

ANYL4PSD
REGIONAL TEACH-IN ON
CLIMATE JUSTICE
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Nature-based and regenerative solutions: Biology's Role in Sustaining the Planet

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What is Climate Change – Importance?

- Climate Change is the defining issue of our time and we are at a defining moment.
- From shifting weather patterns that threaten food production, to rising sea levels that increase the risk of catastrophic flooding, the impacts of climate change are global in scope and unprecedented in scale.



Climate change will boost viral outbreaks

Over the next 50 years, climate change could drive more than 15,000 new cases of mammals transmitting viruses to other mammals, according to a study published in *Nature 2022*.



"Given the IPCC's warning that a global temperature rise of 1.5C is virtually inevitable, net-zero strategies alone will not prevent the next climate disaster nor minimise its impact."

- Mami Mizutori



"Drought may well be the next pandemic after COVID-19 and there's no vaccine to cure it."

- Mami Mizutori

Special Representative of the Secretary-General for Disaster Risk Reduction. United Nations Office for Disaster Risk Reduction (UNDRR).

How prepared are we to respond to climate-induced natural disasters and disease?

Africa - Floods in South Africa; Droughts in East Africa; Tropical cyclones hitting Madagascar.

- What used to be infrequent extreme weather events are becoming the new normal.
- With the right foresight, investments and preparedness, we can greatly reduce the impact of these events and respond appropriately



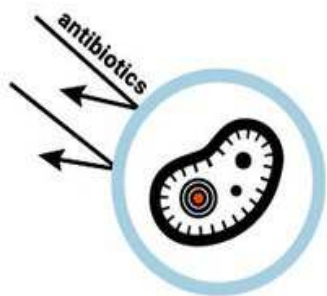
What factors are increasing zoonosis emergence? (Diseases transmitted from animals to humans)



Deforestation and other land use changes



Illegal and poorly regulated wildlife trade



Antimicrobial resistance



Intensified agriculture and livestock production



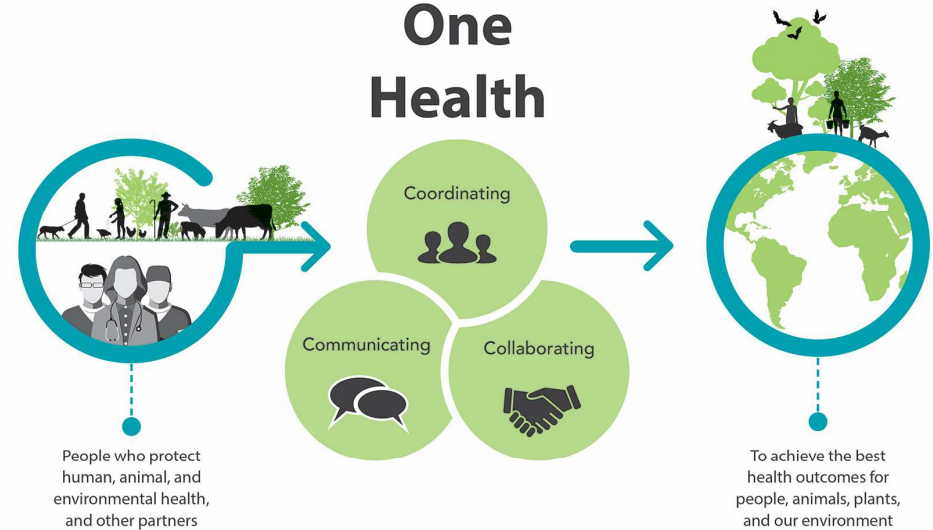
Climate change

Source: UNEP Frontiers 2016 Report

#COVID19

UN
environment
programme

One Health

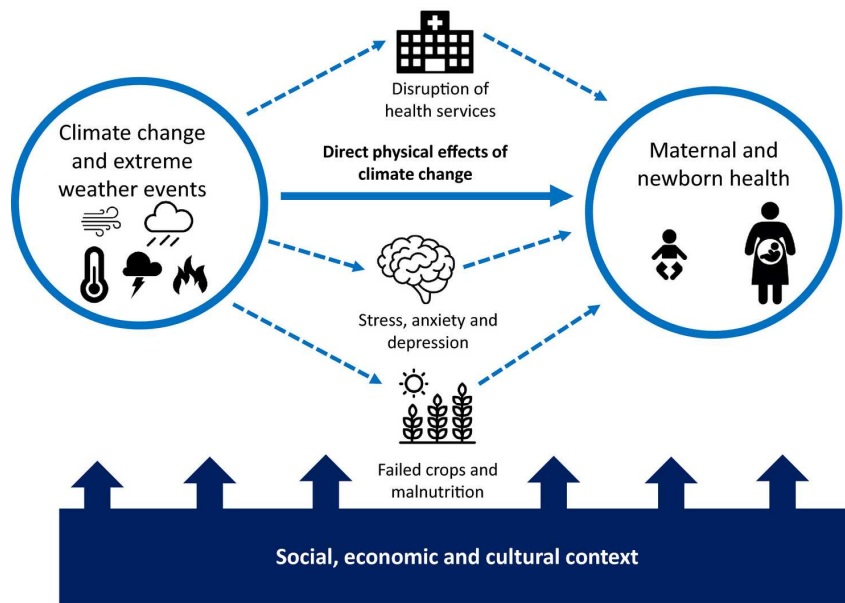


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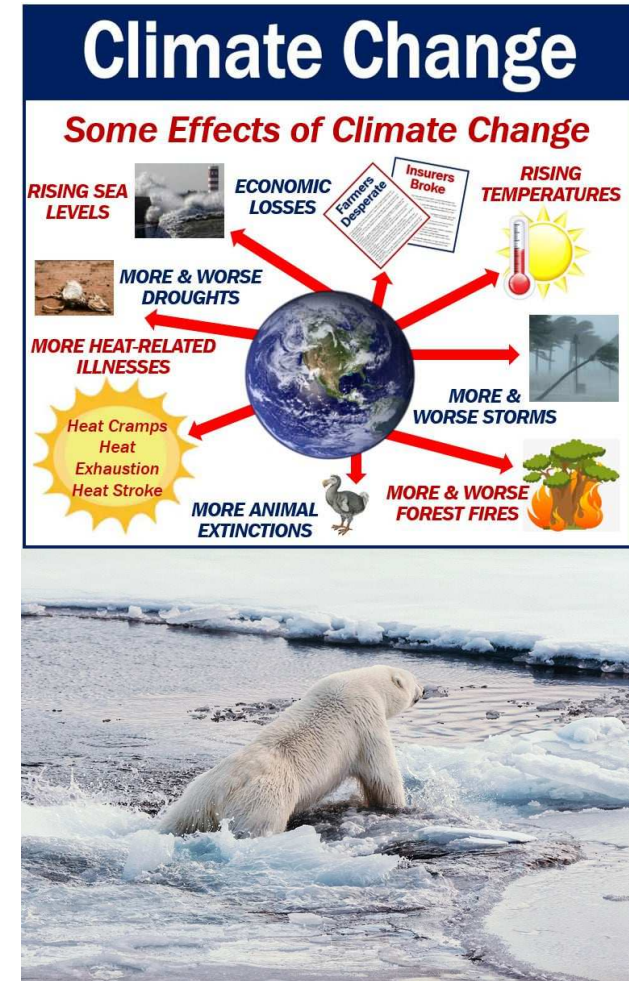
One Health is an approach that recognizes that the health of people is closely connected to the health of animals and our shared environment. ... Close contact with animals and their environments provides more opportunities for diseases to pass between animals and people.

Implications of Climate Change and Health

- A healthy planet means fewer diseases
- The wild must be kept wild
- Moving forward, we need to build a 'different economy'



- Multi-sectoral responses for improving maternal and newborn health and social resilience
- Education
 - Family planning
 - Women's empowerment
 - Climate change adaptation
 - Access to and health care service quality
 - Transport



2020 the Super Year - a big year for biodiversity

- 2020 was supposed to be a big year for biodiversity — a "super year," as the UN proclaimed in February 2019
- A number of landmark global meetings were planned:
- a World Conservation Congress in France;
- a United Nations Ocean Conference in Portugal; and a Nature Summit in New York.
- These discussions were to culminate in October at a major global biodiversity conference in China, billed as the "Paris for biodiversity," a reference to COP21, where a landmark 2015 climate agreement was forged in the City of Lights.

Coronavirus disease (COVID-19)

- Nature, it seems, had other plans.
- The coronavirus pandemic put pretty much all of that on the back burner.
- Addressing biodiversity, like so many other things, seems to have been shunted aside by the coronavirus outbreak.
- The links between pandemics and biodiversity are becoming better understood and appreciated.



HOW DID WE GET HERE?

- Drivers of zoonotic diseases - changes in the environment, usually the result of human development or climate change.
- E.g. Bat-associated viruses, thought to be the cause of the coronavirus, emerged from the loss of bat habitat from deforestation and agricultural expansion.
- Logging, mining, road building in remote places, dam building, irrigation, coastal development, rapid urbanization, population growth, fire...



Uncomfortably close?

- Aftermath - altered habitat can yield less food, sending foraging wildlife into contact with nearby humans, creating vectors for zoonotic bacteria, viruses and parasites.
- The world has lost 60 percent of all wildlife in the last 50 years while the number of new infectious diseases has quadrupled in the last 60 years (World Economic Forum).



Climate Change

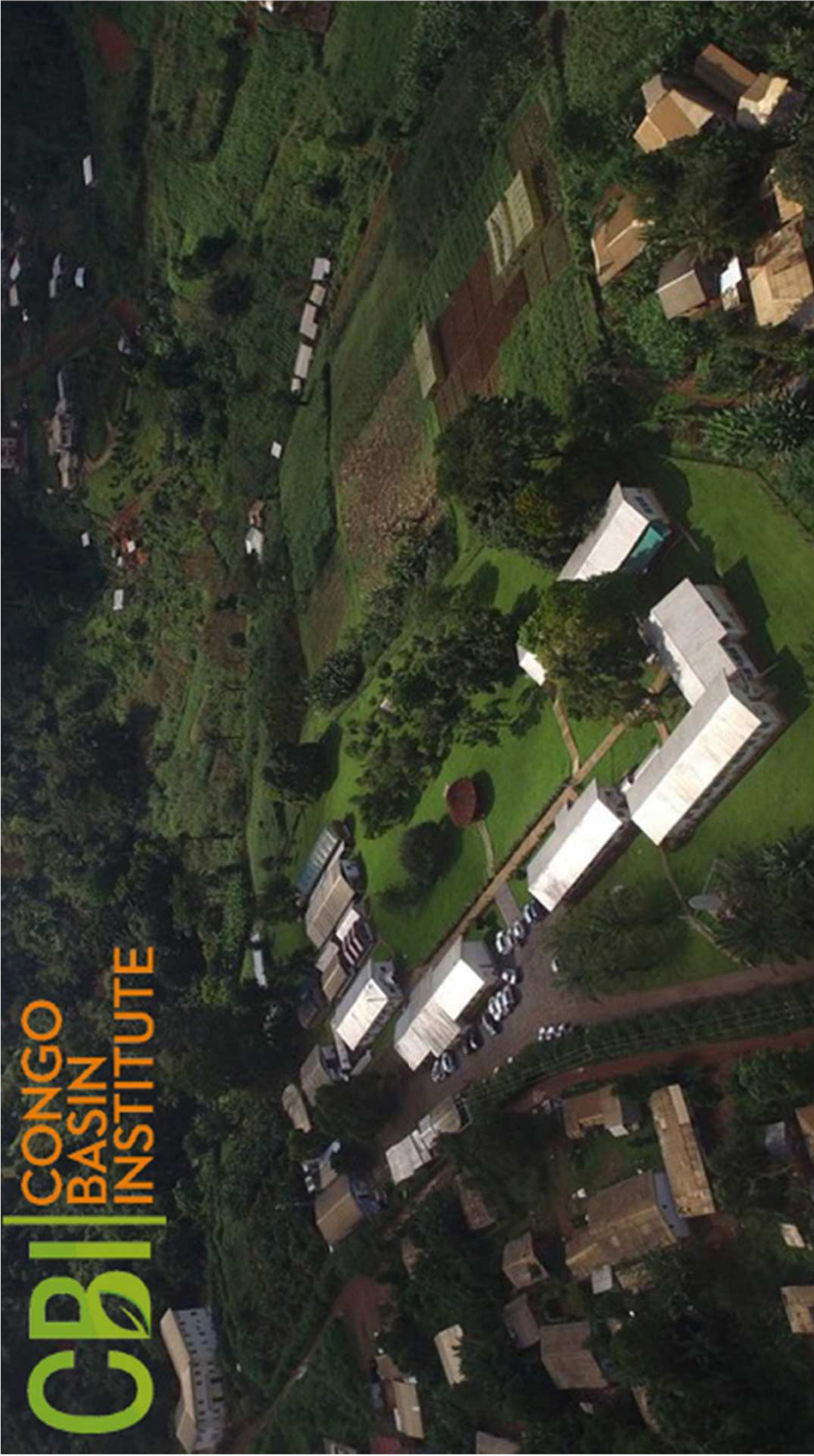
- Climate change will alter and accelerate the transmission patterns of infectious diseases.
- 1 degree Celsius rise in mean global temperatures is altering the abundance, genetic composition, behavior and survival of some species.
- The decline of species threatens the ecosystem services nature provides that, among other things, help to regulate the climate.
- a million species of plants and animals are at risk of extinction, 40 percent of insects
- Biodiversity loss and climate change exacerbate each other



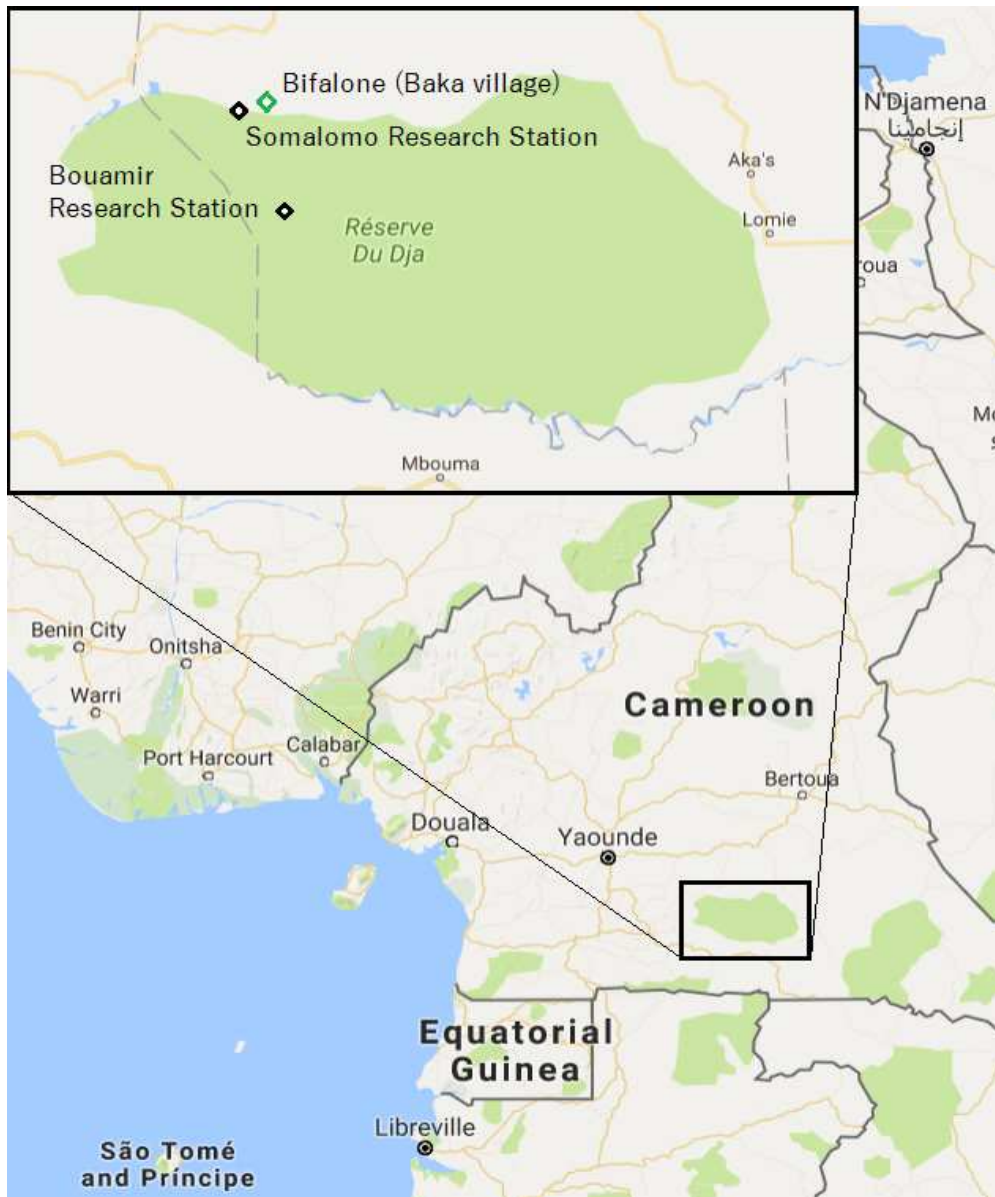
It's the circle of life — and, sadly, death

- The economic impacts - devastating
- More people rely on the natural environment for their livelihood, food security and income
- That can lead to mass migration
- The risks to companies can be significant





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Map shows the CBI Yaoundé, Somalomo, and Bouamir facilities.

With these facilities, CBI can now offer researchers and scholars access to remote field sites in the Congo Basin rainforest

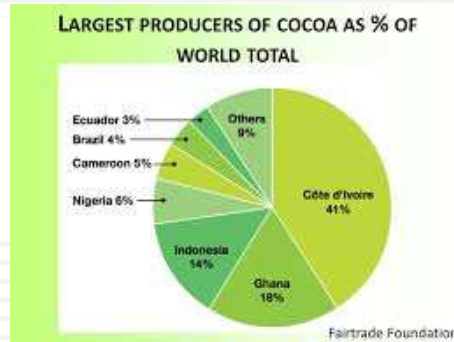
A team from Fieldkit/Conservify

- develop a network of interconnected environmental data collection devices in Bouamir
- initiated in Dec 2019 and to be completed June 2022.



Solar panel to support sensor network established in Bouamir by FieldKit team.

Where do chocolates come from?



- Chocolate comes from cocoa beans, which grow on trees
- West Africa collectively supplies two thirds of the world's cocoa crop, with **Ivory Coast** leading production at 2 million tons as of 2021, and nearby **Ghana, Nigeria, Cameroon** and **Togo** producing additional 1.55 million tons.

What's the average income of a cocoa farmer?



- Fairtrade found average Ivorian cocoa farmer household income was **\$2,707** per year, with around **\$2,000** of income coming from cocoa, according to its survey of 3,202 Fairtrade certified farmers. This equates to **total** income of \$0.93 per person a day.
- 6% of the total value of chocolates go to farmers, so something is fundamentally wrong!!
- Today, the chocolate industry is valued at more than \$100 billion



**TRADE, DEVELOPMENT &
THE ENVIRONMENT HUB**



**UK Research
and Innovation**

CBI CONGO
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**GCRF Cameroon Project - making sustainable trade
a positive force in the world**

UCLA

IITA
Research to Nourish Africa

Brief Overview

- ▶ Over-use and unequal distribution of resources make the world unlikely to reach international ambitions such as the SDGs.
- ▶ The CBI project aims to make sustainable trade a positive force in the world by focusing on the impact of the trade of specific goods and seeking solutions to these impacts.
- ▶ Together with our partners, we study all stages of the supply chain, revealing damaging links and pathways for lasting change



Enhancing Sustainability of Agricultural Commodity Supply Chain

- ▶ Reduces need for land expansion and deforestation
- ▶ Conserve forest carbon – climate mitigation
- ▶ Stabilizes climate locally and regionally
- ▶ Increases resilience of agriculture, local and national economies
- ▶ Increases viability of commodity businesses
- ▶ Benefits biodiversity

For more, see: <https://tradehub.earth/>





The Ebony Project

Goal of the Ebony Project

The project strives to answer the question: ***What is a viable, sustainable ebony production and logging model for Cameroon, and how do we engage local people to be part of the process?***

1. *Environmental issues*
2. *Scientific issues*
3. *Economics*
4. *Policy and legal considerations*



Mapping Pangolin Trafficking from Africa to Asia

Harvested



Amassed



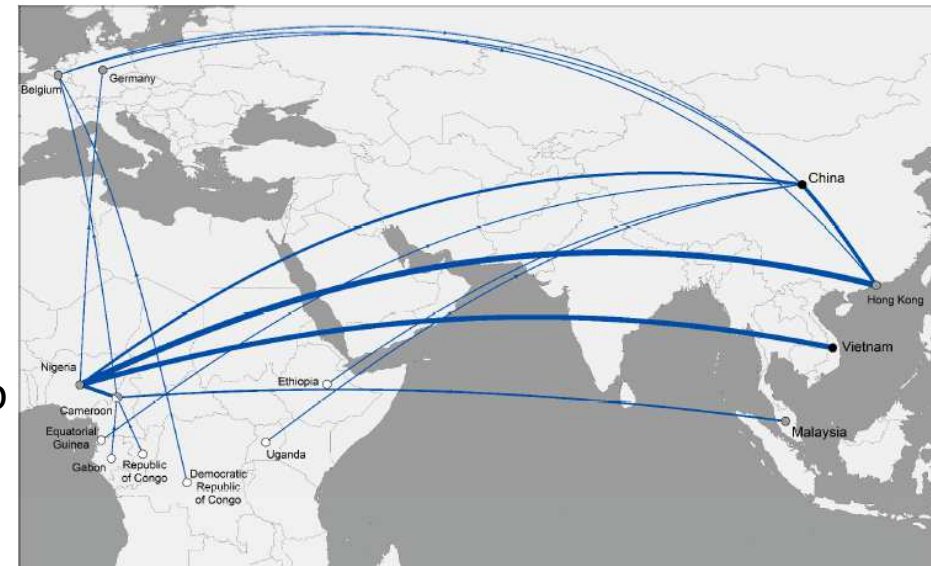
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Consumed



- This project is designed to gather information on the movement of pangolins and pangolin scales across the full trafficking value chain: from poaching in the wild, to scale amassing, to transit patterns, and ultimately consumption. We do this by combining two innovative approaches—genoscapes and social network modelling—to build a comprehensive picture of pangolin trafficking from Africa to Asia.



IOES Practicum for UCLA Undergraduates

AGRICULTURE FOR AFRICA (A4A)

PROBLEM

Evaporating remittances

Unemployment

Joblessness

Despair

lead to

- High rates of youth delinquency
- Increasing juvenile crime and substance abuse
- Increasing rates of incarceration
- Threats of recruitment to violent extremism
- Higher rates of recidivism



THE A4A MODEL



Take home message..... opportunities to engage in climate justice

- A healthy planet means fewer diseases – simple projects can make a difference
- Ensure that the wild is kept wild - habitat restoration?
- Engage all stakeholders to build a 'different economy'

