

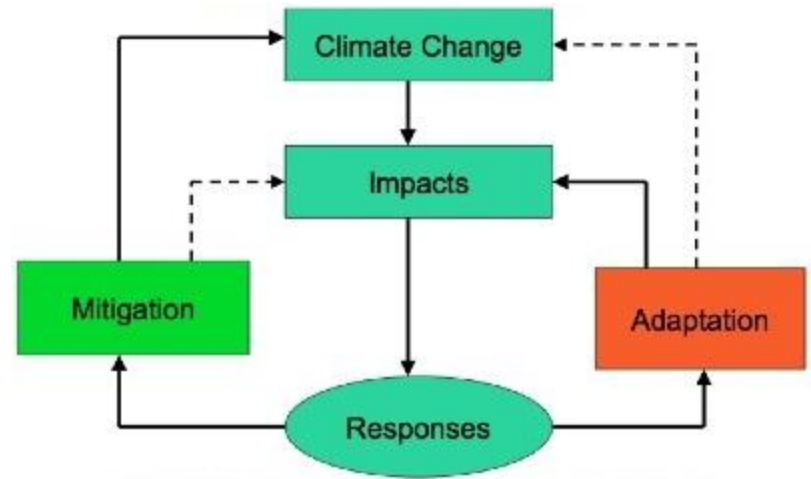
## Vulnerability- what is it?



- quality, state, or probability of being exposed to harm or attack, either physically, emotionally, economically, socially, ecologically ++
- a weakness or error in a system or device's code that can be exploited by unauthorized actors to compromise the data or functionality of the system or device
- Driven by circumstances or instigators

# Climate change

- Mitigation at many sectors expected to increase in response to government policy, economic pressures and demand
- Need for environmental protection & green growth
- climate change will continue to impact
- adaptation is necessary.
- Sometimes adaptation can involve mitigation (e.g. improving home insulation) and so the action will have dual benefits.



# Why vulnerabilities

- Vulnerable aspects;
  - ✓ food insecure
  - ✓ water is scarcity
  - ✓ delicate ecosystem,
  - ✓ natural resource dependent,
  - ✓ Ecological sensitivity .



# Vulnerability segregation

- Impact people within communities differently
- People living in poverty
- Climate change increases gender inequality
- Local communities rely more on the environment for food and other necessities
- Children among the worst-affected
- Vulnerable groups: the elderly, religious minorities and refugees more impacted



# VULNERABILITY

- how strongly people or ecosystems affected by climate change.
- Propensity or predisposition that adversely affected by climate change
- Vulnerability encompasses a variety of elements;
  - ✓ physical exposure,
  - ✓ sensitivity or susceptibility to harm, and
  - ✓ lack or limited capacity to cope and adapt
- Why Understand vulnerability?
  - ✓ resource allocation
  - ✓ policy development
  - ✓ project prioritization
  - ✓ siting, and
  - ✓ Design
- Helps to make decisions;

# VULNERABILITY ANALYSIS

- Describes how strongly people or ecosystems are likely to be affected by climate change
- Component of climate risk. Vulnerability differs within communities and across societies, regions, and countries, and can increase or decrease over time
- driven by certain unsustainable development patterns
  - ✓ ocean and land use,
  - ✓ inequity,
  - ✓ marginalization,
  - ✓ historical and ongoing patterns of inequity such as colonialism,
  - ✓ governance“
- vulnerability is higher in some locations than in others
- Certain aspects within a region increase vulnerability

# Vulnerability categories

## Categories

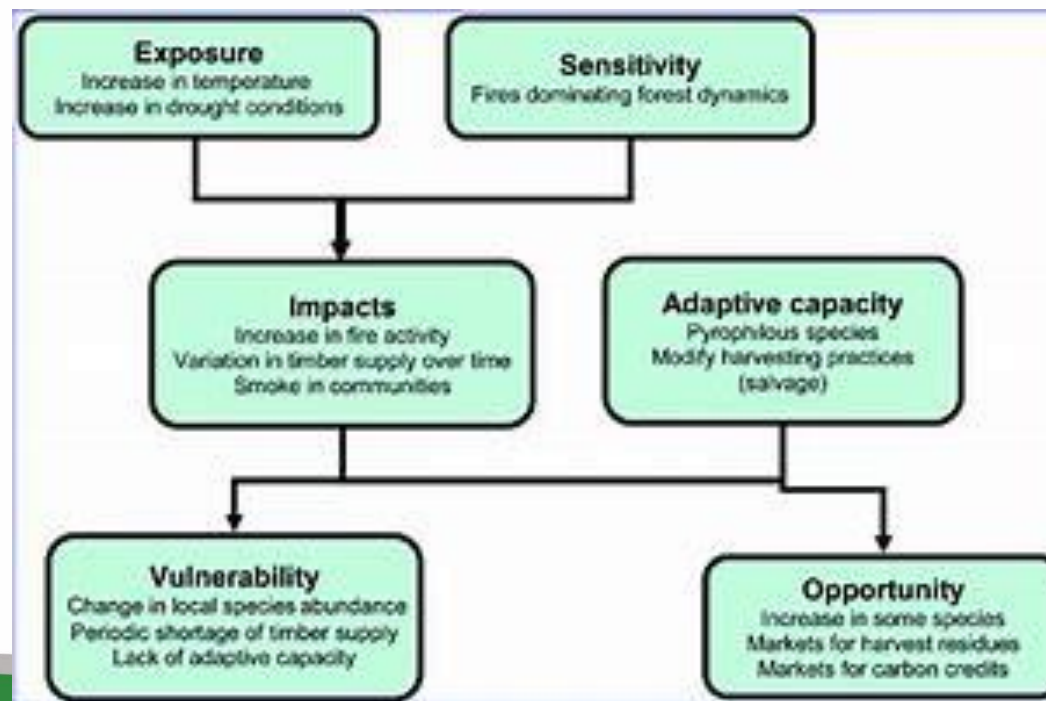
- 1) economic vulnerability based on socioeconomic factors
  - ✓ low incomes, local rural peoples,
  - ✓ women,
  - ✓ children,
  - ✓ the elderly



# Vulnerability check

## 2) Geographic vulnerability

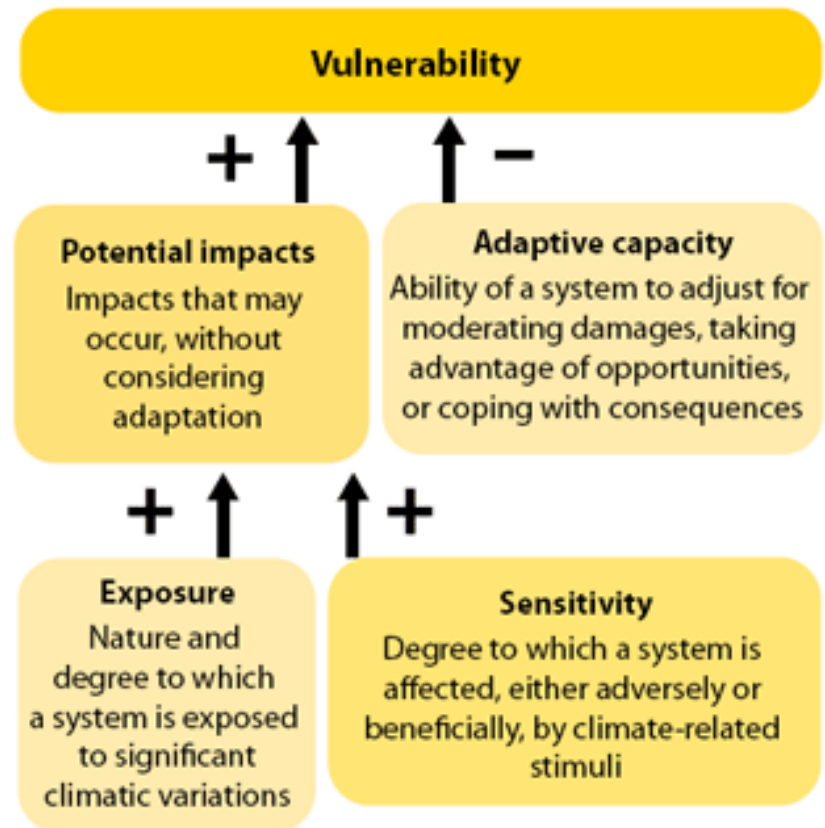
- locations impacted by natural hazards
- dramatic changes in ecosystem services,





# vulnerability

- Central concept to adaptation.
- Degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change,
- Function of
  - ✓ exposure,
  - ✓ sensitivity, and
  - ✓ adaptive capacity. High exposure or
- sensitivity and low adaptive capacity causes high vulnerability



# IMPACTS

## 1) Impact on infrastructure

Urban cities depend on various types of infrastructure such as roads and bridges, power stations and water

## 2) human health

affects the main determinants of human health negatively since as it may modify the transmission of diseases such as cholera, malaria and meningitis

## 3) Impact on ecosystem

affect the ecosystems and the important ecosystem services, decrease biodiversity and wetland region and lead to loss of soil and trees

## 4) Food and water security

✓ lead to the reduction in food production due to changes in rainfall patterns and temperatures.

✓ water resources security due to increased demand and decreased groundwater

# IMPACTS

- The IPCC) has predicted temperatures increase across Africa by 2 – 6 degrees C
- the next 100 years and rainfall variability is expected to increase, resulting in regular flooding.
- Increased weather and climate variability is disrupting lives and economies,
- by 2030, up to 118 million extremely poor people on the continent will be exposed to drought, floods and extreme heat,
- Impacts will hinder progress towards poverty alleviation and growth.
- “In sub-Saharan Africa, climate change could further lower gross domestic product (GDP) by up to 3%, by 2050
- Millions at risk

# IMPACTS

- Increased female headed household
- Interruption of access to social services such as schools causing absenteeism
- Displacement of people from their homesteads and ways of life



# IMPACTS

- Crop failure leading to reduced productivity
- Increased floods and droughts
- Inadequate household food, resulting in hunger and malnutrition
- Increased weather related human and livestock diseases
- *The issues are end less*



## BURDEN OF CARE



# PEOPLE FACING THE BRUNT

- **People living in poverty**
  - ✓ disproportionately affects poor people in low-income communities the region
- **Women**
  - ✓ increases gender inequality,
  - ✓ reduces women's ability to be financially independent,
  - ✓ has overall negative impact on the social and political rights of women
- **Local communities;**
  - ✓ environment depended communities for food and other necessities, makes LC more vulnerable to disturbances in ecosystems
- **Children:**
  - ✓ among the worst-affected by global warming
- Elderly



# ADAPTATION

- Actions to decrease pressure on the natural resources, increase environmental risk management and enhance the social well-being of the vulnerable
- Africa's immediate adaptation requirements stem from the continent's primary sensitivity and vulnerability to climate change, along with its minimal levels of adaptive capacity



## Empowering Champions **very important!!**

### Champions:

- ✓ need to scale up engagement
- ✓ transformational shift of communities, institutions, national and regional resilience ambition





# Barriers to adaptation

- disconnects between the national level, and execution of more cohesive adaptation response remains more uncertain
- statutory and policy structure for adaptation remain disintegrated,
- adaptation policy methods hardly take into cognizance realities in the political and institutional spaces, and general policies
- often at unconventional with separate local adaptation approaches,
- especially, where traditional, and context-specific issues are disregarded

# ADAPTATION PRIORITY NEEDS

- a) Better Quality Adaptation Finance
- b) Prioritization where most needed
- c) for Those Who Need it Most.
- d) access and accountability
- e) Improved Implementation and Tracking of Adaptation
- f) move from adaptation planning to implementation
- g) Equitable and Just Transitions for Adaptation

# Why Adaptation Matters for Africa

- (IPCC), published in 2015 confirms that global average surface temperatures have increased by approximately 0.61°C since preindustrial times.
- climate change is a driver of other closely related threats, such as large-scale mass migration, disease outbreaks, and extreme events
- threat of climate change poses a severe threat on this otherwise impressive trajectory towards future prosperity.
- recognition that African countries must adapt to climate change in order fulfil their global responsibilities to the future well-being of the planet and all humanity
- Climate change is projected to have a drastic impact on Africa during the 21st century, under low mitigation futures
- Risk to The first concerns water resources, due to droughts in an environment of increasing water demands
- risk is food production and food security driven by unfavourable climatic conditions, flooding and drought, agricultural diseases and pests
- risk is health, due to an increase in the range of water and vector borne diseases.

# Conceptual model of adaptation and mitigation

	Objective View	Subjective View	Subjective Behaviour
Adaptation	<p>Risks &amp; Opportunities for Agriculture → Adaptation Strategies Adaptation Strategies → Consequences Consequences → Risks &amp; Opportunities for Agriculture</p>	<p>Perception and Evaluation of Climate Change Consequensies, Risks and Opportunities for Agriculture and Adaptation Strategies</p> <p>→ <b>Social Constructs</b></p>	<p>Decision Making and Behavioural Change leading to a Choice of Adaptation (Risk Minimazation &amp; Opportunities Maximazation) Strategies</p> <p>→ <b>Individual Behaviour</b></p>
Mitigation	<p>Negative Externalities from Agriculture → Climate Change Climate Change → Mitigation Strategies Mitigation Strategies → Negative Externalities from Agriculture</p>	<p>Perception and Evaluation of Climate Change, Negative Externalities from Agriculture and Mitigation Strategies</p> <p>→ <b>Social Constructs</b></p>	<p>Decision Making and Behavioural Change leading to a Choice of Mitigation (Risk Minimazation and Opportunities Maximazation) Strategies</p> <p>→ <b>Individual Behaviour</b></p>

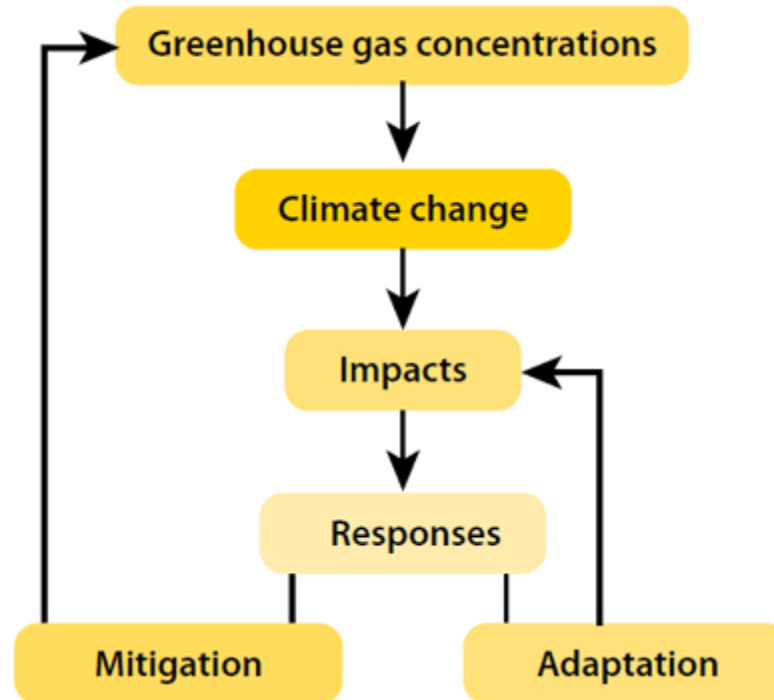
# Understanding Africa's Adaptation Finance Gap

- According to the World Bank, developing countries require between USD 70 billion and USD100 billion,
- while the UNEP Adaptation Gap reports states that this value could four to five times higher.
- Some sectors urgently
- require financial support as the impacts of climate change are occurring at a faster rate than predicted.
- The poorest and most vulnerable countries and communities are not only disproportionately exposed to climate risks and shocks, but to all kinds of insecurities and deprivations that constitute the multiple dimensions of poverty.
- And since poverty and inequality exacerbate vulnerability; reducing poverty and inequality is consequently the most effective climate change adaptation measure

# DIFFERENCE BETWEEN ADPTATION AND MITIGATION

	<b>Mitigation</b>	<b>Adaptation</b>
Spatial scale	Primarily an international issue, as mitigation provides global benefits	Primarily a local issue, as adaptation mostly provides benefits at the local scale
Time scale	Mitigation has a long-term effect because of the inertia of the climatic system	Adaptation can have a short-term effect on the reduction of vulnerability
Sectors	Mitigation is a priority in the energy, transportation, industry and waste management sectors	Adaptation is a priority in the water and health sectors and in coastal or low-lyi

# CC AT GLANCE



# How bad will climate change be?

Mitigation (reducing greenhouse gas pollution) constrains the worst-case outcome, by limiting how much warming is possible.





## TIME IS RUNNING OUT

- Business as usual is no longer the option
- Innovative and transformative actions necessary
- Demands that we all take part
- There must be a leader
- Champions are the leaders



# CLIMATE CHANGE IN ZAMBIA ONE SIZE MAY NOT FIT NOR WORK FOR ALL



# CLIMATE CHANGE IN ZAMBIA

## ONE SIZE MAY NOT FIT NOR WORK FOR ALL



# MAKING A SHIFT

- Climate resilience required to inspire capacity to cope with hazardous event
- Climate justice support equity;
  - ✓ another essential component of vulnerability
  - ✓ closely tied to issues of environmental justice and climate justice.
- There are many aspects of climate justice that relate to vulnerability and resiliency
- communities are the most heavily impacted



## CHAMPIONS HAVE TO MAKE A DIFFERENCE

- MAYBE?
- WE JUST HAVE TO
- WE WILL
- WE WILL TRY
- CERTAINLY SO
- FAILURE IS NOT AN OPTION
- !!!!!!!!!!!!!!!
- **THANKYOU**

Their future at stake

