

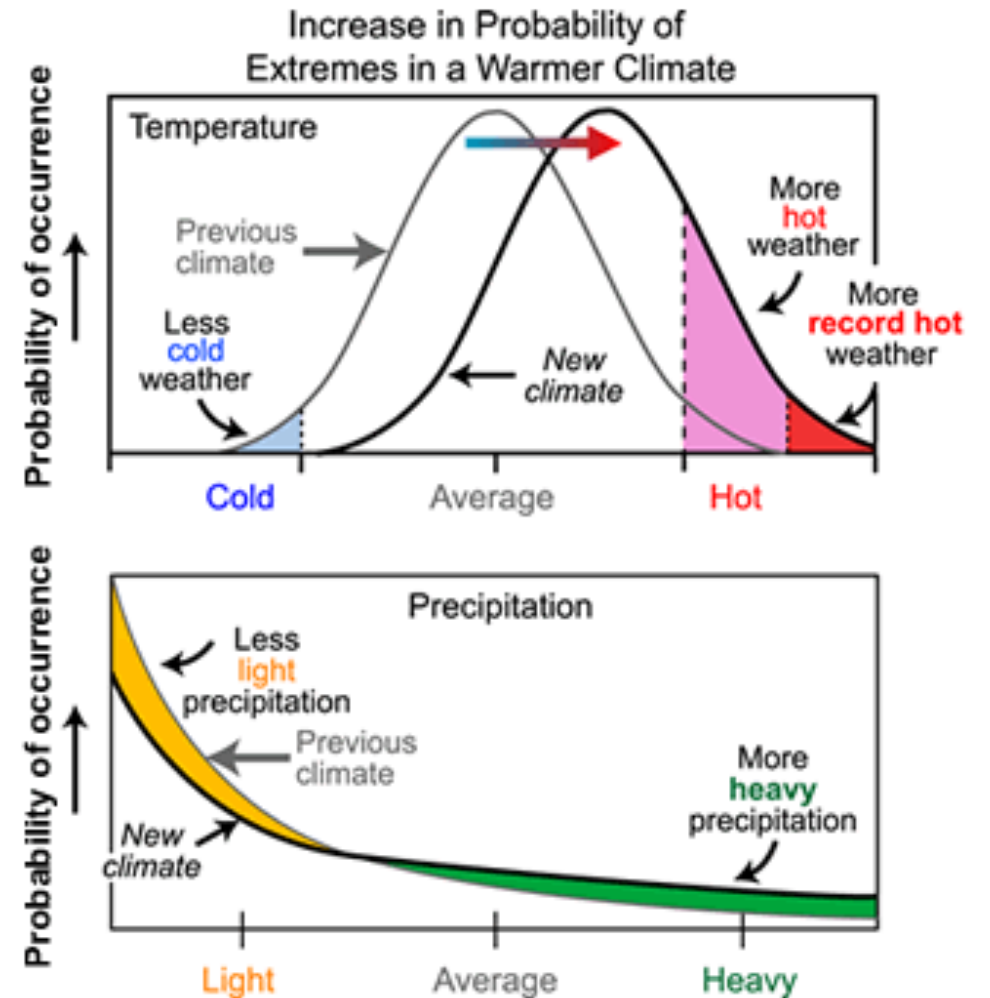
# Building resilience to Uganda's society to impacts of climate change

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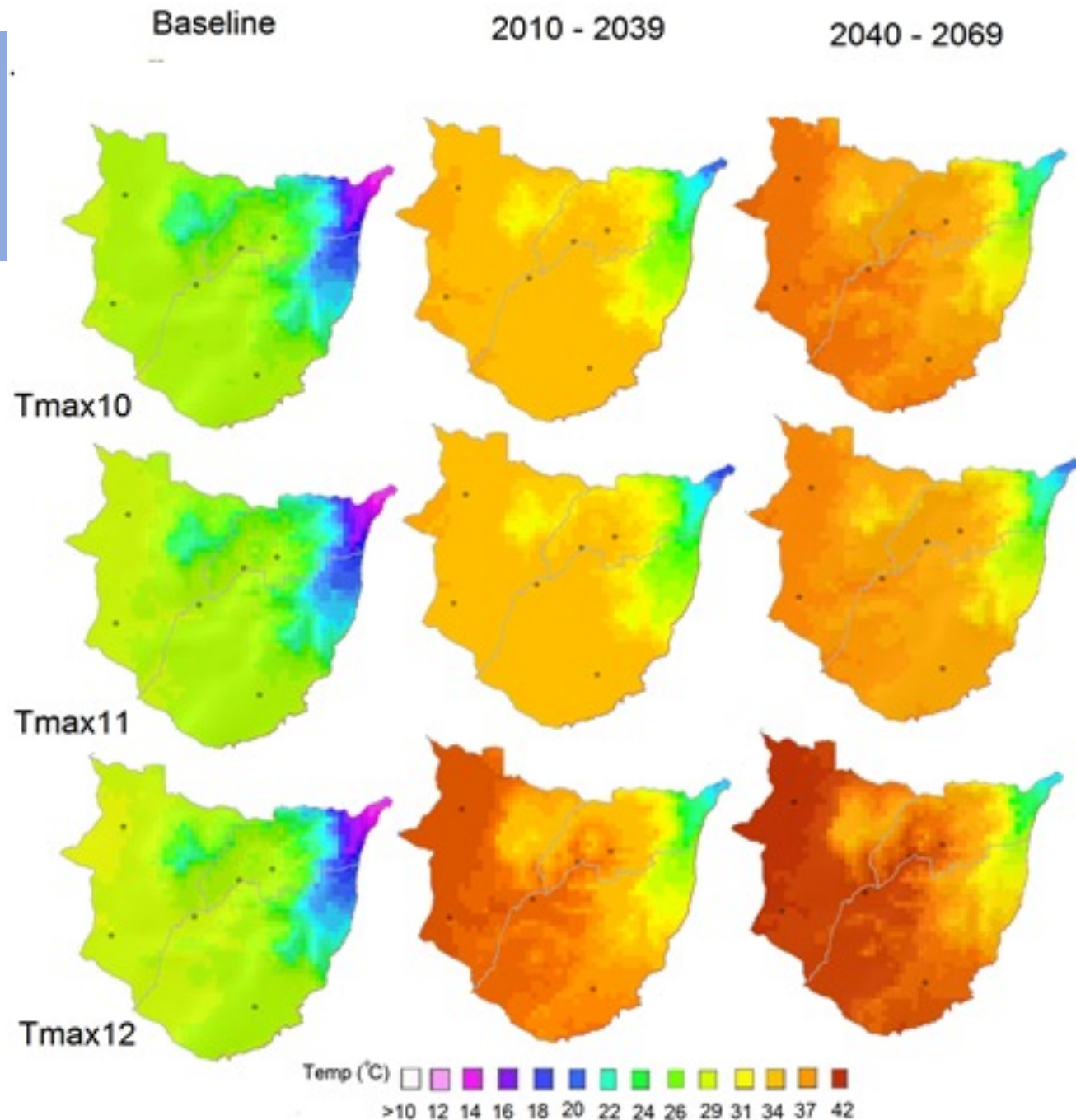
# What do we mean by Climate change?

- Changes in averages
- Changes in extremes
- Combination of changed averages and extremes



# The reality of CC (

- Comparing Maximum temperature in the Mbale region
  - 1961-1990 (baseline)
  - 2010-2039
  - 2040-2069



# Climate change impacts

- Consequences of increased temperature and increased and/or reduced precipitation
  - water resources,
  - food security,
  - infrastructure,



# Climate change impacts – Uganda examples

- Lake Victoria
- Lake Kyoga
- Lake Albert (Ntorooko schools, Butiaba town in Buliisa District)

# Response actions in Uganda -government

- National Development Plans (NDP-II, NDP-III)
- National Adaptation Plan of Action 2007 (adaptation priorities)
- National Climate Change Policy 2015
- National Climate Change Act 2021
- Nationally Determined Contributions to the Paris Agreement (update 2022)
- Climate Change Unit->Climate Change Department-MWE
- Climate Finance Unit in the MFPED
- Numerous projects
  - GCF FP034 Building resilient communities, Wetland ecosystems and associated catchments in Uganda \$44.3m(24.1+18.1), 800,000 direct & 4000,000 indirect beneficiaries
  - Uganda investing in forests and protected areas for climate-smart Development \$148m, (78.3 credit+70Grant)

# Response actions in – general public/Private sector

- Renewable energies
  - Electric cars
  - Rebranding
  - Carbon trade
  - Tree planting
  - Climate-Smart Agriculture
- What have we seen our people do?
    - Migration
    - Cultivation in wetlands



# Understanding climate risk

- Climate risk: Potential for consequences from climate variability and change where something of value is at stake and the outcome is uncertain.
- Often represented as the probability that a hazardous event or trend occurs multiplied by the expected impact.
- Risk results from the interaction of vulnerability, exposure, and hazard.
- Requires data/information about projected changes in climate -> Uganda National Meteorology Authority



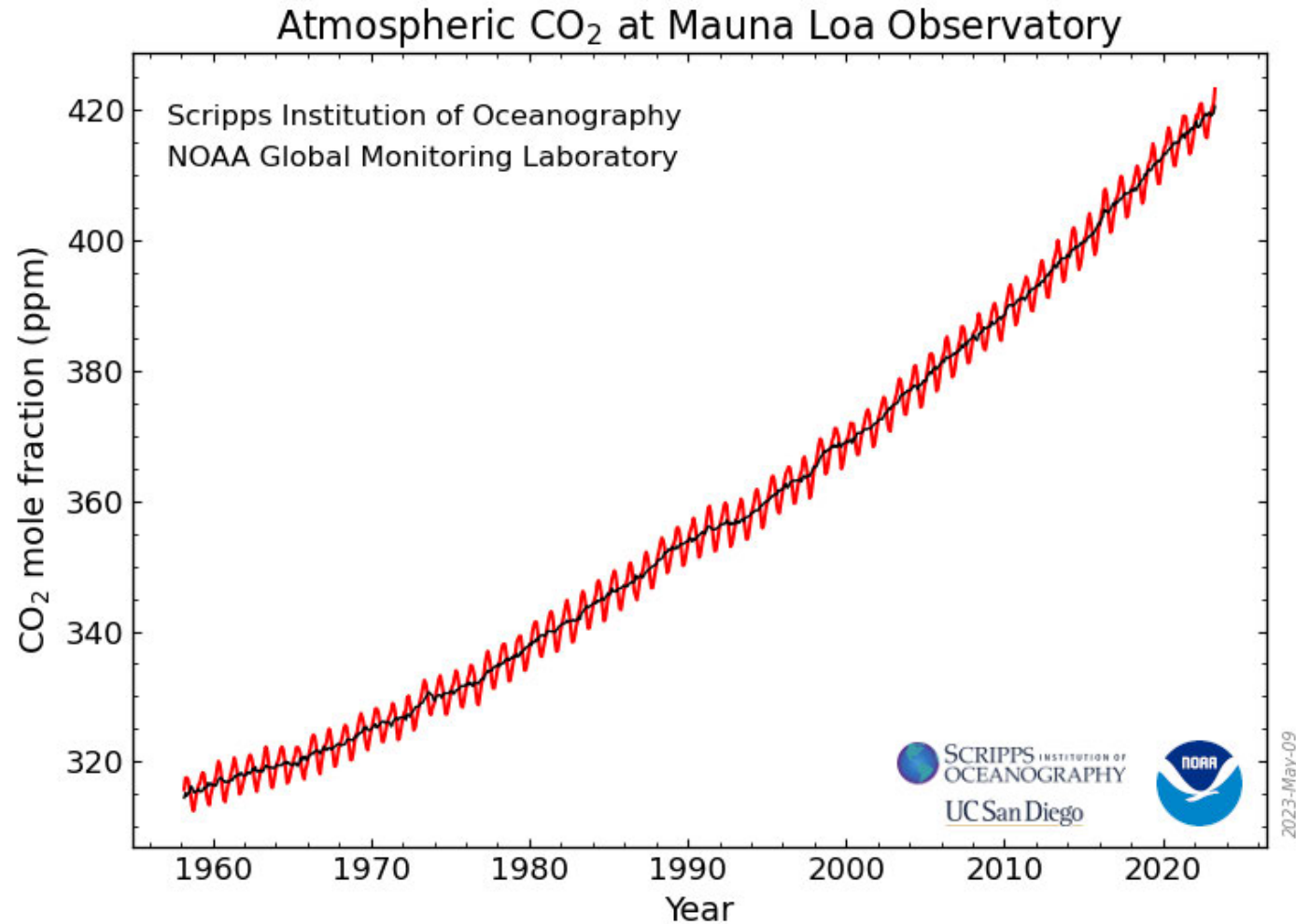
# Weather and Hydrological monitoring



# Global Response actions to climate change

- United Nations Framework Convention on Climate Change (Rio, 1992)
- Two response actions
  1. Mitigation (reduction of greenhouse gas emissions or carbon sequestration)
  2. Adaptation (dealing with the impacts)
- Paris Agreement in 2015 (used bottom-up approach)
- Political ping-pong
- Financial resources committed

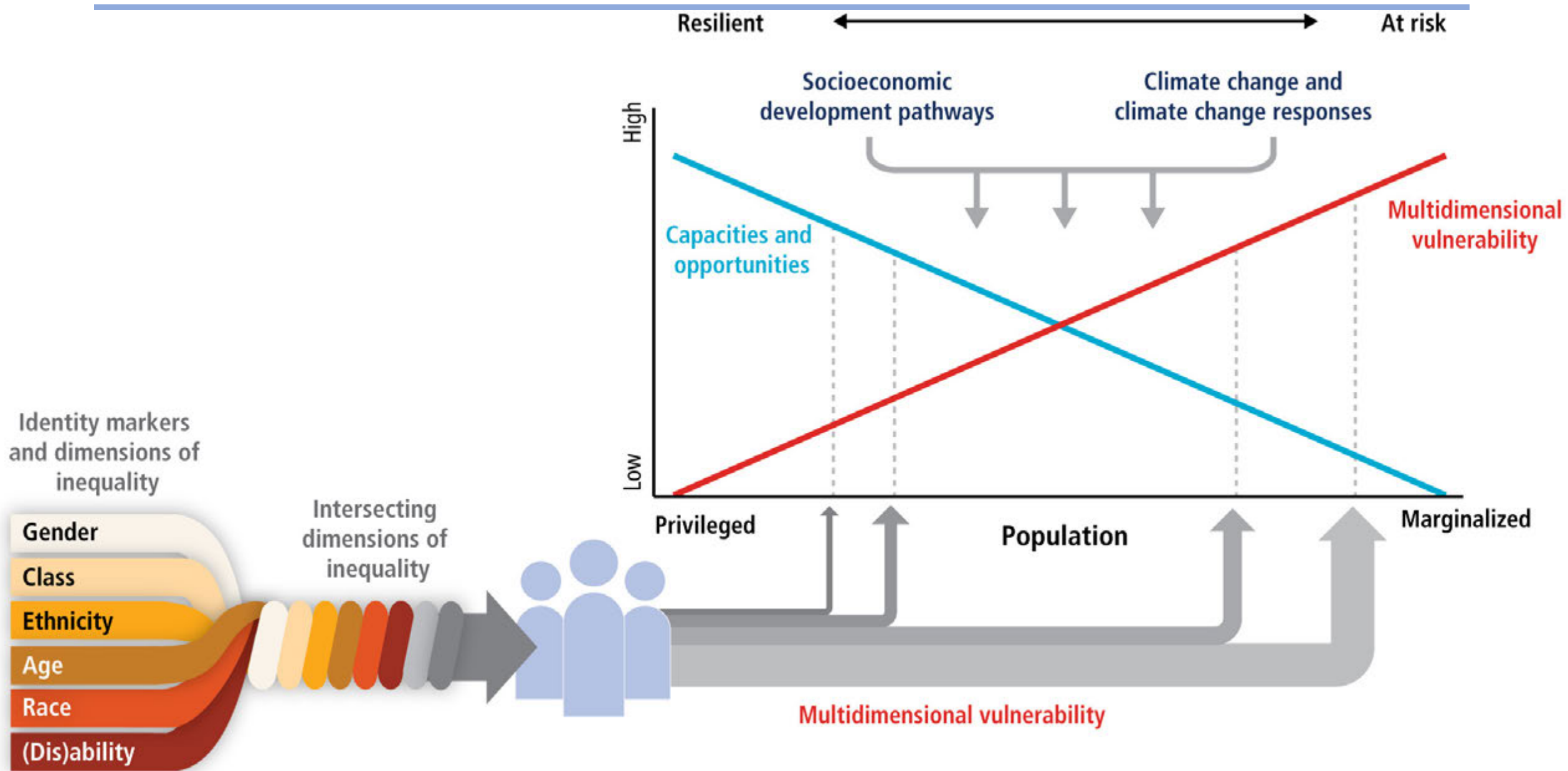
# GHG emissions have continued to rise



# Climate Change Risks to Development

- Additional climate change is expected regardless of the scale of greenhouse gas mitigation efforts
- Across the global scenarios analysed in the AR6, global average temperature changes relative to the reference period 1850–1900 range from 1.2°C to 1.9°C for the period 2021–2040 and 1.2°C to 3.0°C for the period 2041–2060
- Potential risks to socio-ecological systems, terrestrial and ocean ecosystems, critical physical infrastructure, networks and services, living standards and equity, human health, food security, water security, and peace and migration.

# Vulnerability to climate change



# The World Bank provides climate change adaptation principles for finance

1. Rapid, robust, and inclusive development
2. Facilitate the adaptation of people and firms
3. Adapt land use plans and protect critical public assets and services:
4. Help firms and people manage residual risks and natural disasters
5. Manage Financial and macrofiscalar issues
6. Prioritization, implementation, and monitoring progress

# Identify actions to lay the foundations for climate-resilient societies

- Is the economy fulfilling its potential in terms of productivity and economic growth?
- Does the macroeconomic system have appropriate buffers against unexpected shocks?
- Is economic growth inclusive?
- Are farmers' productivity and income growing?
- Is the country on track to achieve universal access to modern infrastructure services?
- Is the country on track to achieve universal financial inclusion?
- Is the country on track to achieve universal access to health insurance coverage to prevent catastrophic health expenditure?
- Does the country offer widespread social protection coverage?
- Is the country actively managing risks in vulnerability hotspots created by conflict or exclusion?



# Identify actions to enable firms and people to adapt

- Have comprehensive climate and risk assessments been completed?
- Is the uncertainty on current and future risks publicly communicated?
- Can all economic actors and public agencies access data on natural risk at an affordable cost and in a practical format?
- Are roles and responsibilities for disaster and climate risk management clearly defined?
- Does the country have institutions and agencies in charge of managing shared resources?
- Do private actors know the level of residual risk they are exposed to, or the level of protection offered by public infrastructure and instruments?

# Adapt land use plans and protect critical public assets and services

- Identify critical public services and assets
- Design and implement a government-wide strategy to increase the resilience of infrastructure and public assets
- Revise land use and urban plans to make them risk-informed
  - Mandate land use and urban planning to accounts for long-term risks
  - Explore the implications of climate change for internal migrations and regional economic impacts
  - Systematically consider nature-based solutions
  - Consider strategic retreat when risk reduction is impossible or unaffordable

# Help firms and people manage residual risks and natural disasters

- Save lives (and money) with hydromet, early warning, and emergency management systems
- Provide all firms and households with risk management instruments
- Develop the insurance sector, building on public-private partnerships
- Build a social protection system that is responsive to shocks
- Help firms develop business continuity plans and financial preparedness
- Be prepared to build back better after disasters, with contingency plans and financing

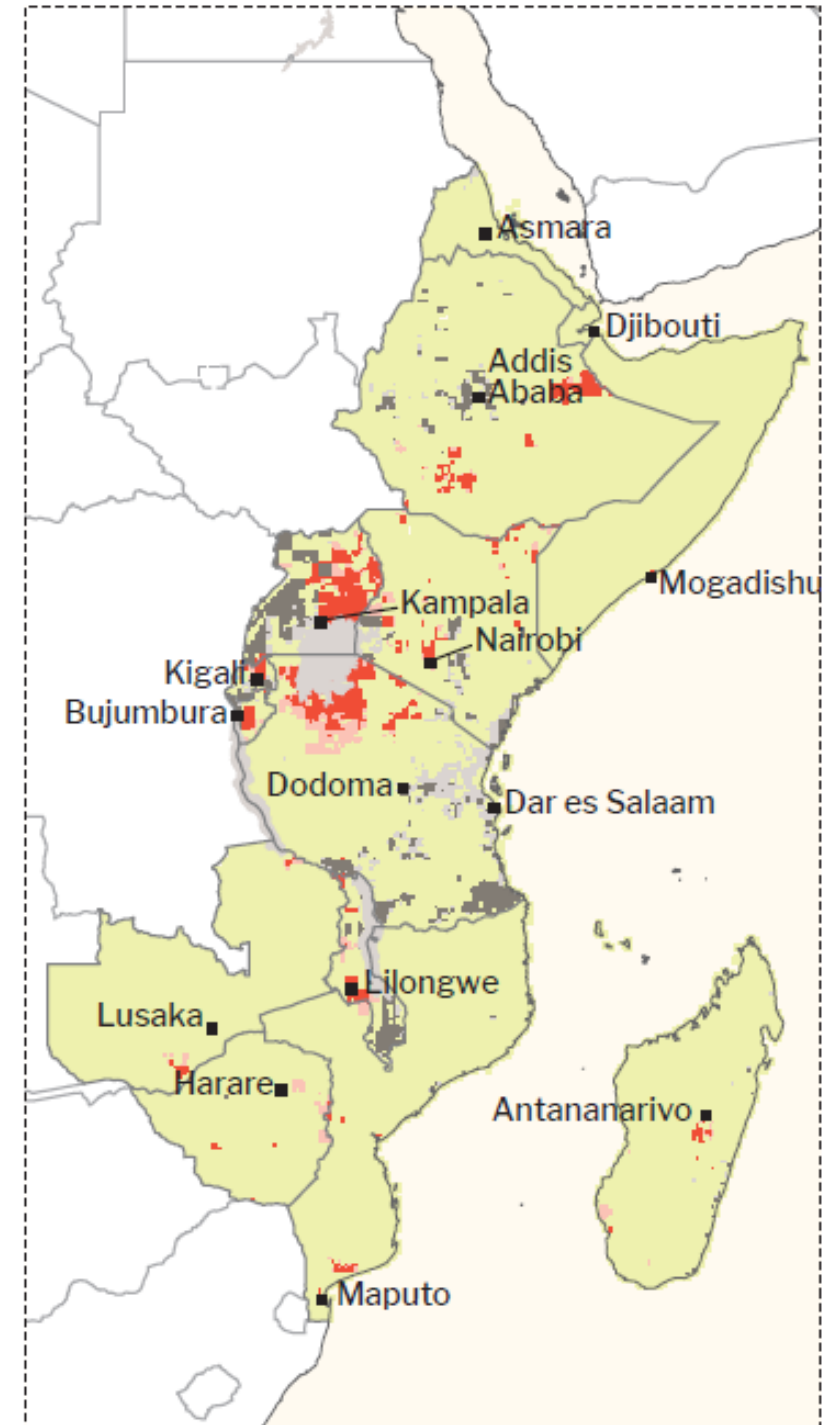
# Manage financial and macro-fiscal issues

- Include contingent liabilities from natural disasters and environmental shocks in the planning and budgeting process
- Develop a financial strategy to manage contingent liabilities, combining multiple instruments
- Anticipate and plan for long-term macroeconomic impacts
- Communicate and mitigate disaster and climate risk exposure of the financial sector and pension systems

# Areas projected to have high climate out migrations in east Africa in

- Without concrete climate and development action, ~143 million people (around 2.8%) could be forced to move within their own countries by 2050 to escape the slow-onset impacts of climate change.
- They will migrate from less viable areas with lower water availability and crop productivity and from areas affected by rising sea level and storm surges.

- High certainty in high levels of climate in-migration
- Moderate certainty in high levels of climate in-migration
- High certainty in high levels of climate out-migration
- Moderate certainty in high levels of climate out-migration



# Application: Prioritization, implementation, and monitoring progress..

Create a strong institutional and legal framework, with appropriate stakeholder involvement

Design an adaptation and resilience strategy with prioritized actions

Set concrete sector-level targets to guide implementation by line ministries

Screen all public policies and expenditures for disaster and climate risks, and align them with adaptation targets

Allocate appropriate funding to the adaptation strategy

Track progress over time, and review and revise the strategy

# Measurement, Reporting and Verification Monitoring, Review and Verification

- MRV of greenhouse gas emissions
- MRV climate finance
- Enhanced Transparency Framework (art. 13 of the Paris agreement)

# Climate Finance (imbalance)

- Climate finance broadly refers to resources that catalyze low carbon and climate resilient development.
- Covers the costs and risks of climate action, supports an enabling environment and capacity for adaptation and mitigation, and encourages research and development (R&D) and deployment of new technologies.
- Can be mobilized through a range of instruments from a variety of sources, international and domestic, public and private (green bonds)



# Climate Finance (imbalance) finance



# Climate Resilient Development

- Climate resilient development (CRD) is a process of implementing greenhouse gas mitigation and adaptation options to support sustainable development for all
- Climate change and sustainable development can no longer be assessed or planned in isolation of one another.

# How can different actors across society and levels of government be empowered to pursue CRD?

- An active civil society and citizenship create the enabling conditions for deliberation, protest, dissent and pressure, which are fundamental for an inclusive participatory process.

# Gender, Climate Justice and Transformative Pathways

- Gender and other social inequities (e.g., racial, ethnic, age, income, geographic location) compound vulnerability to climate change impacts
- Addressing inequities in access to resources, assets and services, as well as participation in decision making and leadership is essential to achieving gender and climate justice
- Land, ecosystem and urban transitions to climate resilient development need to address gender and other social inequities to meet sustainability and equity goals, otherwise, marginalised groups may continue to be excluded from climate change adaptation.
- In the water sector, increasing floods and droughts and diminishing groundwater and runoff have gendered effects on both production systems and domestic use

Thank you

