

CLIMATE CHANGE ADAPTATION

Best practices, Gaps and Effective Adaptation Planning

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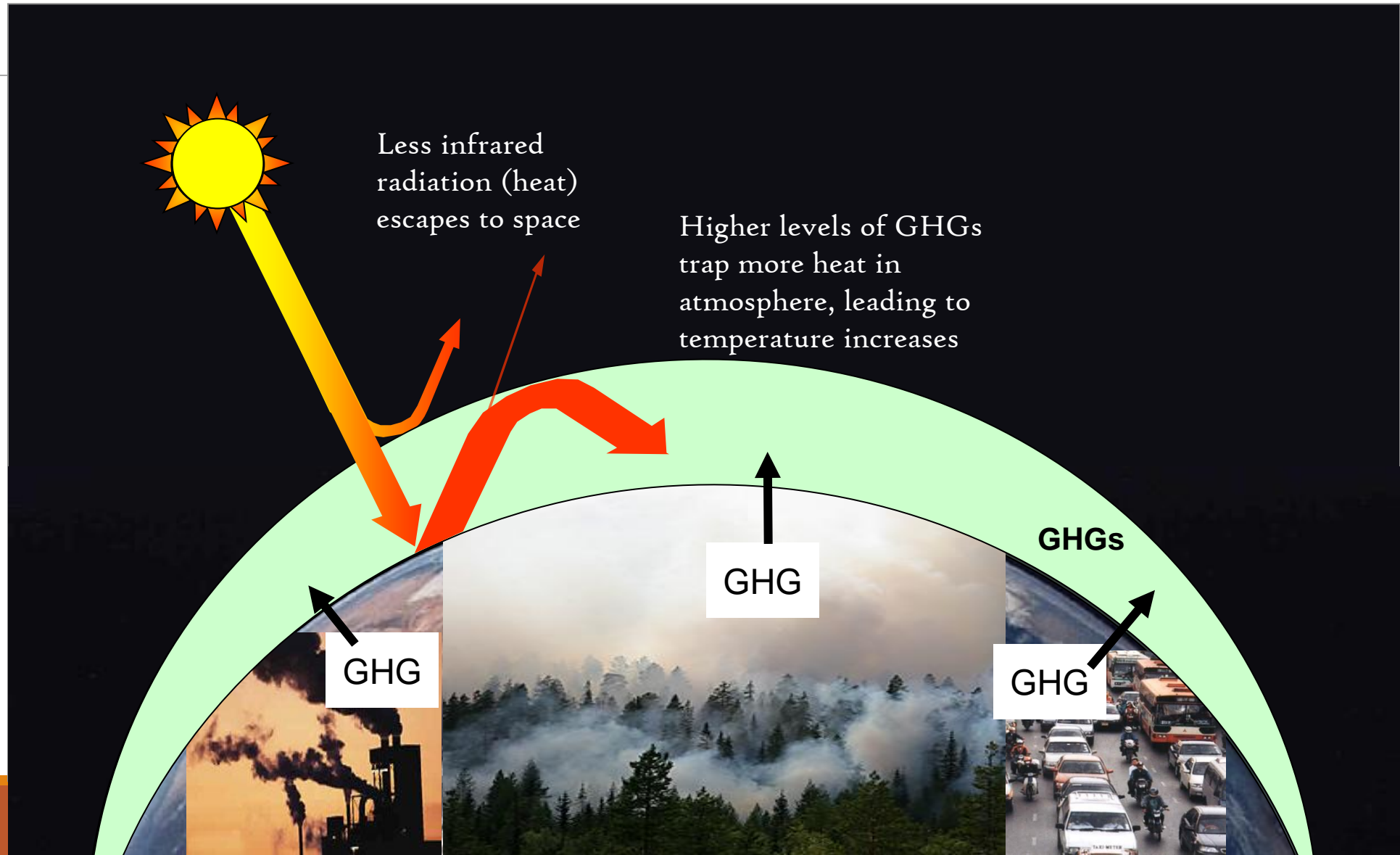
09TH AUGUST, 2024



BILL & MELINDA
GATES *foundation*



The enhanced greenhouse effect



What human activities generate GHGs?

Greenhouse Gas	Industrial Sources	Land Use Sources
Carbon dioxide (CO ₂)	Fossil fuel combustion and cement manufacturing	Deforestation and burning of forests
Methane (CH ₄)	Coal mining, natural gas production	Conversion of wetlands Rice paddies Livestock production
Nitrous oxide (N ₂ O)	Fossil fuel combustion Nitric acid production	Fertilizer use Burning of biomass
Hydrofluorocarbons (HFCs)	Industrial processes Manufacturing	---
Perfluorocarbons (PFCs)	Industrial processes Manufacturing	---
Sulphur hexafluoride (SF ₆)	Electrical transmission and distribution systems	----

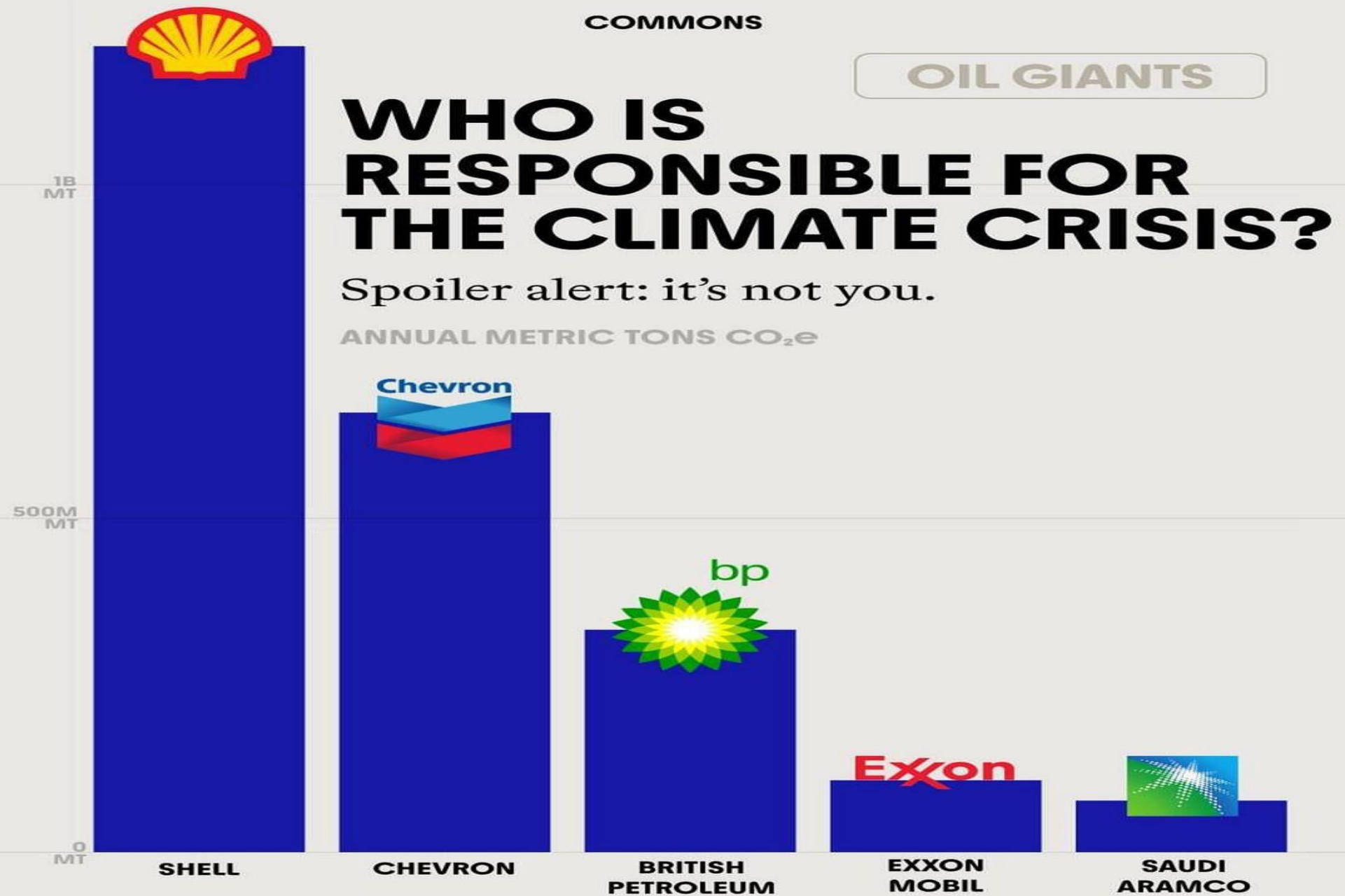
COMMONS

OIL GIANTS

WHO IS RESPONSIBLE FOR THE CLIMATE CRISIS?

Spoiler alert: it's not you.

ANNUAL METRIC TONS CO₂e



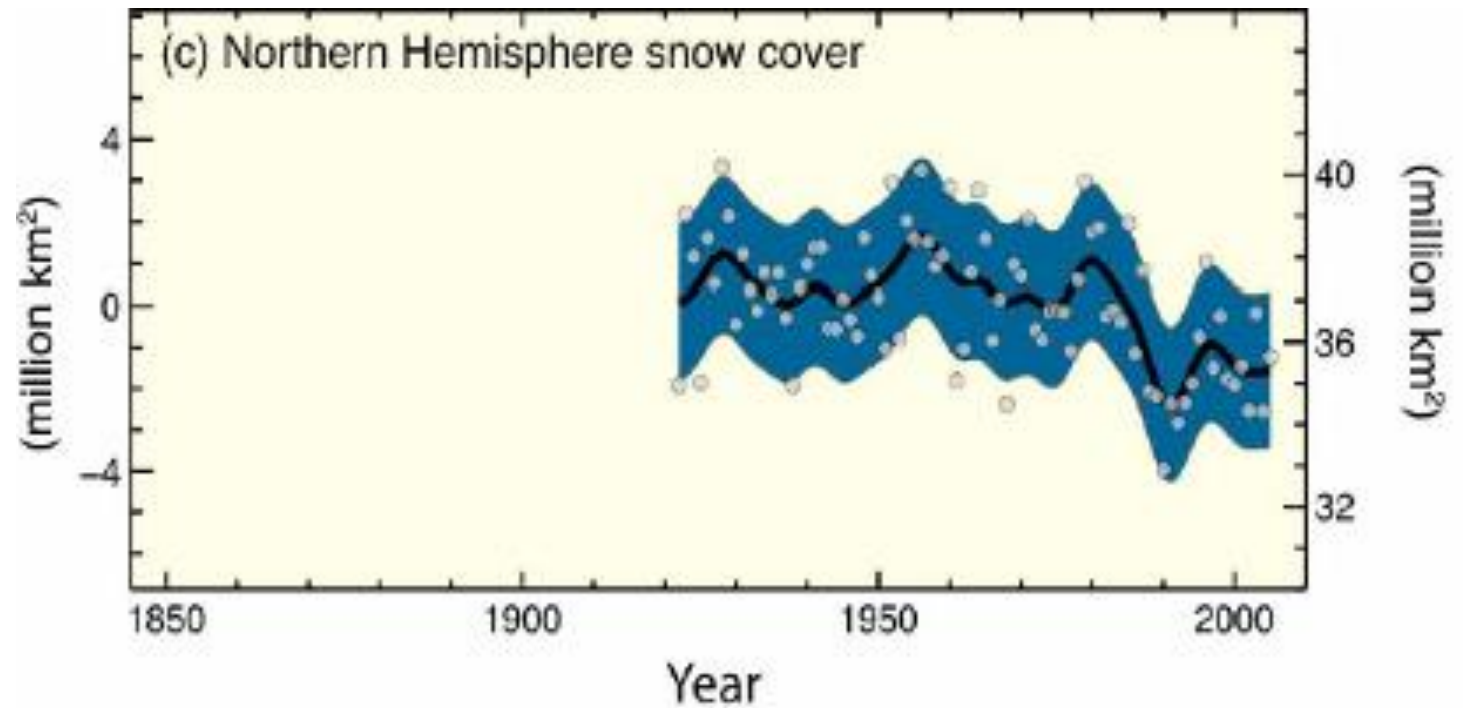
Effects of climate change: more extreme weather events



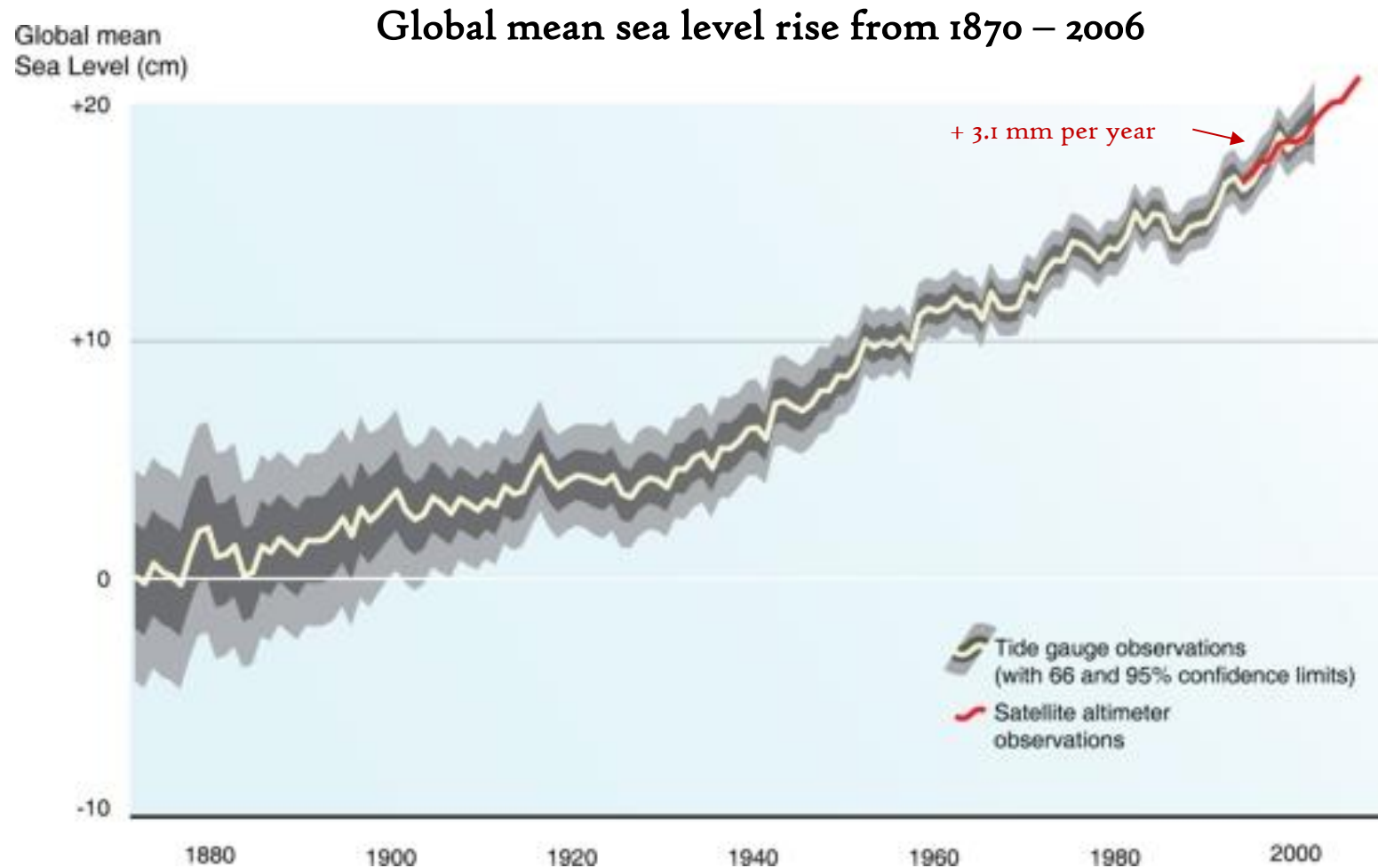
Decreasing snow cover and melting glaciers



Decreasing snow cover



Rising sea levels



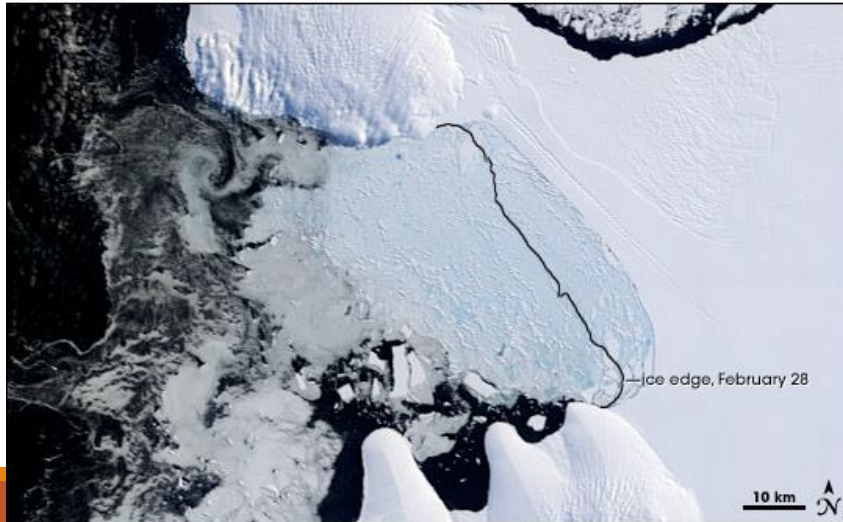
- Sea levels are rising due to thermal expansion and melting glaciers and ice caps
- Average global sea levels have risen 17 cm during 20th century and may rise 28-58 cm by 2100

Warming of poles and loss of sea ice

Collapse of Wilkins Ice Shelf, Antarctica



February 28, 2008



March 17, 2008

Arctic Sea Ice Loss: Greater than Land Area of Texas, California, and Maryland Combined

2003 vs. 1979 Comparison



<http://earthobservatory.nasa.gov/Study/WilkinsIceShelf/>

Cows that died from drought near Ilangeruani village, near Lake Magadi, in Kenya, on Nov. 9, 2022



Malawi Climate Change Situation

- ❑ Climate change is wrecking lives of people, each and everyday
- ❑ Malawi has witnessed reduced food crop yields, damage to infrastructure, loss of biodiversity, loss of lives etc.
- ❑ On average Malawi loses US\$9 million or 0.7% of GDP yearly due to floods in the Shire Basin alone while droughts and dry spells cause about 1 percent (US\$13 million) annual GDP loss in Malawi
- ❑ Current and projected impacts of climate change in Africa make adaptation an urgent priority
- ❑ Yet, adaptation is not receiving the attention it deserves



Climate disasters in Malawi: Increasing frequency, intensity, coverage

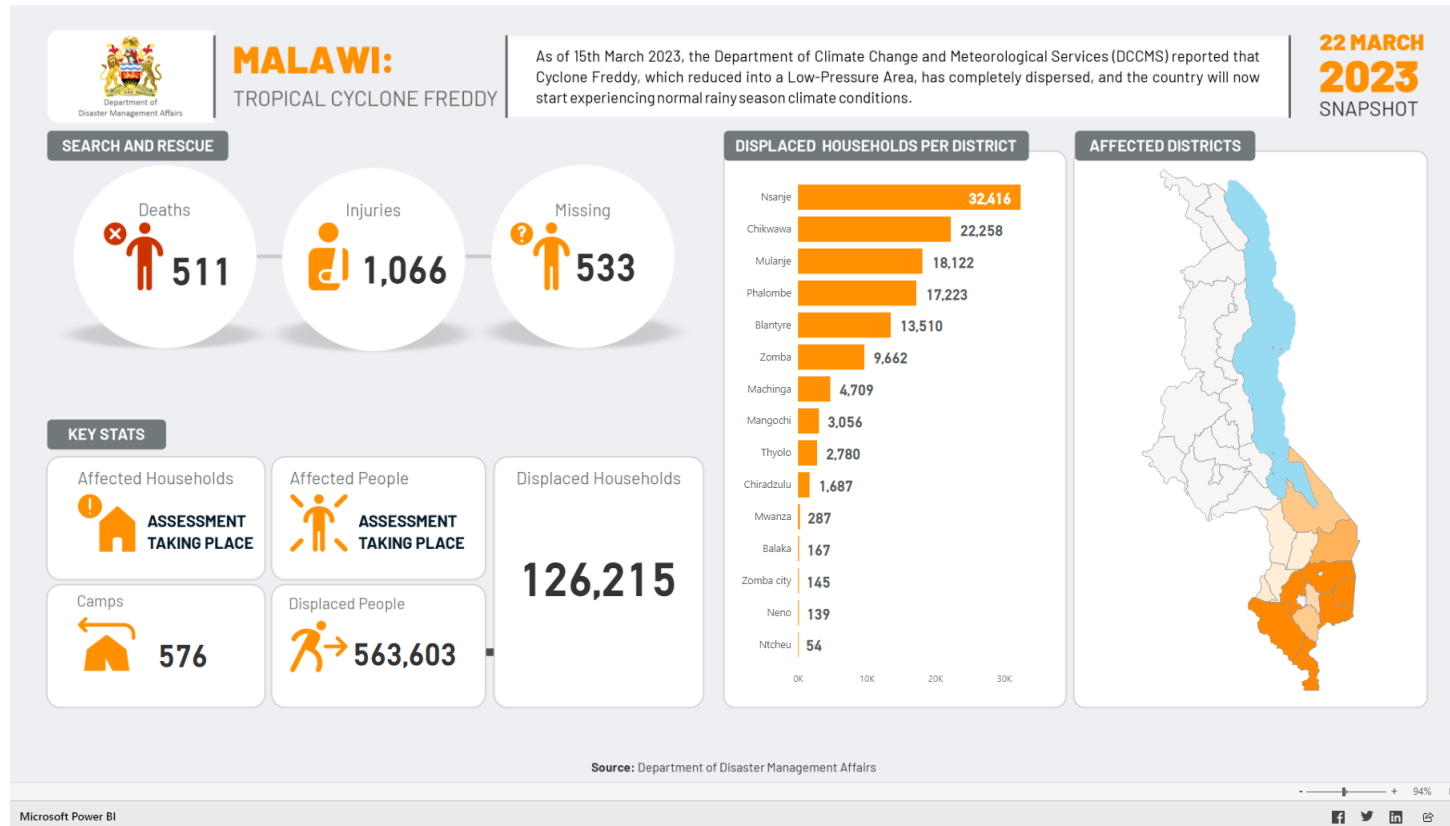


Storm Anna caused flooding in 19 districts resulting into 46 deaths, 206 injuries, 995,000 HHs impacted and 153 thousand people displaced

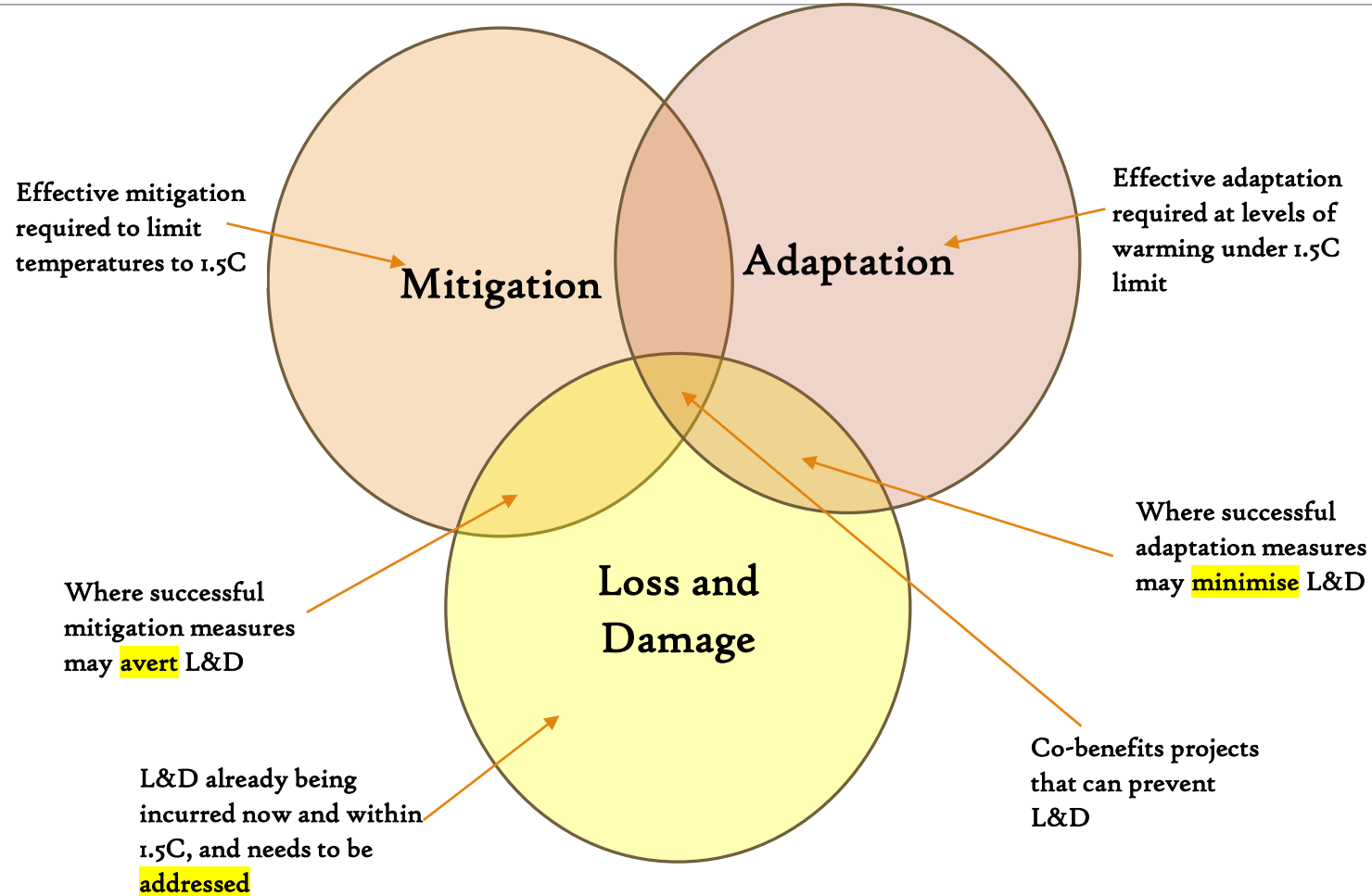
Double Tragedy Cyclone Freddy (flooding & Drought)



Cyclone Freddy figures – USD700m for Recovery



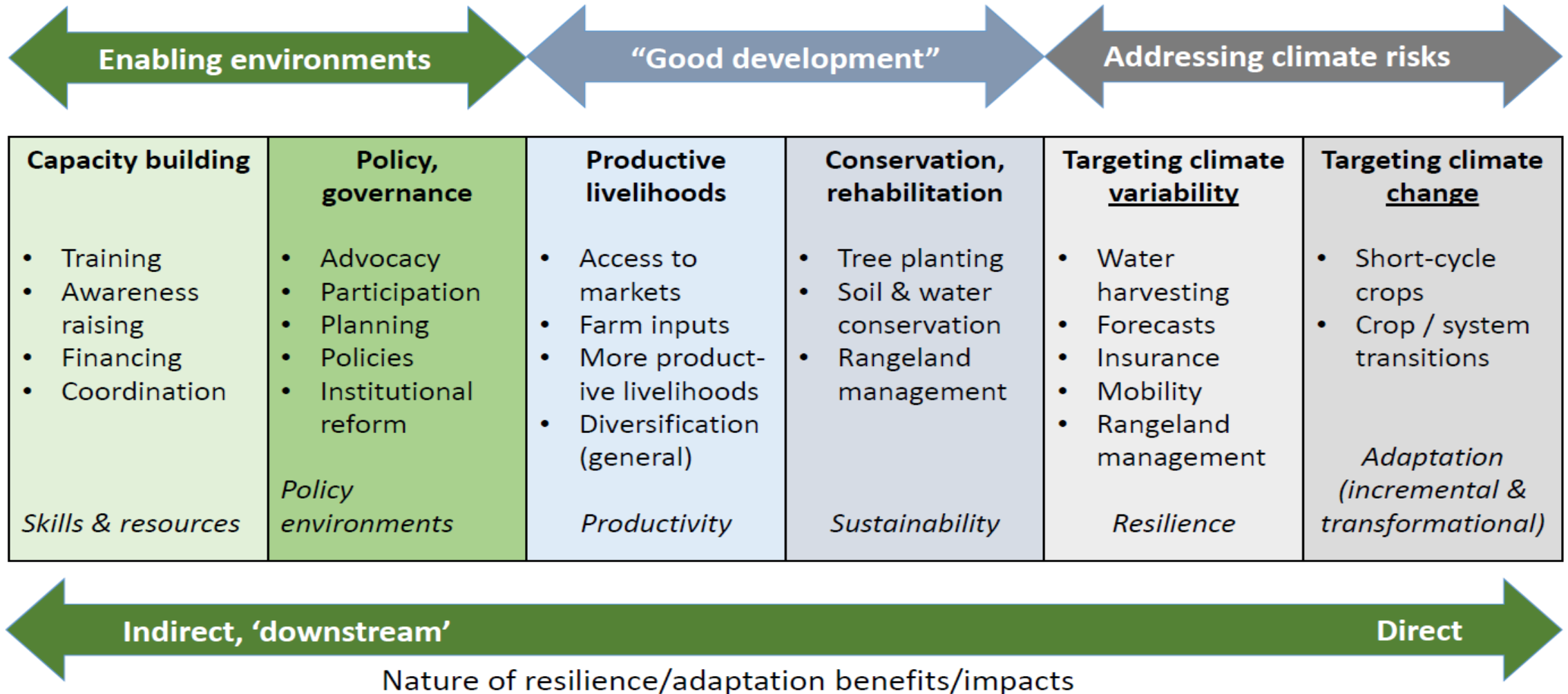
Three Pillars of Climate Change Mgt



Approaches to Adaptation could be

- Incremental – adapting existing systems through familiar measures e.g. adjusting land management practices such as construction of irrigation systems; use of new crop varieties, reducing cultivated areas or livestock numbers
 - Transformational- Radically changing or replacing systems/ practices that are existentially threatened by climate change with alternatives that are viable under new climatic conditions e.g. shifting from fossil fuels to clean energy; relocation of human activities in flood plains, river rehabilitation
- must include measures to address specific identifiable climate hazards/impacts

A typology of Adaptation Actions



What Are Stakeholders Doing About It?

❑ Different stakeholders are **DOING THEIR PART** to address climate change impacts

Government

Leading in creating an environment policy development for implementation of CC interventions

CSOs & Media

Compliment Government efforts through advocacy; research; capacity building and implementation of projects to address negative impacts of climate change

Development Partners

Providing financial support to implement projects

Communities

Demanding action from leaders; implementing various interventions to curb the impacts of climate change

Any Progress?



- ☐ Robust policy framework that supports climate action
- ☐ Implementation of interventions addressing negative impacts
- ☐ Increased understanding of climate change impacts that is triggering adoption of adaptative measures (irrigation, conservation agriculture etc.)
- ☐ Existing youth population that is taking action
- ☐ Increased reporting on climate change issues (*media coverage of Tropical Cyclone Freddy*)
- ☐ Incorporation of climate change issues in development plans such as MW2063
- ☐ Malawi's ratification of global agreements on climate change (*UNFCCC, Paris Agreement, Kyoto Protocol etc.*)

Supporting Needs Based Advocacy on Adaptation in Africa Project

- ❑ As one way of pushing for adaptation as an the urgent need for Malawi, Civil Society Network on Climate Change (CISONECC) with support from the Bill and Melinda Gates Foundation in collaboration with the Pan African Climate Justice Alliance (PACJA) is implementing the project: “Supporting Needs-Based Advocacy on Adaptation in Africa”
- ❑ The project aims to **elevate needs-based adaptation** in global and regional policy spaces and contribute significantly to increasing global, regional and national **ambition on adaptation** that respond to the special needs and circumstances
- ❑ Notably, mechanism for financing adaptation (such as Adaptation Fund) have limitations with guidance for adaptation actions (such as Global Goal on Adaptation) still a work in progress
- ❑ This therefore calls for more advocacy to push for collective actions; informed decisions; doubled climate finance and ambitious adaptation actions

Some Best Practices in Advancing Adaptation

Adoption of adaptation Measures



Diversification of Sources of Livelihood

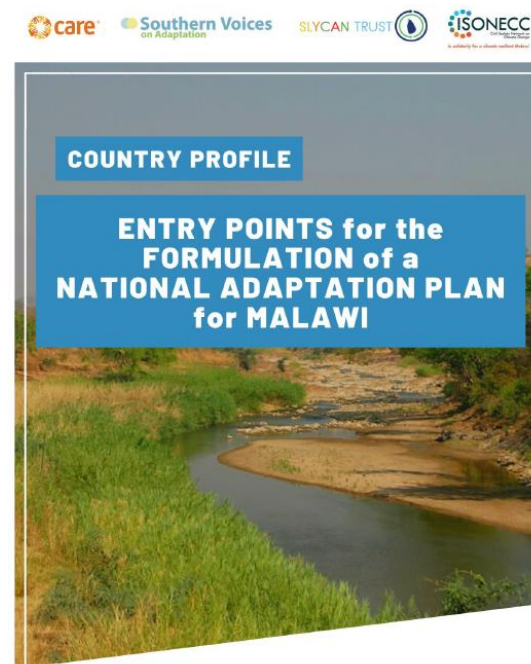


Some Best Practices in Advancing Adaptation

Documentation of Evidence to Influence Policy and Action



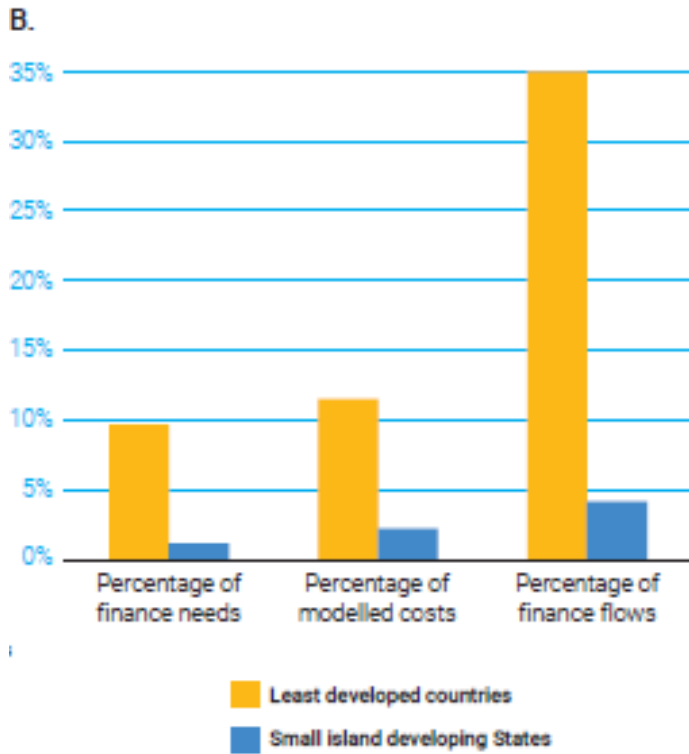
Development of a National Adaptation Plan



APRIL 2021

Gaps in Advancing Adaptation

I. Limited Financing



□ Tried and tested options are available but they are being implemented at a small scale

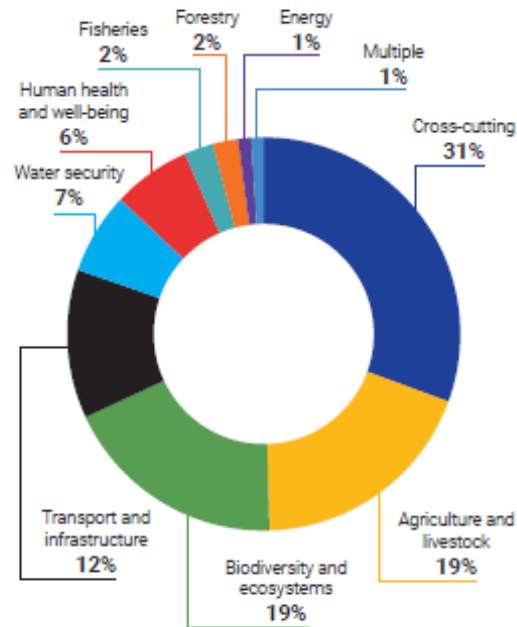
□ WHY!?

- Globally, more funding is given for mitigation than adaptation
- Lack of clear adaptation goal(s) (Malawi NAP)
- Limited domestic finance
- Developed countries not honoring their commitment to finance climate actions

Gaps in Advancing Adaptation

2. Integration of Climate Change Adaptation in Sectoral Plans

Sectoral focus of adaptation actions reported in adaptation communications



❑ Incorporation of adaptation actions informed by sectoral needs remains low

❑ HOW!?

- Evidence of poor infrastructures – roads, schools, hospitals, bridges
- Malawi mainly relying on rainfed agriculture
- Diversification of energy generation – hydropower mostly in flood prone areas
- Low adoption of fish farming
- Low adoption of technology in health care services (such as Chipatala cha pa phone)
- Low adoption of water harvesting

Gaps in Advancing Adaptation

3. Limited Capacity to Adopt Adaptation Measures

INSIDE DEVELOPMENT | FOOD SYSTEMS

Malawian farmers turn to organic alternatives as fertilizer costs rise

Agriculture experts in Malawi have warned that the rising fertilizer prices will have severe consequences on different development sectors in the country. Adding that farmers should now start to look for organic alternatives to chemical fertilizers.

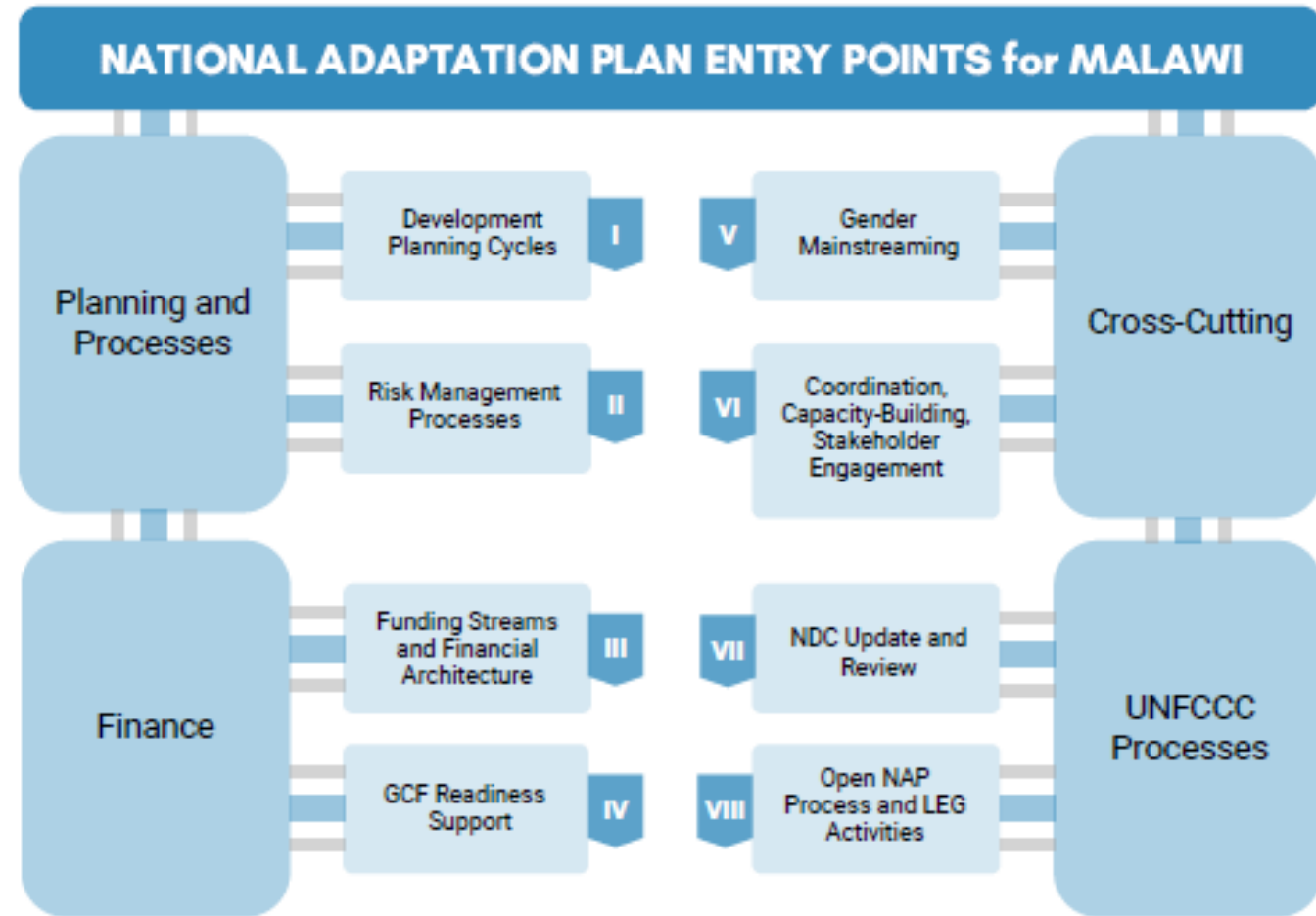
By **Madalitso Wills Kateta** // 11 April 2022



- ❑ Limited knowledge and skills to adopt alternatives
- ❑ Reliance still on inorganic fertilizer – reportedly “AIP beneficiaries reduced by 400, 000 (definitely a cause for panic.)
- ❑ Preference to old practices

How Can we Ensure Effective Adaptation Planning?

NATIONAL ADAPTATION PLAN ENTRY POINTS for MALAWI



- ❑ Be informed by climate impacts and vulnerabilities of Malawi
- ❑ Should reflect Malawi's key development goals, sectoral priority actions, and gaps and needs
- ❑ Must be participatory, inclusive and area specific
- ❑ Must have clear M&E framework – with indicators
- ❑ Must utilize existing processes
- ❑ Must have intentional finance related to existing gas and needs and means of implementation

Examples of Needs-Based Adaptation Actions

Solar Powered Irrigation farming to address limited rainfall; and inclusive of elderly (on manual treadle pumps)



Examples of Needs-Based Adaptation Actions

Promoting conservation agriculture, soil mulching and use of Mbeya manure to address loss of fertility



Examples of Needs-Based Adaptation Actions

Promoting fish farming as a source of protein and income



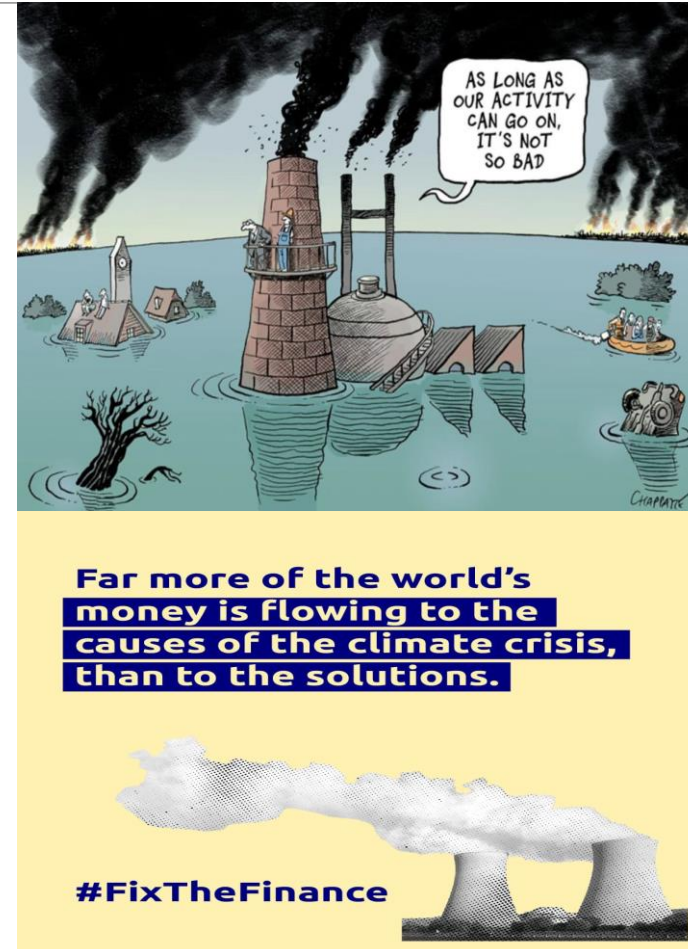
Examples of Needs-Based Adaptation Actions

Empowering women, to practice piggery husbandry, as one of the most vulnerable groups to the impacts of climate change



Advocacy Approaches for NBA

- Lobbying
- Campaigns/petitioning
- Meetings with government officials
- Translation of research
- Education/influencing events
- Consensus building and/or
- Creating champions



Despite these gaps...

**Adverse
impacts from
human-caused
change will
intensify**

Water scarcity and food production



Health and wellbeing



Cities, settlements and infrastructure



Ecosystem structure, species range shifts and changes in timing





Thank You!

