

Mobilizing Indigenous and Local Knowledge Solutions

Addressing Climate Impacts and
Vulnerabilities: A Perspective from
the **Caribbean Region**



United Nations
Educational, Scientific and
Cultural Organization

LiNKs

Local and Indigenous
Knowledge Systems

Workshop report in English:

<https://unesdoc.unesco.org/ark:/48223/pf0000375025.locale=en>

Informe del taller en español:

https://unesdoc.unesco.org/ark:/48223/pf0000375025_spa



UNESCO

Natural Science Sector

26 July, 2021



ABOUT

UNESCO organised the **first regional Caribbean** workshop on indigenous and local knowledge of climate impacts.

3 – 5 September 2019 in **Georgetown, Guyana.**

PARTICIPANTS

AI Anguilla

MS Montserrat

AG Antigua & Barbuda

BS Bahamas

BB Barbados

BZ Belize

CO Colombia

CU Cuba

GY Guyana

MX Mexico

NI Nicaragua

PR Puerto Rico

VC St. Vincent & the Grenadines

SR Suriname

TT Trinidad & Tobago

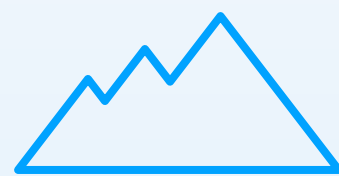
KNOWLEDGE CO-PRODUCTION

The workshop brought together indigenous and local knowledge holders with climate scientists from the Caribbean region

Culture & Languages



Landscapes & Seascapes



Climate & Livelihood



INDIGENOUS
AND LOCAL
KNOWLEDGE
ARISE FROM
SPECIFIC SOCIAL
CONTEXTS AND
ECONOMIC
PROCESSES

Values & Beliefs



Practices



Gender Dynamics



UNESCO CONTEXT



- UNESCO has a **20-year history** of working with indigenous and local knowledge holders on climate and biodiversity policies and practices
- UNESCO a policy on engaging with indigenous peoples

<https://en.unesco.org/indigenous-peoples/policy>

- UNESCO's **SIDS Action Plan** aligns with the SAMOA Pathway

<http://www.unesco.org/new/en/natural-sciences/priority-areas/sids/resources/publications/unesco-sids-action-plan/>

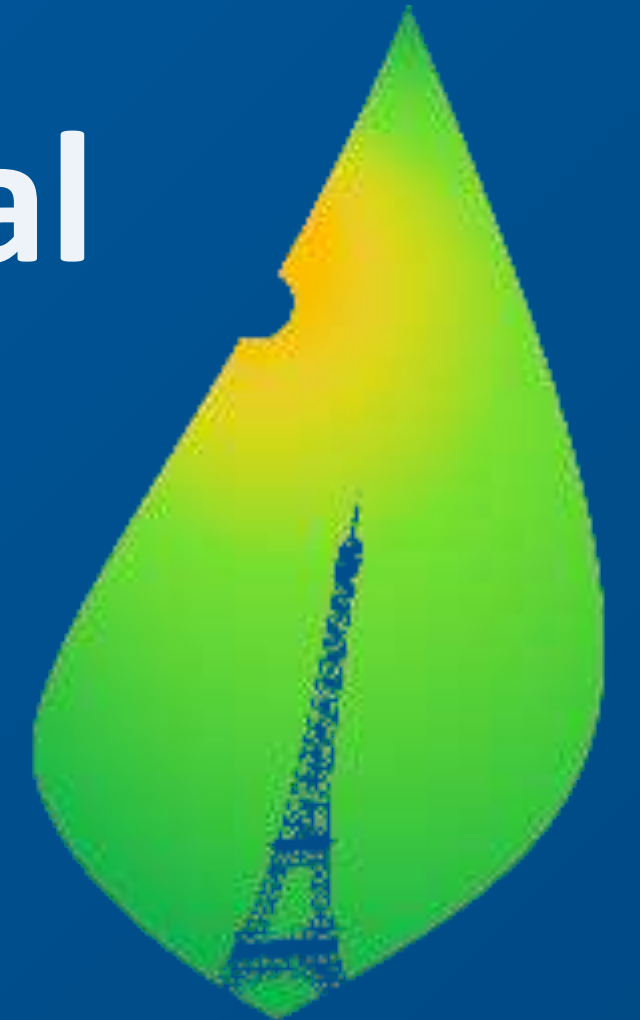
- The Georgetown event and report are contributions to the rolling work plan of the Facilitative Working Group of the Local Communities and Indigenous Peoples Platform under the UN Framework Convention on Climate Change (**UNFCCC**)

<https://unfccc.int/topics/local-communities-and-indigenous-peoples-platform/the-big-picture/lcipp/initial-workplan-2020-2021-of-the-local-communities-and-indigenous-peoples-platform#eq-2>



United Nations
Educational, Scientific and
Cultural Organization

“ Parties acknowledge that adaptation action [...] should be based on and guided by the best available science and, as appropriate, **traditional knowledge, knowledge of indigenous peoples and local knowledge systems.**”



Paris Agreement, article 7.5

PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21·CMP11



Excerpt from Article 31.1 of the United Nations Declaration on the Rights of Indigenous Peoples

Indigenous peoples have **the right to protect and develop their cultural heritage**, traditional knowledge and cultural expressions, as well as their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge...



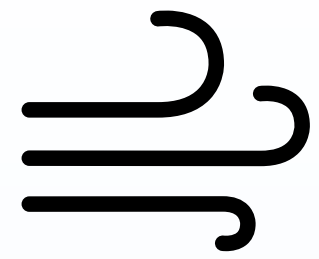
Co-produced knowledge

The two or more epistemologies can be combined to produce the best available knowledge, improving decision-making in climate issues – respecting their different origins, functions and governance. Complementarity creates opportunities for knowledge coproduction and improving decision-making.



Scientific knowledge

**Knowledge of indigenous
peoples and local
communities**



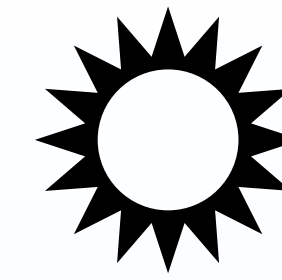
HURRICANES

and other extreme weather events



FLOODING

as well as storm surges and erosion



DROUGHTS

and threats to fresh water supplies

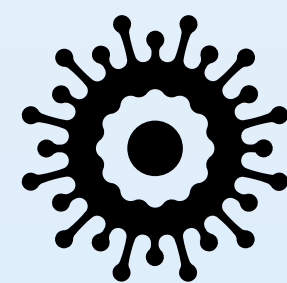


CLIMATE HAZARDS IN THE CARIBBEAN



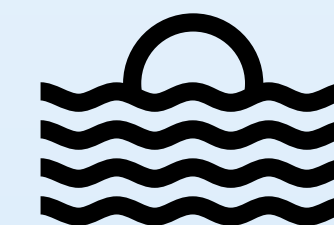
DECLINING BIODIVERSITY

for instance via loss of pollinators



INCREASE IN HEAT-SENSITIVE DISEASES

example: dengue fever

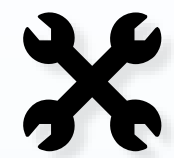


ECOSYSTEM IMPACTS

rising sea level, salination of drinking water, coral bleaching and death, ocean acidification, and others

COMPILE

and share case studies
on ILK from the
Caribbean region,
including States and
Non-self-governing
territories



GEORGETOWN WORKSHOP OBJECTIVES

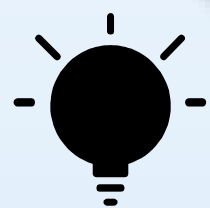


DELIBERATE

on the issues and key
characteristics of ILK
in the Caribbean

GENERATE

relevant
recommendations to
strengthen ILK
alongside science in
policy and decision
making



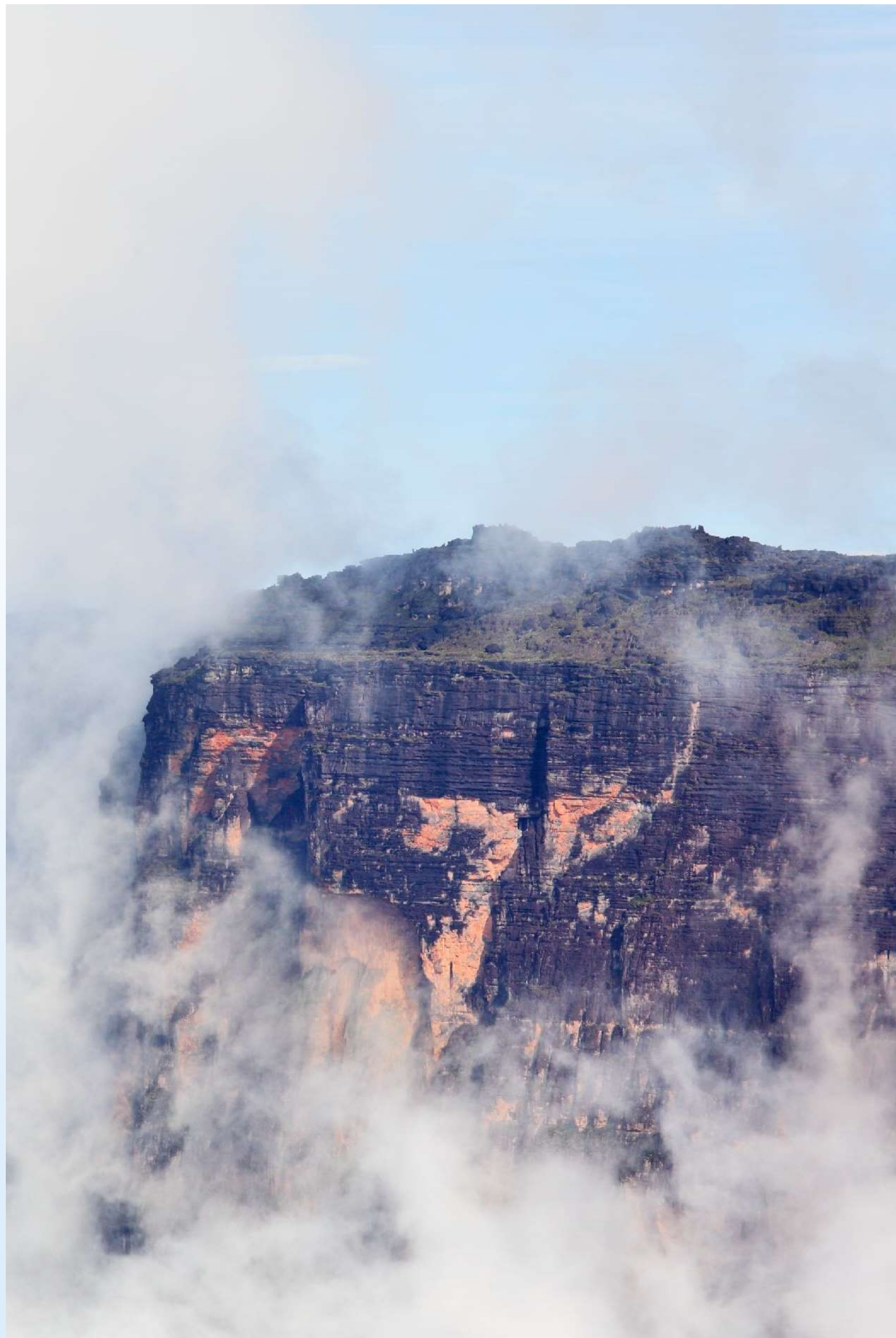
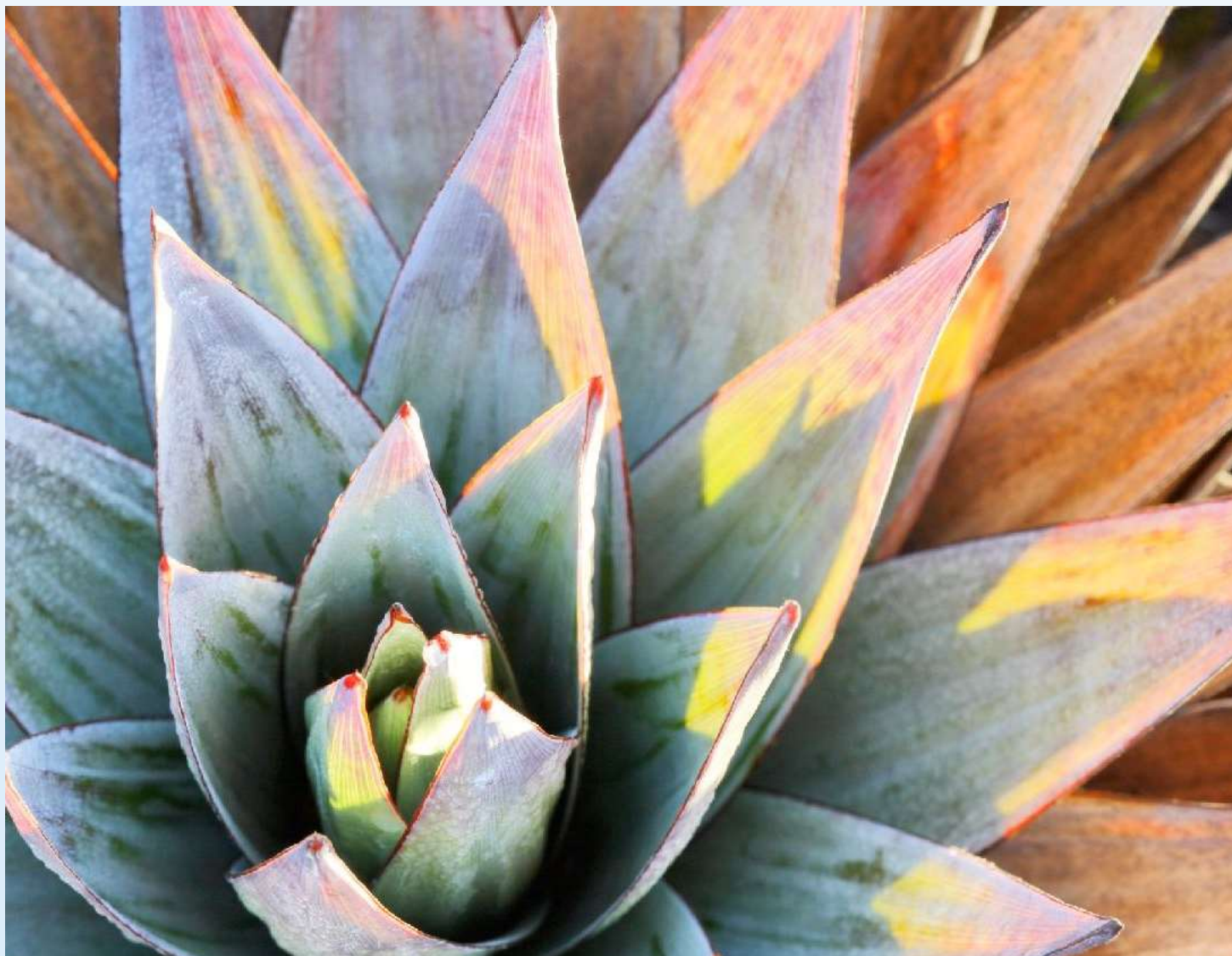
CONTRIBUTE

to the rolling work plan
of the UNFCCC LCIPP



UNESCO WORKSHOP THEMES

- ☆ **Livelihoods** of indigenous peoples and local communities of the Caribbean
- ☆ **Observing** and understanding impacts of climate change
- ☆ **Mobilizing** ILK for Caribbean adaptation planning
 - ☆ **Case studies** of risk reduction, boosting ecosystem resilience, coping, and recovery strategies
- ☆ Multi-stakeholder **partnerships in support of indigenous knowledge** in climate change policy, identifying best practices and challenges.



AKAWAIO WEATHER FORECASTING

“Almost **100 different ethno-meteorological and hydrological indicators** are used by the **Akawaio** indigenous people to assess weather and climate, including 77 biological indicators such as signs from plants and animals, eight physical indicators and ten cosmological indicators.”

CASE STUDY: CABAÑUELAS

- **Cabañuelas** is a traditional forecasting system used for centuries by **Cuban farmers** from Contramaestre
- It is described in *Cuban Farmers' Local Knowledge on Weather and Biodiversity*, presented by Juan Carlos Rosario Molina, Universidad de Oriente, Santiago de Cuba

CUBAN FARMERS' CABAÑUELA S FORECASTIN G SYSTEM



Wind direction



Cloud accumulation



Combine
predictions



Estimate
rainfall



Plant
crops

CASE STUDY: BELIZE



- Presented by Ms Froyla Tzalam, Mopan and Q'eqchi Maya, Sarstoon Temash Institute for Indigenous Management, Belize
- Four indigenous communities created Sarstoon Temash Institute for Indigenous Management (SATIIM) to co-manage the National Park
- Indigenous knowledge is the foundation of local climate mitigation and informs data on forests and carbon inventories.
- The synthesis of traditional knowledge and modern science won SATIIM recognition from both the World Bank's Indigenous Adaptation to Climate Change Fund

BELIZEAN ILK

FORESTS

Maya of southern Belize **observe changes to their forests** resulting from climate change.

ANIMALS

Indigenous farmers **predict rain** by listening to howler monkeys, watching flood flies and black army ants

PLANTS & INSECTS

When the cotton trees drop their leaves and cicadas sing, it announces the dry season

SKY

Looking for rings around the moon can indicate rain



CONCLUSIONS

Indigenous and local knowledge, in combination with science and environmental conservation initiatives (i.e. nature-based solutions), can contribute to:

- forecasting
- monitoring
- managing natural hazards and climate change impacts:
 - slow onset phenomena
 - extreme weather events.

ILK can contribute to recovery from impacts and build resilience:

- in food security,
- agriculture,
- fisheries,
- spatial planning,
- housing and adaptive livelihoods.

PRINCIPLES FOR ILK COOPERATION WITH SCIENCE AND POLICY MAKING



FOSTER DIALOGUE

Create spaces for **intergenerational dialogue** with and within indigenous peoples and local communities

RESPECT INDIVIDUALS

Adopt models geared towards **mutual benefits** and based on respect for the rights and interests of indigenous peoples and local communities

ADD VALUE

Avoid “**extractive**” research or knowledge exchange models in which traditional knowledge is separated from its holistic context

GENDER AWARE

Importance of gender awareness and **women’s knowledge**

SAFEGUARDS

Urgent attention to safeguarding community knowledge systems

A CALL TO ACTION

Indigenous languages, cultures, values, practices and cosmologies are all vehicles for intergenerational transmission of valuable knowledge;

Indigenous peoples welcome the opportunity to work with scientists and policy makers, working jointly for greater resilience;

Caribbean meteorologists noted the importance of local observations and adaptation actions, they welcome further cooperation;

CARICOM noted the importance of indigenous and local knowledge both in terms of climate responses and biodiversity conservation;

Guyana is studying a new national action plan on traditional knowledge.

International Decade of Indigenous Languages provides an opportunity for capacity building: **it is time to move from being holders of knowledge to being involved in policy and decision-making.**

FURTHER ACTIONS

Undertake a series of capacity-strengthening, information-exchange and strategy **workshops for indigenous and local community leaders** in the Caribbean

Further cooperation between international, regional, national and local actors, with attention to **ongoing cooperation** between National governments, indigenous peoples' organisations and UNESCO.

Support for the Guyana Traditional Knowledge National Action Plan

Establish an observer status for local communities and indigenous peoples within the Caribbean Community Climate Change Center (CCCCC) and other relevant Caribbean institutes.

Fondo para el Desarrollo de los Pueblos Indígenas de América Latina y El Caribe (FILAC) **online workshop** on ILK of natural hazards and risk reduction (2021)

CLOSING THANKS

With thanks to the traditional owners, participants and the indigenous peoples and local community organisations who participated in the 2019 workshop.

And special thanks to the Guyana National Commission for UNESCO, the UNESCO Regional Cluster office for the Caribbean (Kingston, Jamaica), the World Meteorological Organisation, the Caribbean Community Climate Change Centre, CARICOM, and to Max Ooft (Suriname) for preparing the draft report.

For further information contact:

UNESCO Local and Indigenous Knowledge Programme: links@unesco.org

Website: <https://en.unesco.org/links>



THANK YOU!

Did you know that 'hurricane' is an indigenous word? Taino and Arawak use versions of **hurakán**, literally 'wind centre'. It is associated with a malignant spirit of storms.

