



A DISCRETE HIGHLIGHT OF CLIMATE CHANGE IMPACT ON MENTAL HEALTH IN AFRICA: **Making the Invisible Visible**



Flood Knowledge Summit Organizing Team
Climate Resilience Initiative, hosted at UNU-
MERIT
United Nations University
Maastricht, the Netherlands



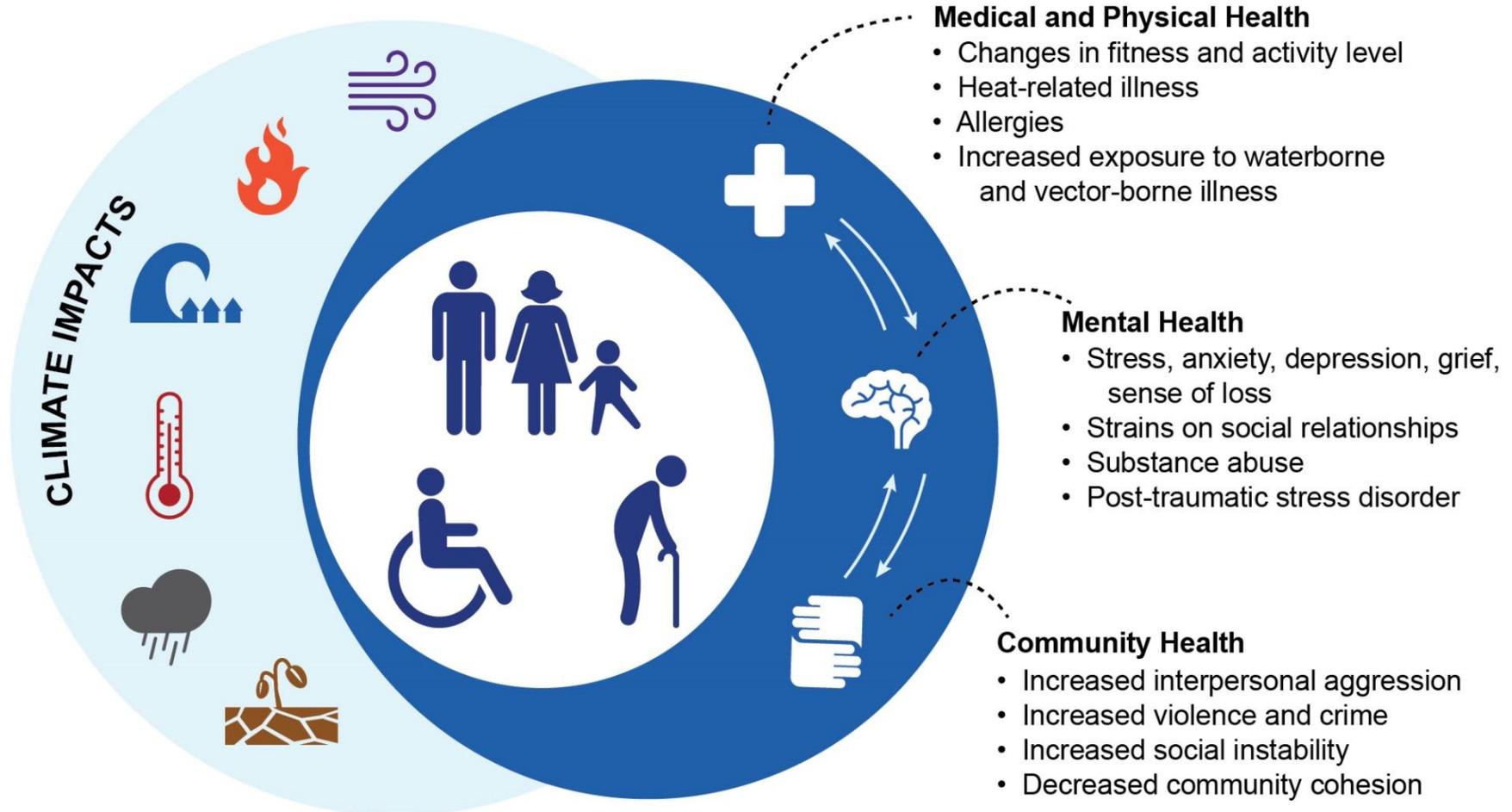
Professor Kenneth Yongabi Anchang, Professor of Public Health, Imo State University, Owerri, Nigeria. yongabika@yahoo.com

Preview of my talk

- A conceptual overview of climate change and mental health
- Perceptions of climate change and mental health in Africa: **making the invisible visible.**
- **What is mental health?**
- Floods, landslides, prolonged rains and drought cycles provoking grief, sadness, stress, hypertension, due to loss of lives, properties, social amenities, increased poverty, homelessness, etc and Mental health impacting in Africa. A flash comparison of coping with mental health in the Global West and Global South: **Discrete issues**
- Climate Change and mental health Interventions: **The village Afro-centric models- Connecting with the Unconnected through Health Literacy tool kit for Mental Health and Climate Change**
- Conclusion and **Futuristic**

An Algorithmic Summary of Climate Change and its Impact on mental health

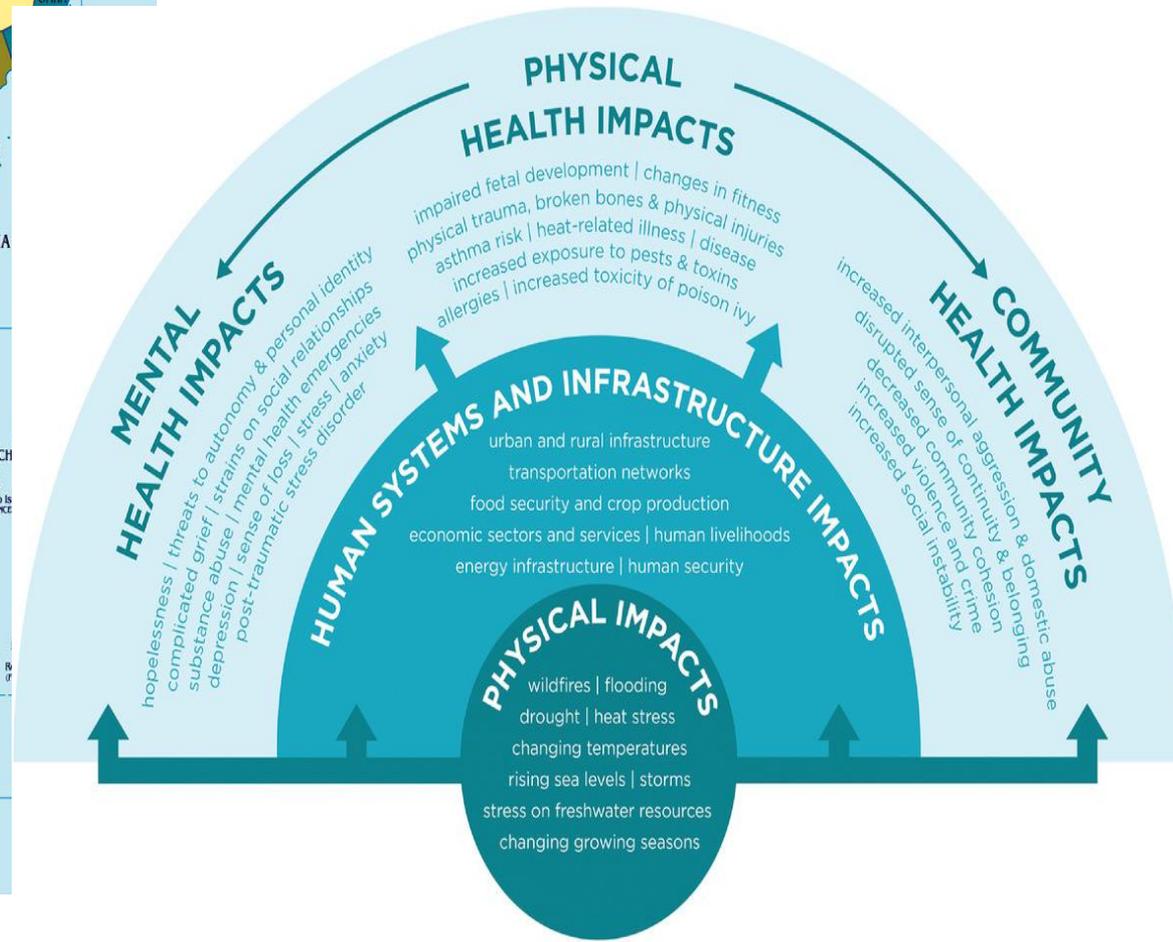
Impact of Climate Change on Physical, Mental, and Community Health



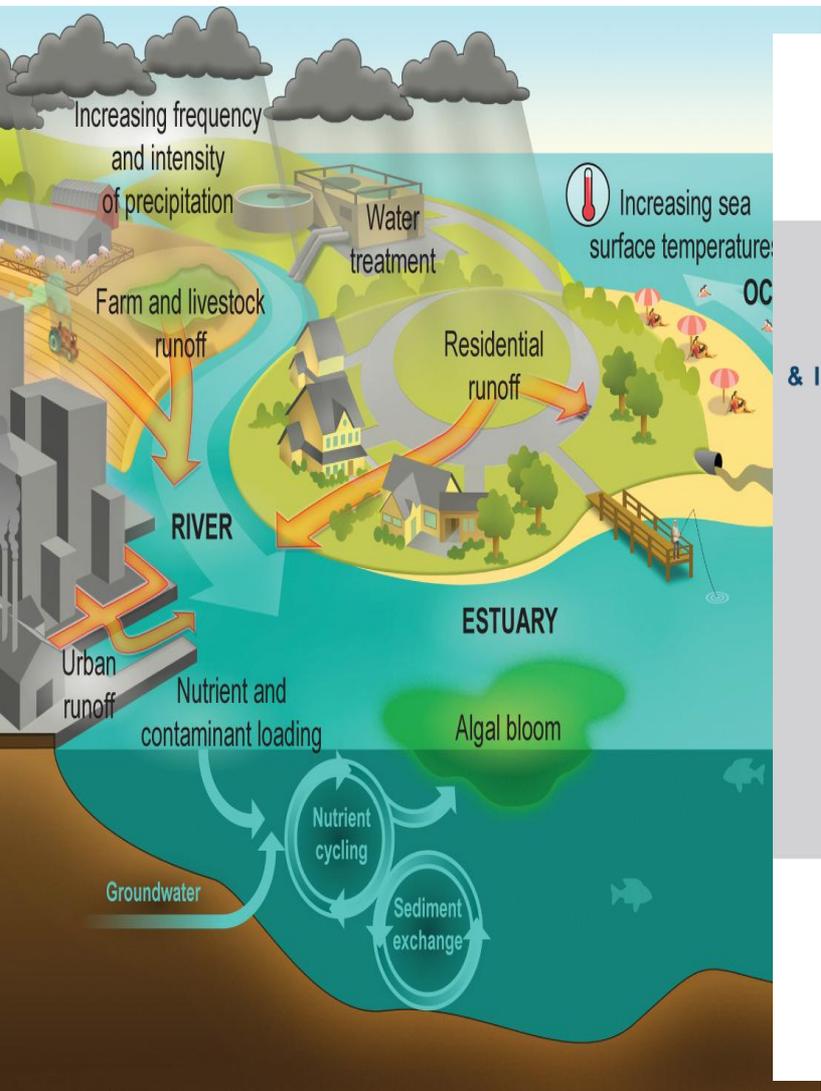
Climate Grief spares no African country

Climate change is a significant threat to the health of the Africans

Every African is vulnerable to the mental health impacts associated with



FLOODS ACROSS AFRICA IS INCREASING MORE THAN BEFORE CONTAMINATING DRINKING WATER SOURCES LACK OF POTABLE WATER RELATED STRESS, GRIEF AND THOUGHT OF NOT HAVING CLEAN WATER GENERATES MENTAL HEALTH DISORDERS\



ENVIRONMENTAL & INSTITUTIONAL CONTEXT

- Land-use change
- Ecosystem change
- Infrastructure condition
- Geography
- Agricultural production & livestock use

CLIMATE DRIVERS

- Increased temperatures
- Precipitation extremes
- Extreme weather events
- Sea level rise

EXPOSURE PATHWAYS

- Extreme heat
- Poor air quality
- Reduced food & water quality
- Changes in infectious agents
- Population displacement

HEALTH OUTCOMES

- Heat-related illness
- Cardiopulmonary illness
- Food-, water-, & vector-borne disease
- Mental health consequences & stress

SOCIAL & BEHAVIORAL CONTEXT

- Age & gender
- Race & ethnicity
- Poverty
- Housing & infrastructure
- Education
- Discrimination
- Access to care & community health infrastructure
- Preexisting health conditions

MENTAL HEALTH AND WELL-BEING Disrupted

Exposure to Disasters Results in Mental Health Consequences

Observation: Many people exposed to climate-related or weather-related disasters experience stress and serious mental health consequences. Depending on the type of the disaster, these consequences include post-traumatic stress disorder (PTSD), depression, and general anxiety, which often occur at the same time. The majority of affected people recover over time, although a significant proportion of exposed individuals develop chronic psychological dysfunction.

Specific Groups of People Are at Higher Risk

Observation: Specific groups of people are at higher risk for distress and other adverse mental health consequences from exposure to climate-related or weather-related disasters. These groups include children, the elderly, women (especially pregnant and post-partum women), people with preexisting mental illness, the economically disadvantaged, the homeless, and first responders. Communities that rely on the natural environment for sustenance and livelihood, as well as populations living in areas most susceptible to specific climate change events, are at increased risk for adverse mental health outcomes.

MENTAL HEALTH AND WELL-BEING Disrupted

Climate Change Threats Result in Mental Health Consequences and Social Impacts

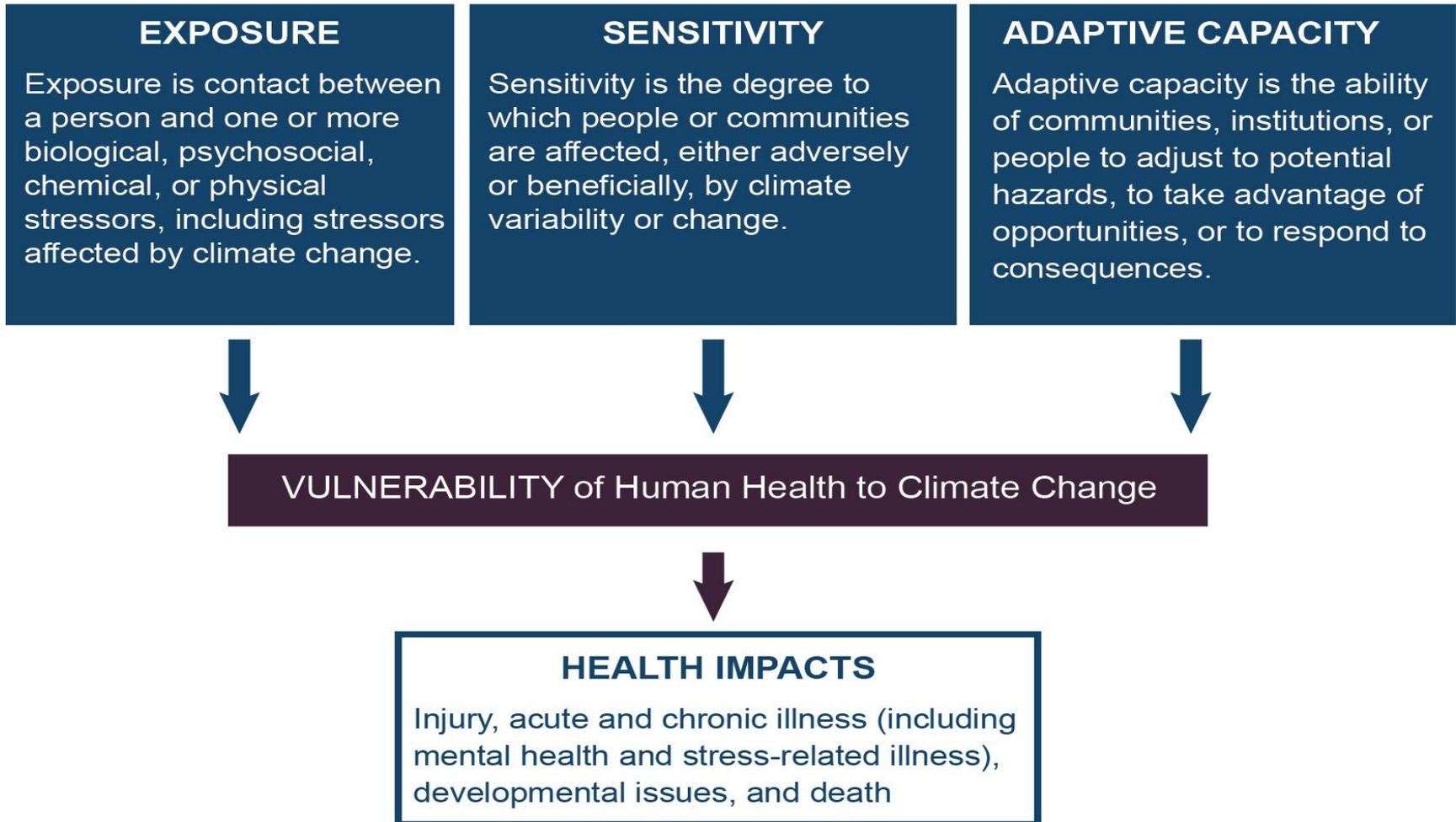
Observation: Many people will experience adverse mental health outcomes and social impacts from the threat of climate change, the perceived direct experience of climate change, and changes to one's local environment. Media and popular culture representations of climate change influence stress responses and mental health and well-being

Extreme Heat Increases Risks for People with Mental Illness

Observation: People with mental illness are at higher risk for poor physical and mental health due to extreme heat. Increases in extreme heat will increase the risk of disease and death for people with mental illness, including elderly populations and those taking prescription medications that impair the body's ability to regulate temperature

What are these key determinants and Vulnerability of human health to climate disorders?

Determinants of Vulnerability



**TEMPERATURE-RELATED DEATH AND ILLNESS Even
Small Differences from Seasonal Average
Temperatures Result in Illness and Death: Not well
quantified across Africa**

**TEMPERATURE-RELATED DEATH AND ILLNESS
(TEMPERATE VERSUS TROPICS)
Changing Tolerance to Extreme Heat Some
Populations at Greater Risk- increased mental
health in this population**

**Increased deforestation and floods have pushed rodents
Snakes , rats to migrate to human abodes. The dangers are not
just physical but mental at homes**

**Emergence of New
Vector-Borne
Pathogens, increased
hospitalization
admidst lack of
finances impacts
mental health**

VECTOR-BORNE

DISEASES increases due to flooding: This causes stress, sadness, grief and life adjustments

Earlier Tick Activity and Northward Range Expansion

Key Finding 2: Ticks capable of carrying the bacteria that cause Lyme disease and other pathogens will show earlier seasonal activity and a generally northward expansion in response to increasing temperatures associated with climate change. Longer seasonal activity and expanding geographic range of these ticks will increase the risk of human exposure to ticks,

Changing Dynamics

Mosquito-Borne

Disease

Key Finding 3: Rising temperatures, changing precipitation patterns, and a higher frequency of some extreme weather events associated with climate change will influence the distribution, abundance, and prevalence of infection in the mosquitoes that transmit West Nile virus and other pathogens by altering habitat availability and mosquito and viral reproduction rates. Alterations in the distribution, abundance, and infection rate of mosquitoes will influence human exposure to bites from infected mosquitoes, which is expected to alter risk for human disease.

CLIMATE IMPACTS ON WATER-RELATED ILLNESSES

Runoff from Extreme Precipitation Increases Exposure Risk

Key Finding 2: Runoff from more frequent and intense extreme precipitation events will increasingly compromise recreational waters, shellfish harvesting waters, and sources of drinking water through increased introduction of pathogens and prevalence of toxic algal blooms. As a result, the risk of human exposure to agents of water-related illness will increase [

**FOOD SAFETY, NUTRITION,
AND DISTRIBUTION**

Water Infrastructure Failure

Key Finding 3: Increases in some extreme weather events and storm surges will increase the risk that infrastructure for drinking water, wastewater, and stormwater will fail due to either damage or exceedance of system capacity, especially in areas with aging infrastructure. As a result, the risk of exposure to water-related pathogens, chemicals, and algal toxins will increase in recreational and shellfish harvesting waters, and in drinking water where treatment barriers break down.

Runoff from Extreme Precipitation Increases Exposure Risk

Increased Risk of Foodborne Illness

**Rising Carbon Dioxide Lowers Nutritional Value of
Food**

CLIMATE IMPACTS ON WATER-RELATED ILLNESSES AND PSYCHE

Seasonal and Geographic Changes in Waterborne Illness Risk

Key Finding 1: Increases in water temperatures associated with climate change will alter the seasonal windows of growth and the geographic range of suitable habitat for freshwater toxin-producing harmful algae certain naturally occurring *Vibrio* bacteria and marine toxin-producing harmful algae. These changes will increase the risk of exposure to waterborne pathogens and algal toxins that can cause a variety of illnesses

Runoff from Extreme Precipitation Increases Exposure Risk

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Descriptive **of** IMPACTS OF EXTREME EVENTS ON HUMAN HEALTH

Vulnerability to Coastal Flooding

Key Issues: Coastal populations with greater vulnerability to health impacts from coastal flooding include persons with disabilities or other access and functional needs, certain populations of color, older adults, pregnant women and children, low-income populations, and some occupational groups. Climate change will increase exposure risk to coastal flooding due to increases in extreme precipitation and in hurricane intensity and rainfall rates, as well as sea level rise and the resulting increases in storm surge

Changing Distributions of Vectors and Vector- Borne Diseases

Key issues: Climate change is expected to alter the geographic and seasonal distributions of existing vectors and vector-borne diseases .

Floods, Land slides, Lightening have generated Helplessness, powerlessness, despair, guilt with climate change victims being every one but especially the youths, women and elderly

I shall highlight orally my Experiences and Lessons from Africa (Cameroon, Douala, Bafoussam, Bamenda, Nigeria, North and South east, Kenya, Angola, Congo, Mauritania, Mozambique

Floods have caused Grazer land conflicts in Cameroon and Nigeria

Floods and bush fires have generated Internally Displaced Persons in Cameroon, Nigeria, Niger, South Sudan leading to unquantified mental health issues and especially in disabled persons.

Extreme climate events, hotter and colder like in floods in Germany North Rhine, Queensland in Australia, there are varying degrees of eco griefs and resilience in the global south

Perception of Eco grief (gods angry and sacrifices) Religio-centric approach common in Global south than in Global North

Consideration from Cop26 summit

389 natural disasters, 15000 deaths, 98 million affected, 200 billion USD in 2020

323 climate change disasters, 10 663 deaths in 2021 and 40 psychological associations signed climate change and mental health

This figure below taken from a Publication from Nature: The description of Climate anxiety holds true for all communities globally

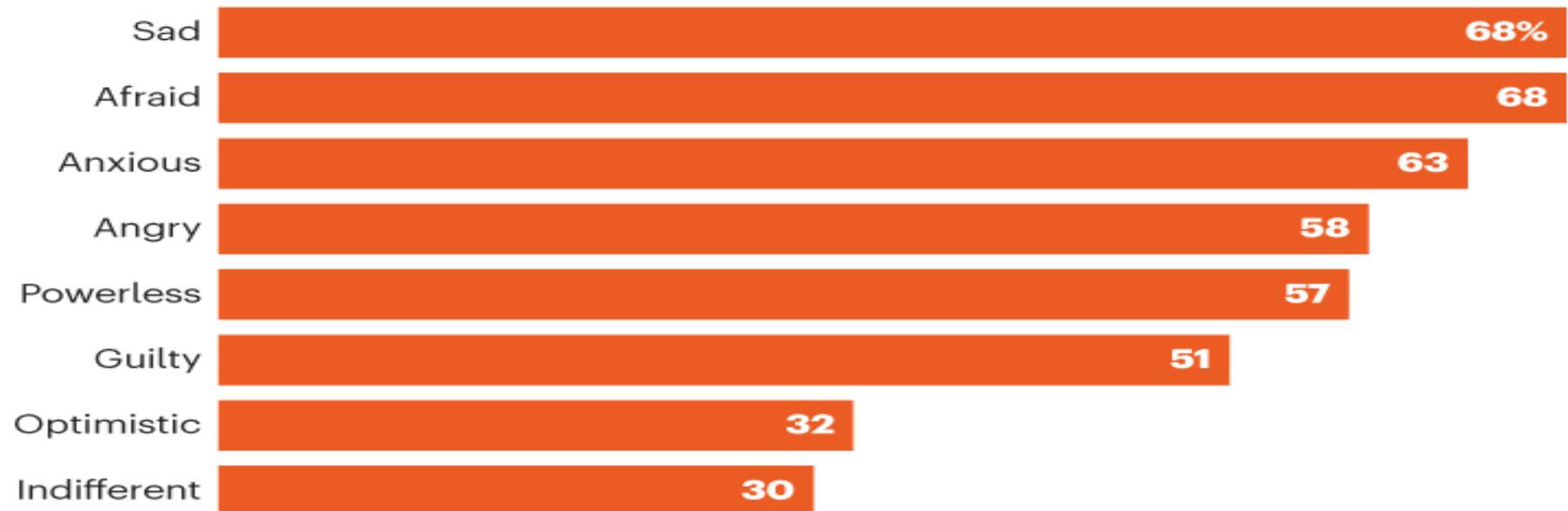
CLIMATE ANXIETY

A survey of 10,000 young people shows that negative feelings about climate change can cause psychological distress.

How worried are you about climate change?



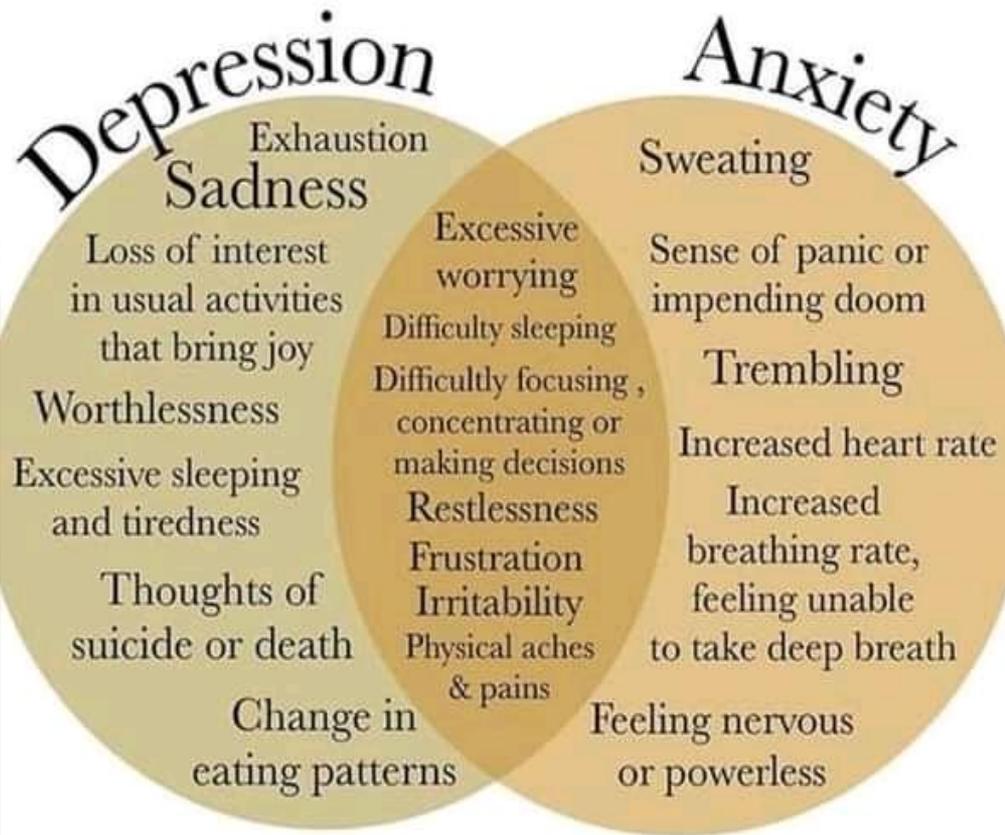
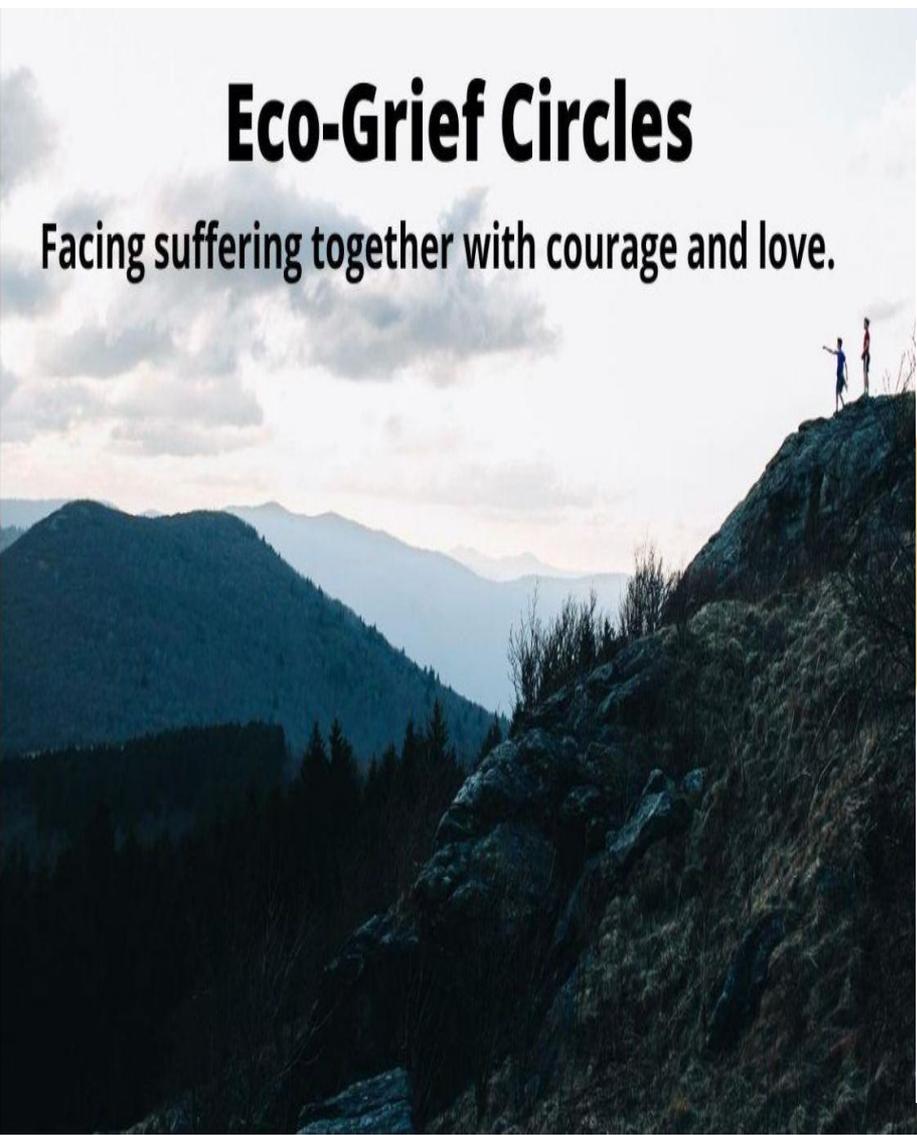
Climate change makes me feel...



The key critical three terms that summarizes impact of climate variability on mental health is captured below

Eco-Grief Circles

Facing suffering together with courage and love.



@therapyforwomen

The Reality of Eco-grief. Prolonged heavy rains with thunder storms destroys Cattle in Cameroon and Kenya: The owners in grief and shock: Their mental health affected



The Reality of Eco-grief. Prolonged heavy rains with thunder storms destroys Cattle in Northern Nigeria” economic losses elicits grief to the owners

Early Warning Systems (EWS) of climate change in the westeg Australia but not in Africa



The Reality of Eco Grief: Floods in Nigeria Worsens food shortage, increase transportation cost



**Land Slides in and Floods in Cameroon Worsens food shortage
Homes lost**



FLOODS WREAK HAVOC IN DURBAN

Heavy rains lashed the city of Durban with mudslides and floods incessant rain have triggered floods in the eastern coastal province

South Africa's April floods made twice as likely by climate crisis, scientists say

Cameroon – Fatalities Reported After Heavy Rain and Floods in Douala . Snakes and rats infestation of homes: Trauma and mental stress of dealing with multiple health and financial challenges



Hundreds of homes were flooded and roads swamped, causing massive traffic disruption in the coastal city which is home to 2.7 million people.

Local media reported at least 3 people are thought to have died after the rain caused a building to collapse in the PK13 neighbourhood in Douala.

Douala recorded 186.0 mm of rain in 24 hours to 12 August. The high volume of rain overwhelmed the inadequate drainage system in the city. [The city saw similar flooding after heavy rain in August last year.](#)

The situation is worsened by the masses of plastic waste blocking rivers and drainage channels. Charity [WasteAid](#) recently embarked on a long-term project to help clear the city of plastic waste.



Women and girls
disproportionately
bear the burden of
climate-related
events, such as
these cyclones.

Erratic Rains, Dry
Spells Destroy Crops
in Cameroon, Forcing

...

**Birds From Chad and Nigeria
Destroying Farmland, Cameroon
Says**



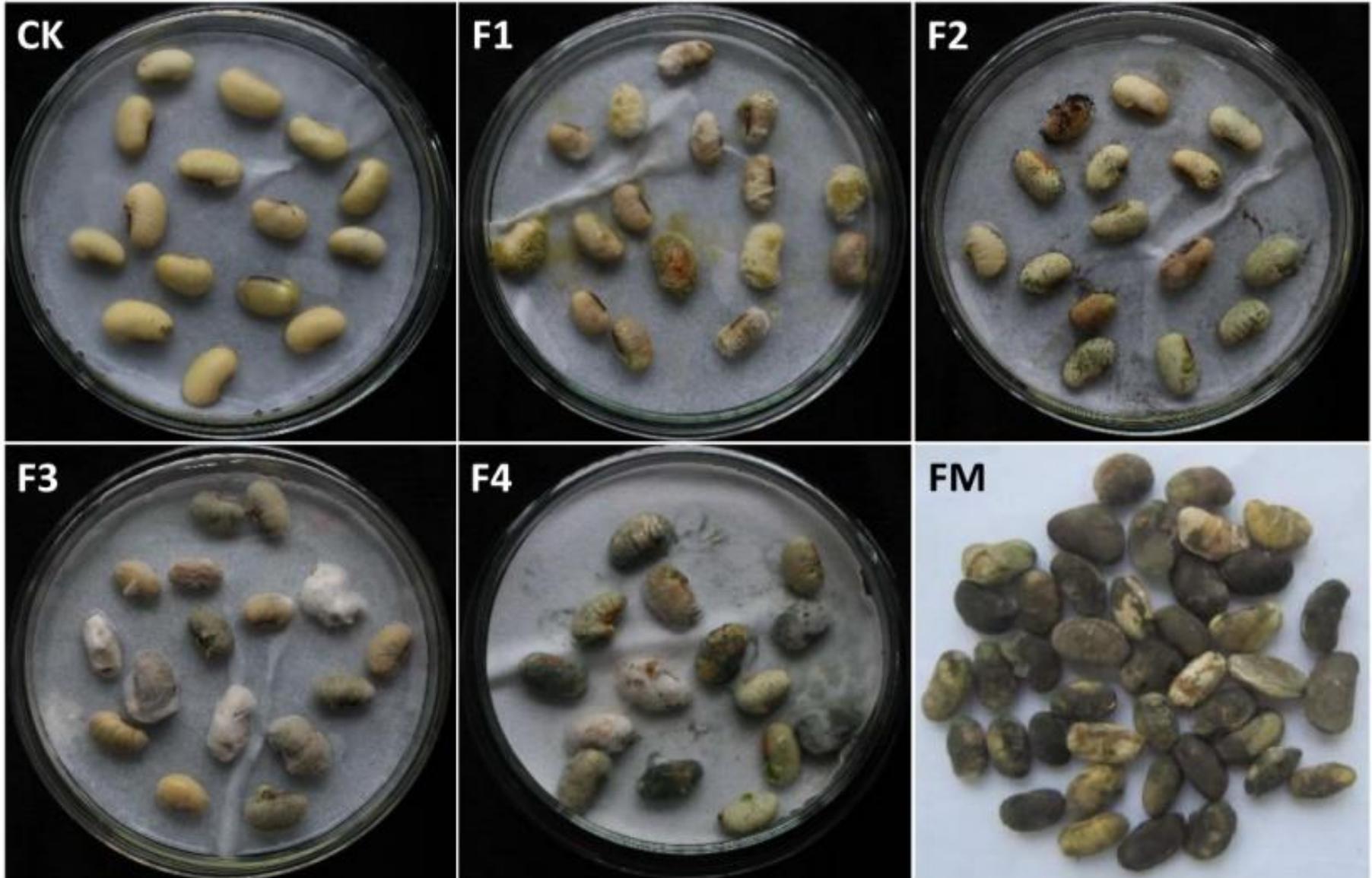
**Weaver birds fly over millet farms in Waza,
northern Cameroon, Feb. 3, 2021. (Moki Edwin
Kindzeka/VOA) and below Floods from River
Congo destroys bridge, Brazzaville , Congo**



Floods in Cameroon destroying Farmland, reducing local food production such as mushrooms and vegetables in Cameroon as reported by elderly : Mental health of the elderly affected



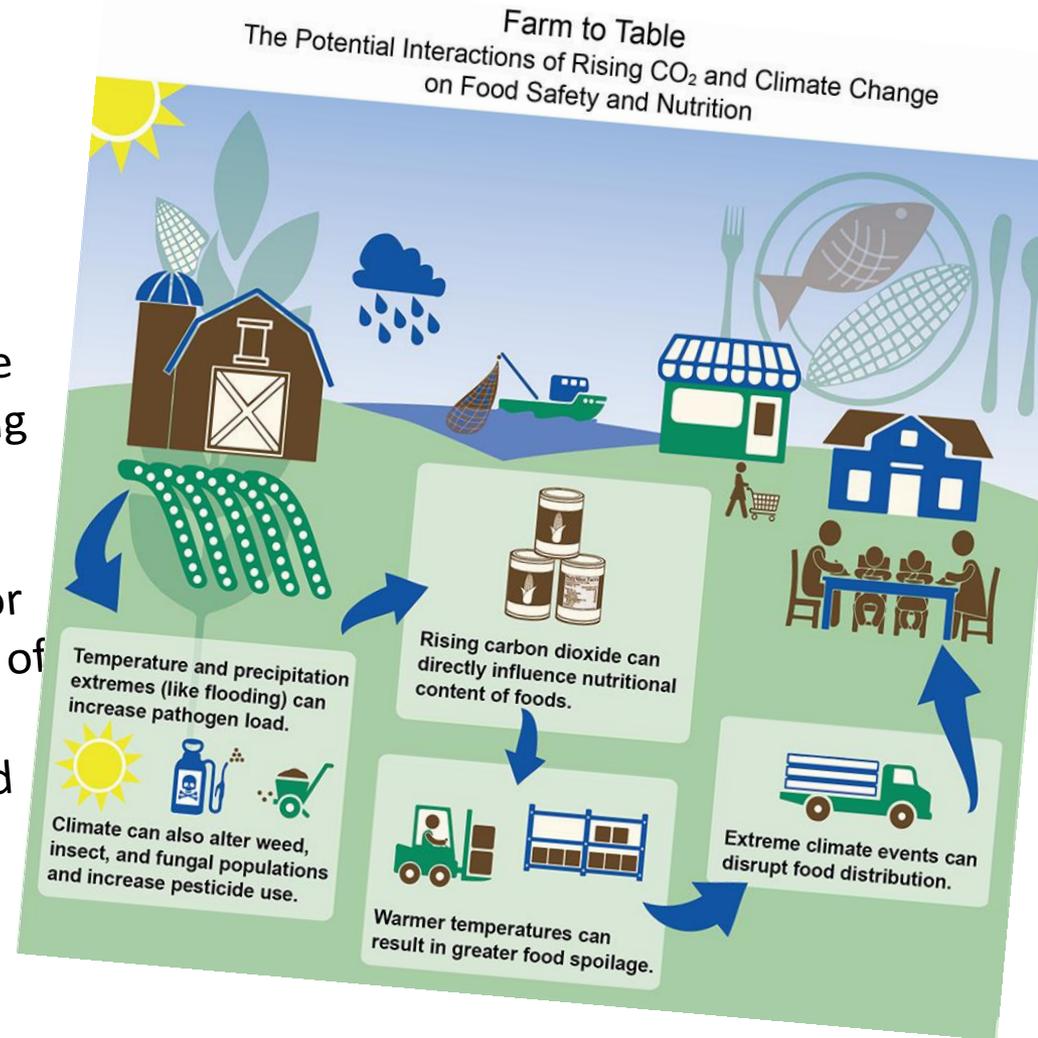
Prolonged rains in Cameroon increases decay of beans a staple crop ; food related mental stress in Nigeria



FOOD SAFETY, NUTRITION, AND DISTRIBUTION AFFECTED LEADING TO STRESS

Extreme Weather Limits Access to Safe Foods

Observation: Increases in the frequency or intensity of some extreme weather events associated with climate change will increase disruptions of food distribution by damaging existing infrastructure or slowing food shipments. These impediments lead to increased risk for food damage, spoilage, or contamination, which will limit availability of and access to safe and nutritious food depending on the extent of disruption and the resilience of food distribution infrastructure.



Climate crisis affects the psyche of young people who could be agents of intervention agency



‘children's and young people's contributions to climate action, their role as ‘agents of change’ (Spyrou et al 2021: 3)

We call these practices *sites of public pedagogy* and consider the committed youth as public educators (Wildemeersch et al 2021:

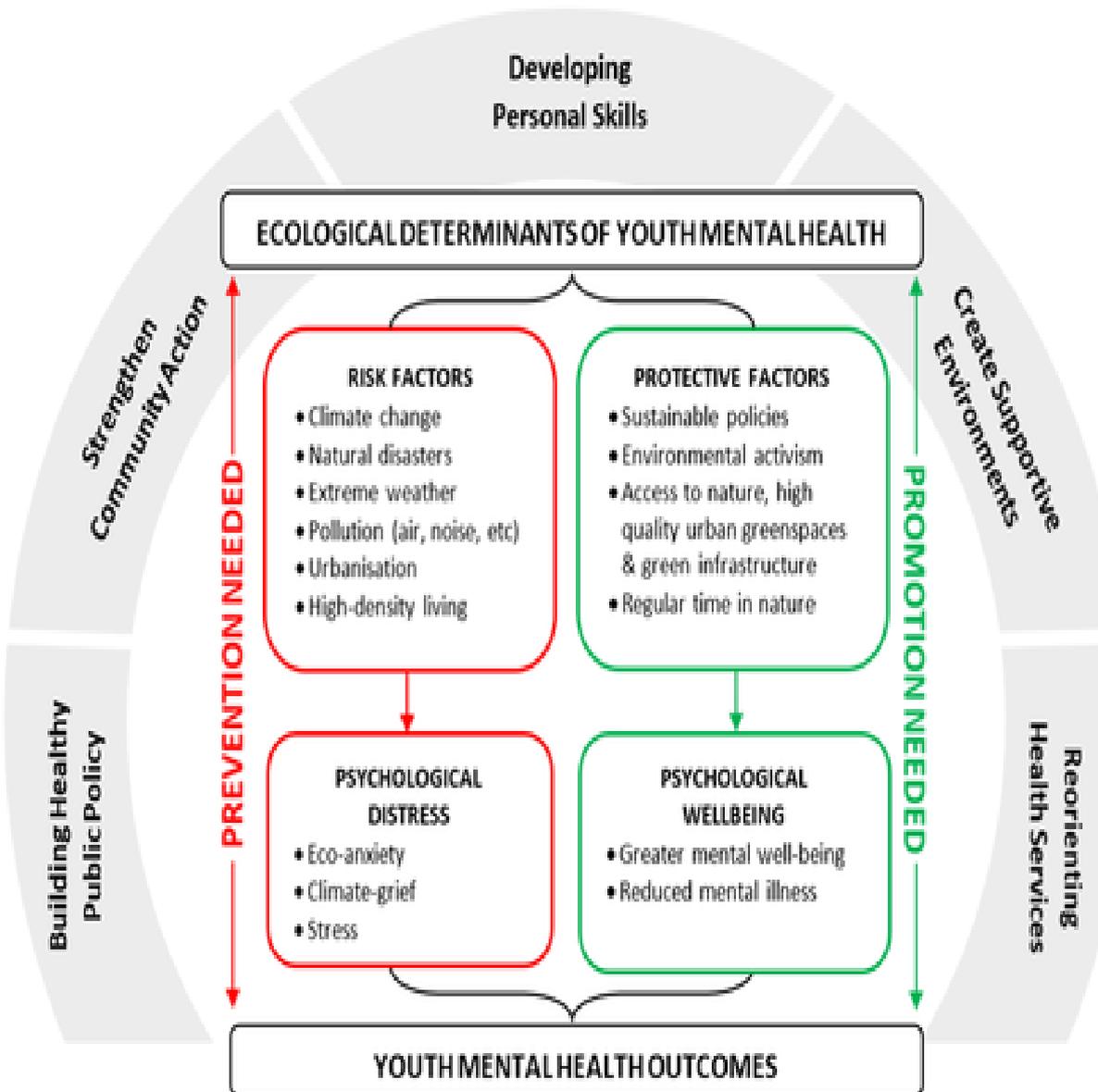
**Social Determinants of Health
Interact with Climate Factors to
Affect Health Risk**

**Vulnerability Varies
Over Time and Is
Place-Specific**

**Youths are key to mapping
out tools and vulnerability
indices to identify climate
health and mental effects**

**Health Impacts Vary
with Age and Life
Stage**

Intervention starts with young people for a sustain generational positive change. The synthesis below summarizes the issues



The Pillars of an effective mental health abatement and eco resilience and survival is considered below



The Ibanikom Mental Health Literacy Evolution and Intervention Project in Cameroon Launched in 2021

<https://claretianuniversity.edu.ng/aikit/>

We undertake a ground survey to detail the barriers, perceptions and traditional beliefs surrounding climate disasters and the use mental health, measurement of eco grief and climate change amongst communities in Africa and use the results to developed afro-centric centred **policy briefs** for wider implementation (Cameroon, Nigeria and Kenya was used as a case study.

We compared perceptions of eco grief with similar situations in Europe, America, Africa, and Asia, as well as the kind of interventions (*Systemic reviews, whatsapp, interviews, meta analyses. See our findings.... Planet health One health*)

(We noted that in Africa a **Decentralised Intervention strategy can guarantee** Resilience, better Coping strategies, reduce suicides and depressions, community support structures were identified.

The Ibanikom Health Literacy Evolution Model to curb mental health effects from climate change: A master class and world's first ground strategy

It address: Mental health and Climate Literacy

What is mental Health and Climate Literacy

1. Access to information
2. Processing of the information
3. Using the information correctly
4. Positive health gains and outcomes

It addresses the following Determinants:

Social, Cultural, Economics, Governance (State or Traditional)

Community engagement redefined, bottom top approach redefined

Indigenous Knowledge to curb Climate change and mental health in the world -the case of Africa

Let me through this oration explain the tenets of The Ibanikom Health Literacy Evolution Model: Afro-centric Intervention model

Built on the Kom **Philosophy of Living**

Wain- Child

Afojinya---Food

Nyamgwing--Prosperity

Living physically, socially and mentally with nature with cultural injections on unsustainable practices

99% of men complain of stress, thinking with headaches, young married men with hypertension and gender based cold wars. **The model provides guidelines to reversing this trend**

(90% women have mental issues: providing food, drying of crops, dealing with Low crop yield as a result of drought and prolonged rains and flash floods Land slides on farms slopes

The model provides guidelines to reversing this trend

The Ibanikom mental Health and Climate Literacy Evolution Model in Kom , Cameroon



LAUNCHING: THE IBANIKOM HEALTH LITERACY EVOLUTION

IBANIKOM means the light of kom. The purpose of this project is to enable all the kom kindred on the globe, health literate



What is Health Literacy?

- Defined as:
- access to health knowledge
 - understanding the health info
 - use of health info rightly
 - gaining wellness through the process

The Ibanikom Health Evolution is the first of a kind on the globe where a tribe unites with its king, ancestors, traditional government institutions with the religious, and academia and all Kom people irrespective of status and gender to build health promotion based on an intersection of traditional governance, healthy villages and contextualized Health Literacy built on the "Iwu Kom Tual"(The Three Kom Hands) Wisdom of life, ie, "Wain, Afojina, Nyamgvin"(Child, Food, Prosperity).

Flagged by his Royal Majesty, **Fon Clement Ndzi II**, this history making event is built on the fact that effective Health Literacy for all people must be socio culturally constructed and must demonstrate Health Literacy products to drive effective implementation.

The Ibanikom Health Literacy community model has been developed in the last six months.

The traditional and royal launch of the public health strategy PAVES THE WAY FOR WHO to understudy and implement globally.

The ibanikom HL project will unveil Health Literacy products for preventing and management of non-communicable diseases (NCDs) and contagious diseases and total well being with health supplements developed from the ecology and tradition of Kom to the world.

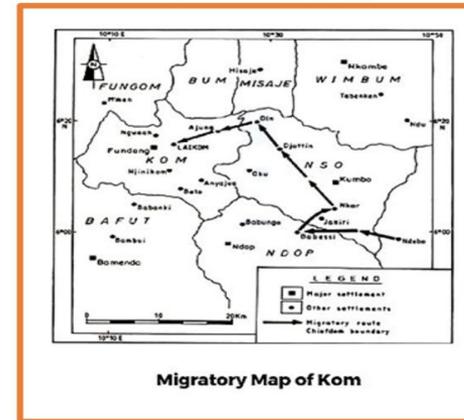
The concept has now been galvanized into the creation of a Centre of Excellence for Promotion of African Indigenous Knowledge and Wisdom domicile Claretian University

Iwonghi Ntôh

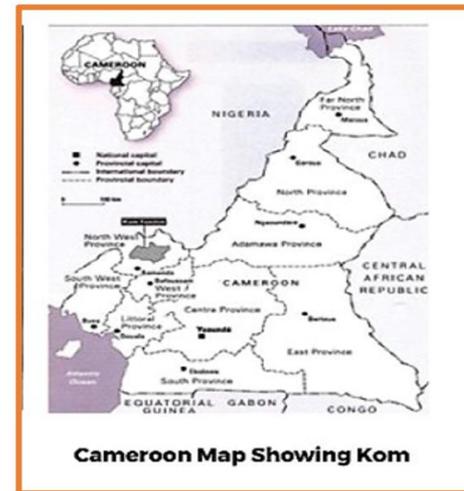
Ibanikom Health Literacy products



Coordinator(s): Prof. Kenneth Yongabi Anchang
Dean, Faculty of Health Science, CUN
Fr. Joseph Ateh, (Convener)

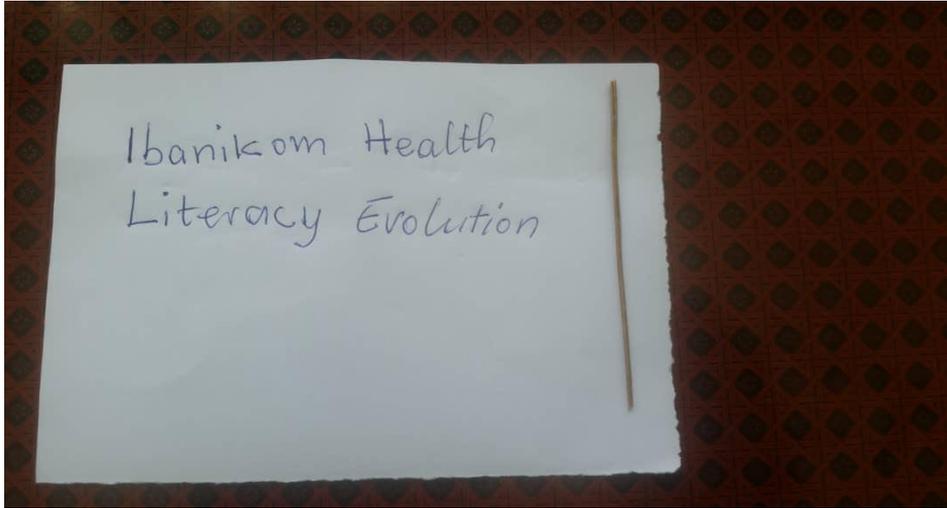


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Ibanikom Health Literacy Evolution

The Ibanikom mental Health and Climate Literacy Evolution traditional Policy Model in Kom , Cameroon enacted by the King and his kindreds



The Ibanikom mental Health and Climate Literacy Evolution Model in Kom , Cameroon

What are the ongoing gains ?

Reduction of stress feelings, increasing social cohesion and unity and sense of purpose

Reunion with ancestors for succor and hope in living

reduction in trauma using a community shared model

reduction in Fear as traditional methods of environmental

conservation, sustenance and curtailment of harmful farming

practices, hunting, poaching, building, etc are reviewed and realigned

Reduction in Anxiety

Anger due to loss of properties reduced based on anticipation

Thank you



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<https://claretianuniversity.edu.ng/aikit/>