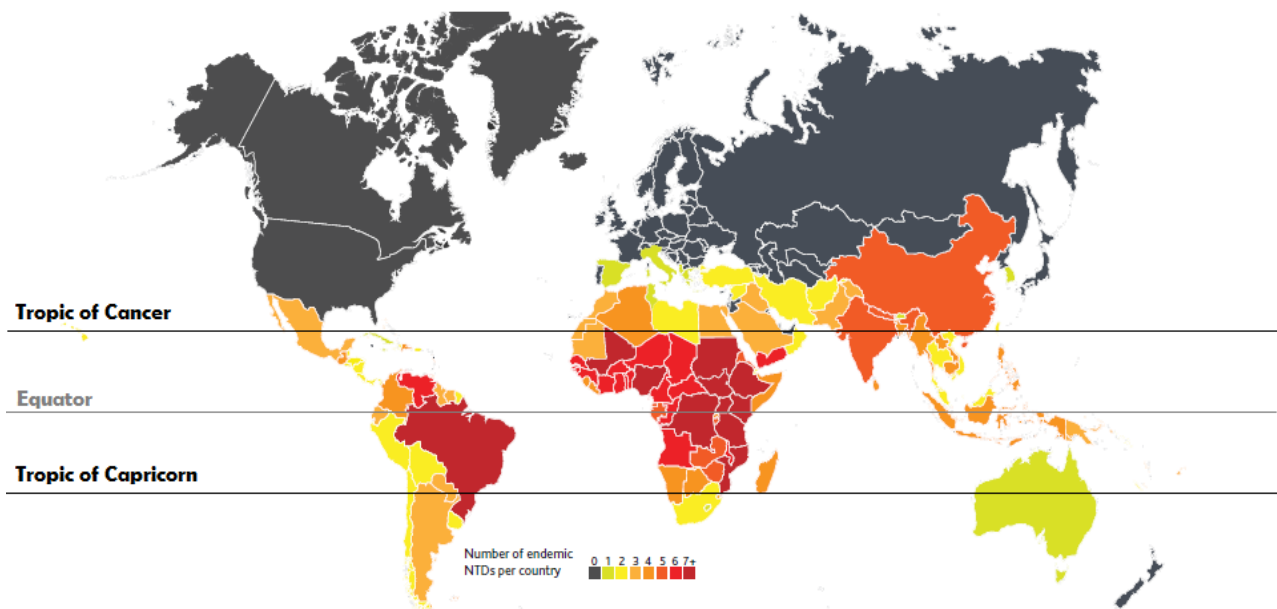
CLIMATE CHANGE

- The ocean in the Tropics drive the dynamics of climate change
- The Tropics are expanding at 30 miles per decade

TROPICAL ECOSYSTEM

- The **15** million square km that once existed has now been reduced to only **6** million square km
- Every year **140 000** square km of Tropical rainforests are destroyed

1 billion people are infected annually by Neglected Tropical Diseases



Source: World Bank – World Development Indicators

WORLD BIODIVERSITY

- **80%** of the world's **biodiversity** are in the Tropics
- The **fishing yield** of marine species in **Tropical countries** could **decrease by 40%**

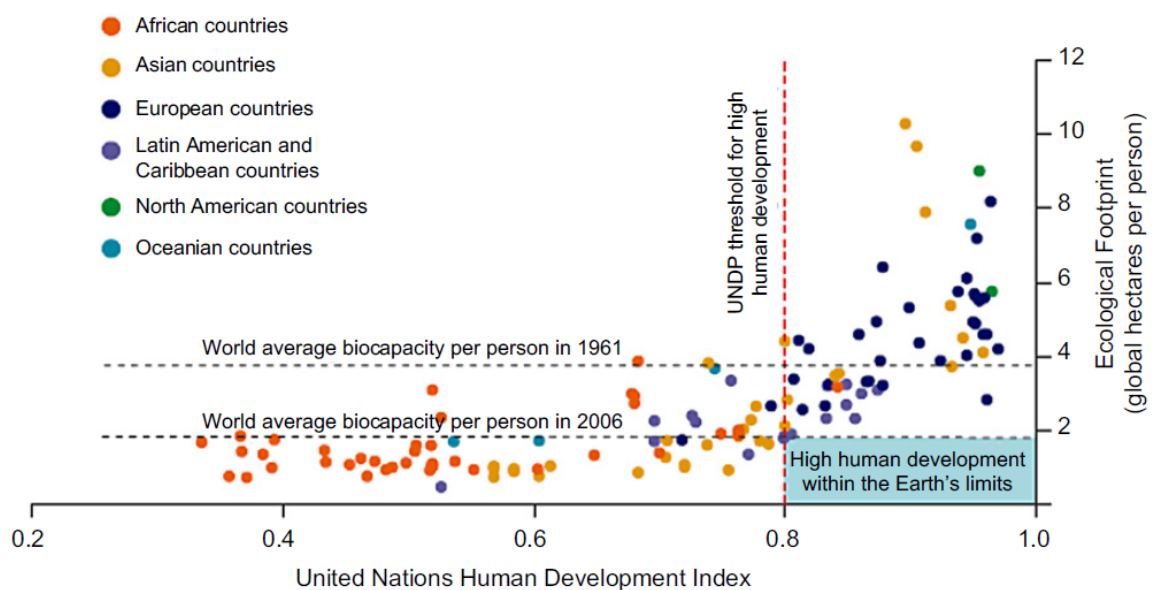
TROPICAL MEDICINE

- **Tropical rainforest provide natural resources** which makes up the ingredients for more than **60% of anti-cancer drugs**
- **Climate change** will induce the **escalation of tropical diseases**

Source: State of the Tropics Report, 2017

The ecological footprint of most tropical countries are within the Earth's biocapacity limits while the Human Development Index is low.

A strategic balance has to be achieved.



Source: Tonis, R. (2015). SMEs role in achieving sustainable development. Journal of Economic Development, Environment and People, 4(1), 41-50.

About the Organisers



The Mahathir Science Award Foundation

In 2005, the “ASM Award for Scientific Excellence in Honour of Tun Dr Mahathir” was renamed as the Mahathir Science Award. In 2010, the Mahathir Science Award Foundation was established with seed funding from the Academy of Sciences, Malaysia (ASM) to manage and oversee this prestigious award.

The Mahathir Science Award is positioned as the world’s most prestigious science award for tropical sciences, and bestowed on any scientists, institution or organisation worldwide in recognition of contributions and innovations towards solving problems in the tropics through science and technology.

One award is conferred annually for outstanding contributions in the following areas:

- Tropical Agriculture
- Tropical Architecture and Engineering
- Tropical Natural Resources
- Tropical Medicine

The award carries a cash prize of USD 100,000.00, a gold medal and a certificate. To-date there have been 11 winners of the Mahathir Science Award.



Academy of Sciences Malaysia (ASM)

ASM strives to be the nation’s Thought Leader for matters related to science, engineering, technology and innovation. ASM is committed to pursue excellence in the fields of Science, Engineering and Technology (SET) for the benefit of all. Academy of Sciences Malaysia supports good science by endorsing activities of highest fulfillment to promote engagement, understanding and literacy in science, technology and innovation.

Taking science outside its box is often a delightful journey that leads us to interesting new directions filled with various types of engagements with people. At the end of the day, it is ASM’s commitment to enhance the scientific capacity of the country.

International Conference on **TROPICAL SCIENCES: CONTRIBUTIONS TO SUSTAINABILITY**

The conference focuses on the contributions of Science and Technology in addressing the challenges and value of the Tropical region to achieve sustainability.

Subject areas covered:

Tropical Medicine

Tropical Agriculture

Tropical Natural Resources

Tropical Architecture & Engineering

Climate Change

Youth

Open Science

Targeted participants:

Government, Private sector, Academia, NGOs, Youth & the Media

Conference Programme

DAY 1: 25 OCTOBER 2021 | MONDAY

16:45	Welcome speech by Tan Sri Samsudin Osman Chairman, Mahathir Science Award Foundation
16:50	Official Opening by Prime Minister of Malaysia
17:00	Keynote Address on Tropical Sciences by YABhg. Tun Dr Mahathir Mohamad
17:15	Address by Head of State (Asia)
17:30	Meet the Speakers Session
18:00	Keynote on Tropical Medicine Dr. Peter Daszak (USA)
18:30	Keynote on Tropical Architecture and Engineering Prof. Dr Wong Nyuk Hein (Singapore)
19:00	Meet the Speakers Session
20:00	Dialogue on Sustainable Development in the Tropics Panellists: Ministers and Economists
21:30	End

*subject to change

(All times are in GMT+8)

Conference Programme

DAY 2: 26 OCTOBER 2021 | TUESDAY

16:25	Introductions			
16:30	Address by Head of State (Anglophone Africa)			
16:45	Keynote on Tropical Agriculture Prof. Dr Shenggen Fan (China)			
17:15	Talk by Tan Sri Dr Jeffrey Cheah – Investing in the Tropics			
17:30	Meet the Speakers Session			
18:00	Panel Discussions on Challenges of the Tropics I			
	Changing Agriculture Landscape in the Tropics	Digital Innovations for Public Health in the Tropics	Sustainable Use and Health of Tropical Biodiversity	Climate Change in the Tropics
19:30	Meet the Speakers Session			
20:00	Address by Head of State (Latin America and the Caribbean)			
20:30	Panel Discussions on Challenges of the Tropics II			
	Climate-Smart Agriculture in the Tropics	One Health Approach to Tropical Health	Sustainable Blue Economy in the Tropics	Leading Edge Material Development for the Tropics
22:00	End			

*subject to change

(All times are in GMT+8)

Conference Programme

DAY 3: 27 OCTOBER 2021 | WEDNESDAY

16:40	Introductions			
16:45	Address by Head of State (Francophone Africa)			
17:00	Keynote on Tropical Natural Resources Prof. Emeritus Tan Sri Zakri Abdul Hamid FASc (Malaysia)			
17:30	Panel Discussions on Challenges of the Tropics III			
	Open Science for Tropical Biodiversity	Smart People-First Cities in the Tropics		Green Energy in the Tropics
19:00	Meet the Speakers Session			
20:00	Panel Discussions on Challenges of the Tropics IV			
	[19:45] Youth Resilience in the Tropics <i>(and Soft Launch of Global Youth Development Index and Report)</i>	Frontier technologies in Tropical Agriculture	Natural Product Development and Trade: The Future is in the Tropics	Neglected and Vector-borne Tropical Diseases
21:45	Presentation and Adoption of Kuala Lumpur Communique on the Tropics Moderator: Mazlan Othman			
22:45	End			

*subject to change
(All times are in GMT+8)