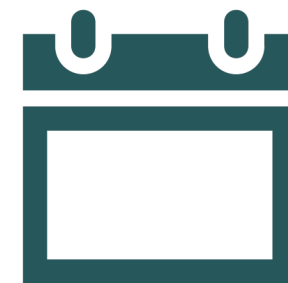


The Population, Environment and Development (PED) Approach to tackling Climate Change in Africa



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Population and Development**

AFIDEP

African Institute for
Development Policy

Outline



1. Demographic trends



2. Drivers and impact of rapid population growth in Africa



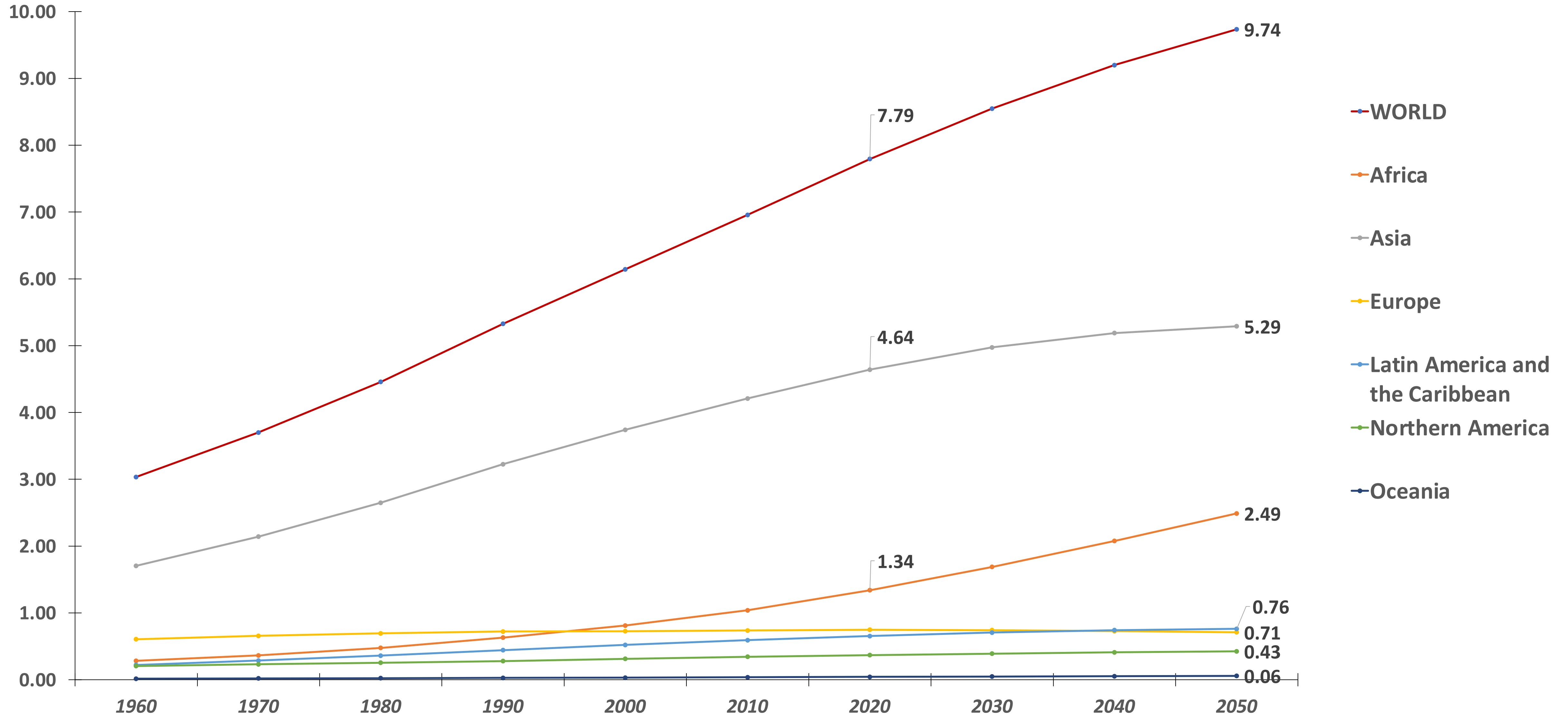
3. Climate change and the PED approach



**Sustainable development
priorities revolve around
people**

Population Trends, 1960-2050

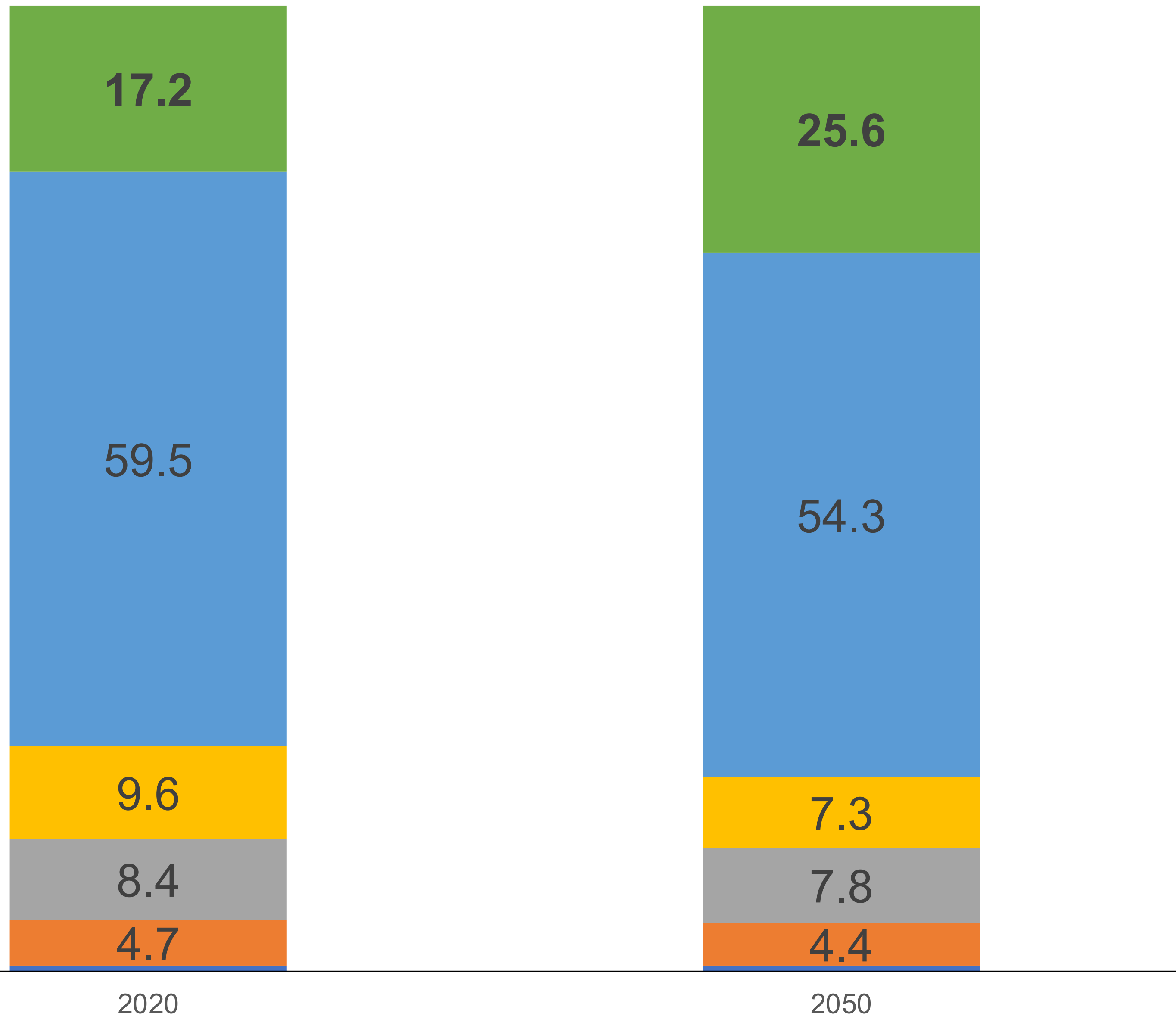
Global and Regional Population Trends (in billions)



**Africa is the
fastest growing
world region**



Regions by their contribution to total World Population (%)



- Africa
- Asia
- Europe
- L. America & Caribbean
- Northern America

Source: United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019



Many African countries are projected to almost double their populations in 30 years

Top 10 most populous African countries in 2020

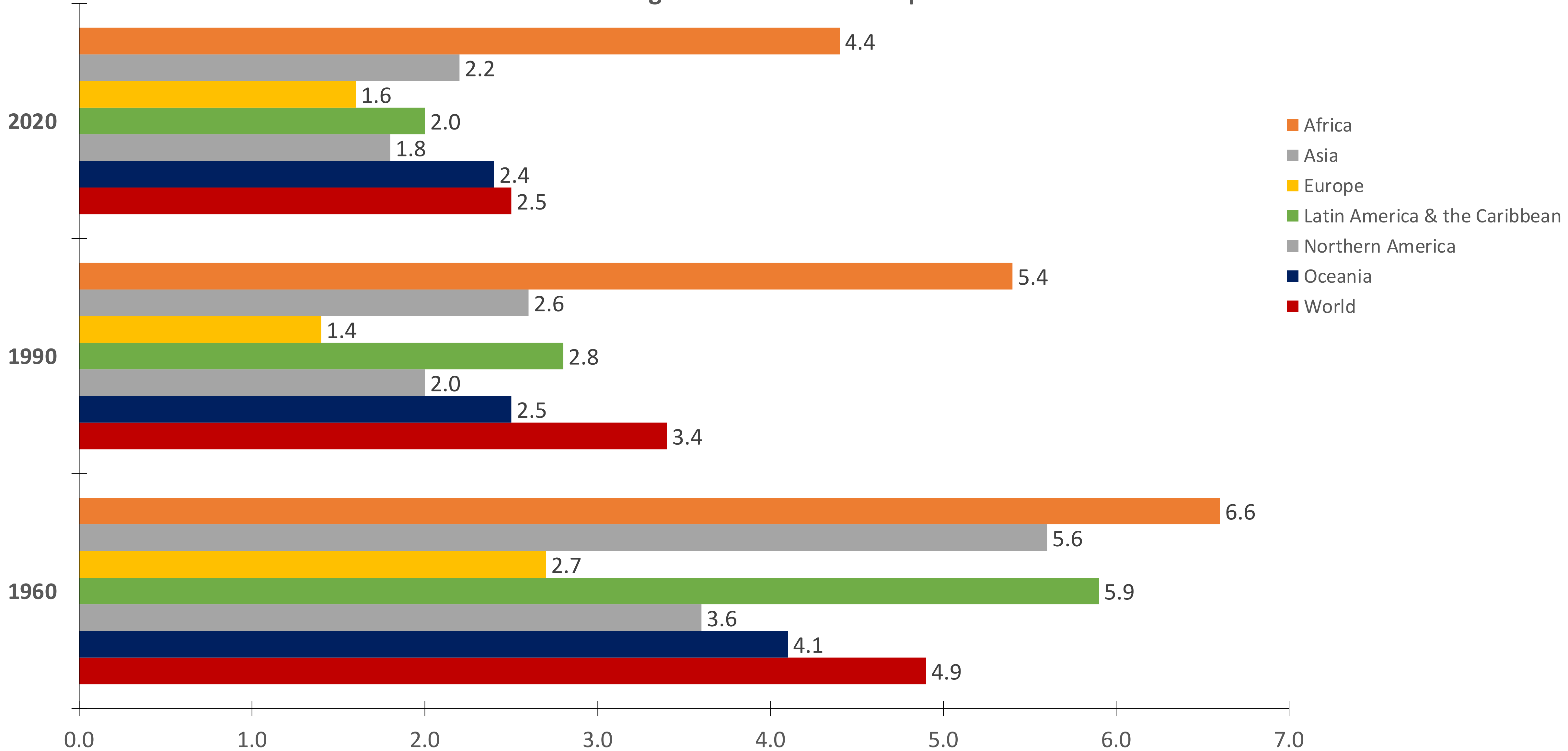
1. Nigeria – 206 million
2. Ethiopia – 115 million
3. Egypt – 102 million
4. D.R. Congo – 89 million
5. Tanzania – 59 million
6. South Africa - 59 million
7. Kenya – 53 million
8. Uganda – 45 million
9. Algeria – 43 million
10. Sudan – 43 million

Top 10 most populous African countries in 2050

1. Nigeria – 401 million
2. Ethiopia – 205 million
3. D.R. Congo – 194 million
4. Egypt – 160 million
5. Tanzania – 129 million
6. Kenya - 91 million
7. Uganda – 89 million
8. Sudan – 81 million
9. Angola – 77 million
10. South Africa – 75 million

Fertility is the key driver of Africa's rapid growth

Average number of children per woman

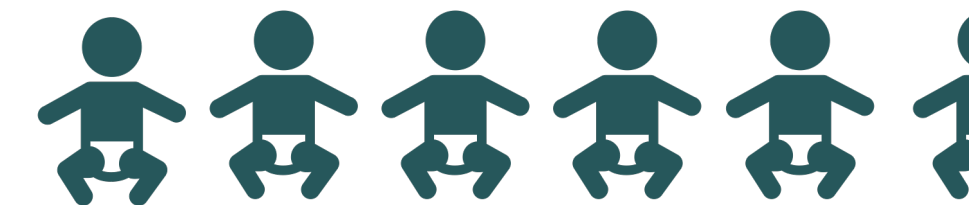


Source: United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019

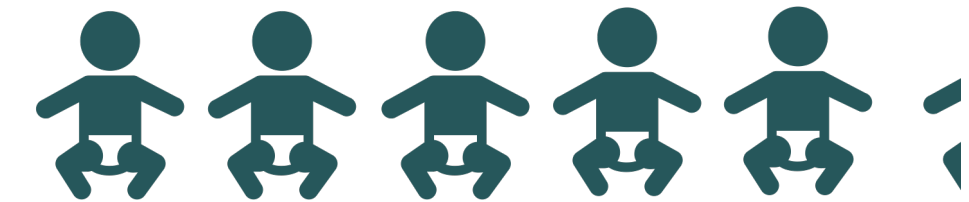
The average number of children varies greatly by region in Africa



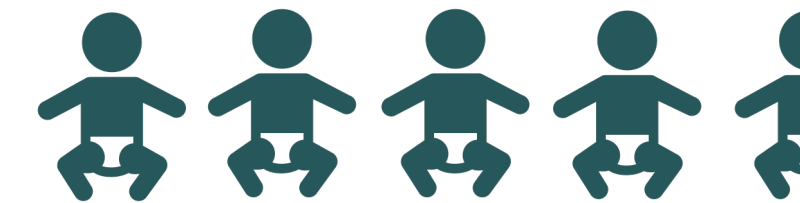
Middle Africa – 5.53



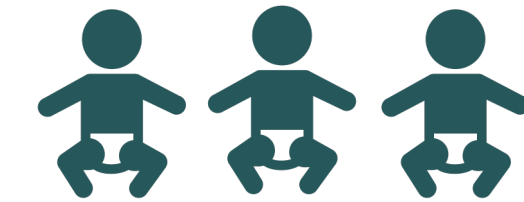
Western Africa – 5.18



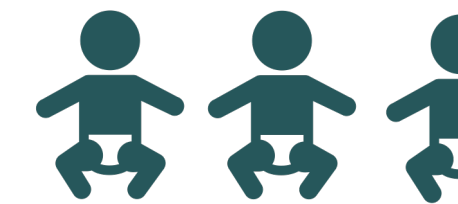
Eastern Africa – 4.43



Northern Africa – 3.25



Southern Africa – 2.50



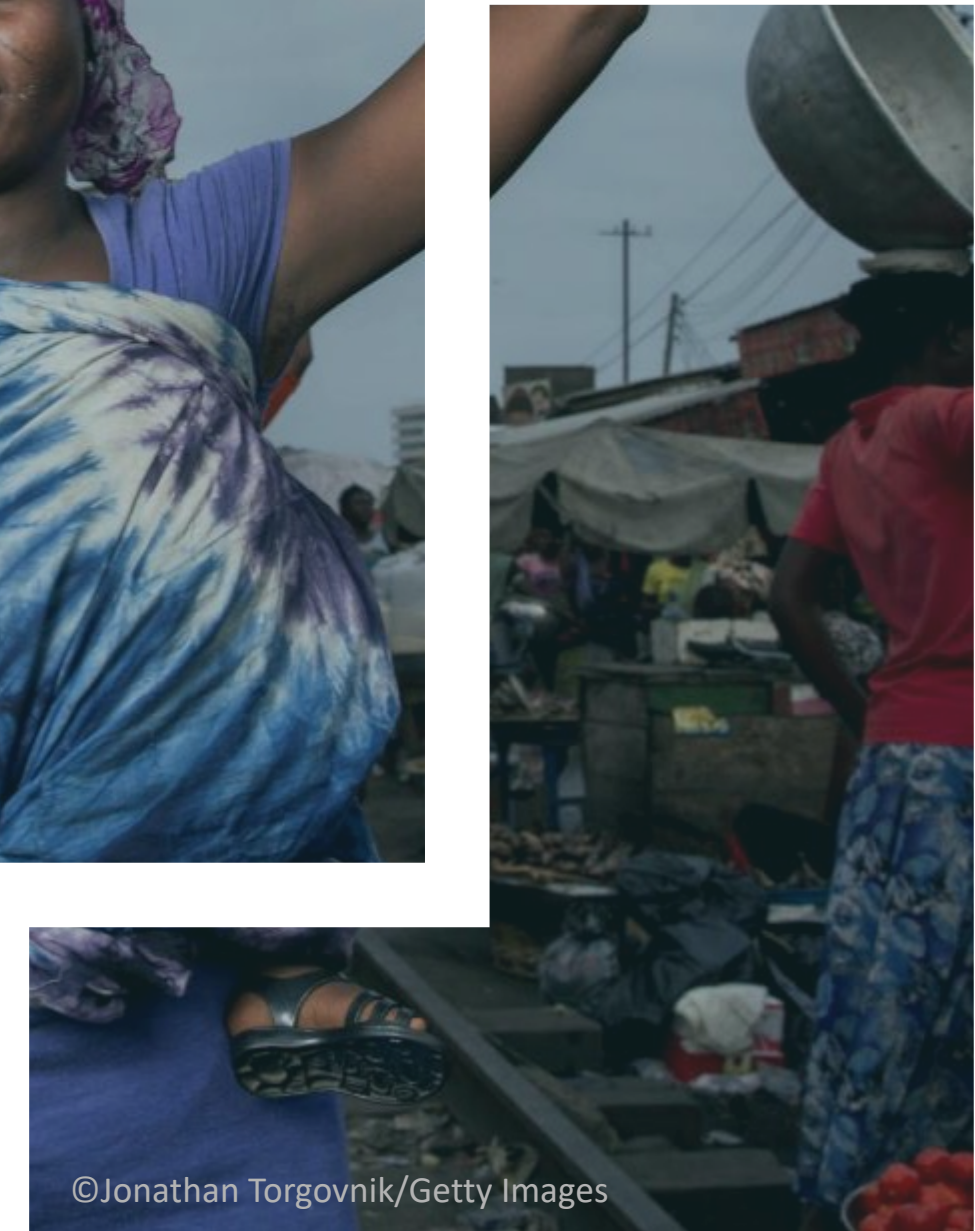


High fertility has persisted in Africa because...

- Child mortality remains persistently high
- Traditions and norms give women and girls little power to make important life decisions leading to challenges such as child marriages and early child-bearing
- Low use of modern contraception
- High unmet need for family planning
- Desired family size
- Inadequate information and access to adolescent sexual and reproductive health
- Limited education opportunities especially for girls

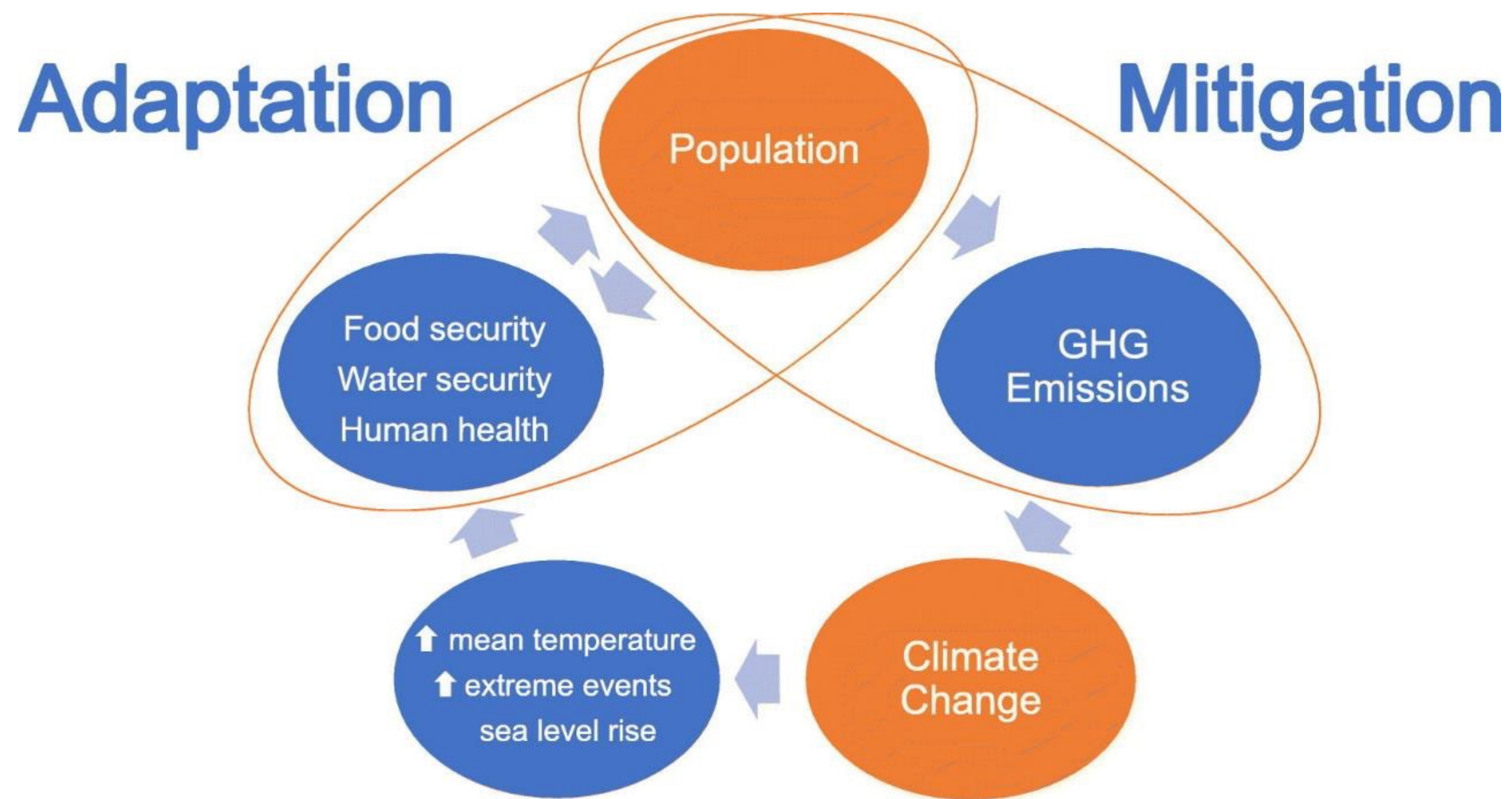
Impact of rapid population growth

- Increase in demand for goods and services
 - ✓ Food
 - ✓ Fuel
 - ✓ Housing
 - ✓ Transportation
 - ✓ Schooling
 - ✓ Health
- Underlying cause for land use change
 - ✓ Food insecurity
 - ✓ Water scarcity
 - ✓ Loss of biodiversity
- **Adverse climate change risks and undermines resilience**



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Population and Climate Change



Mitigation – actions that result in the prevention or reduction of climate-altering greenhouse gas (GHG) emissions

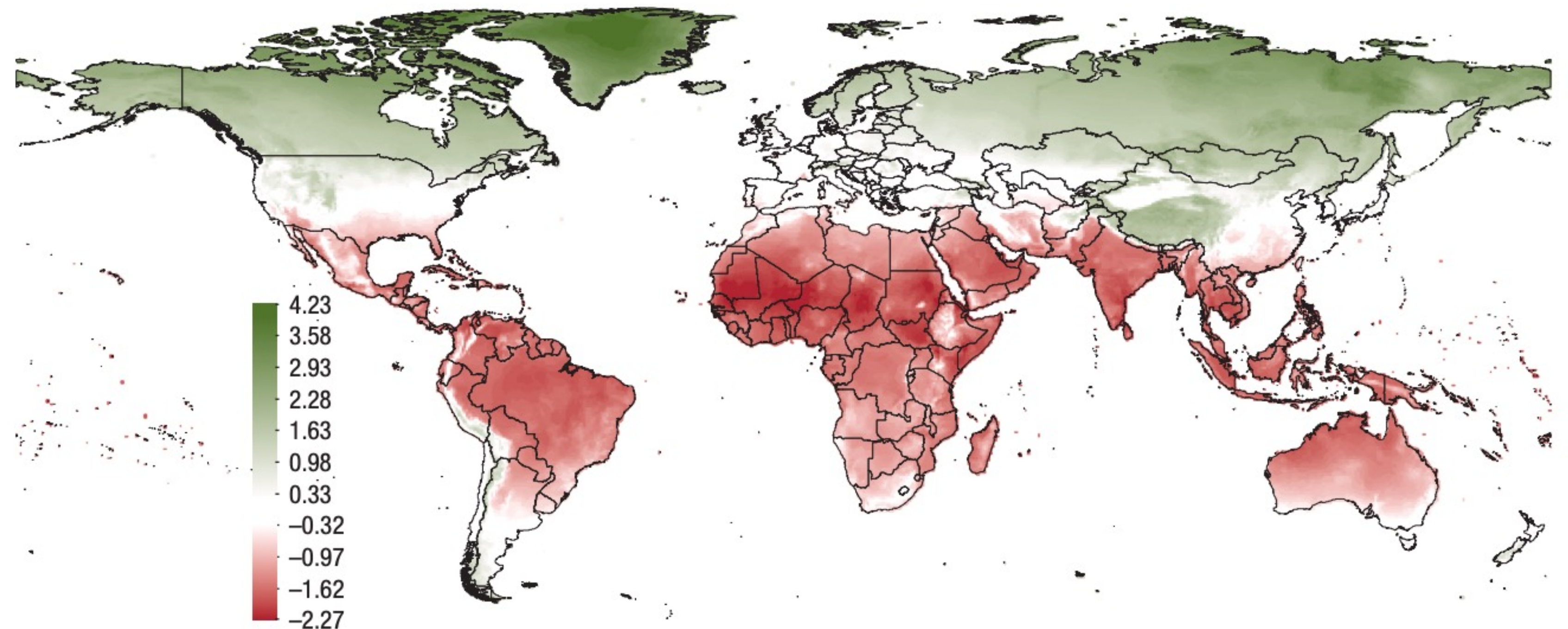
Adaptation – actions that aim at reducing vulnerability of populations to climate change impact

Source: Dodson et al., 2020

Effect of temperature increase on real per capita output across the globe (percent)

While Africa's contribution to global climate change is currently small as compared to other world regions, it does bear the brunt of climate change impact.

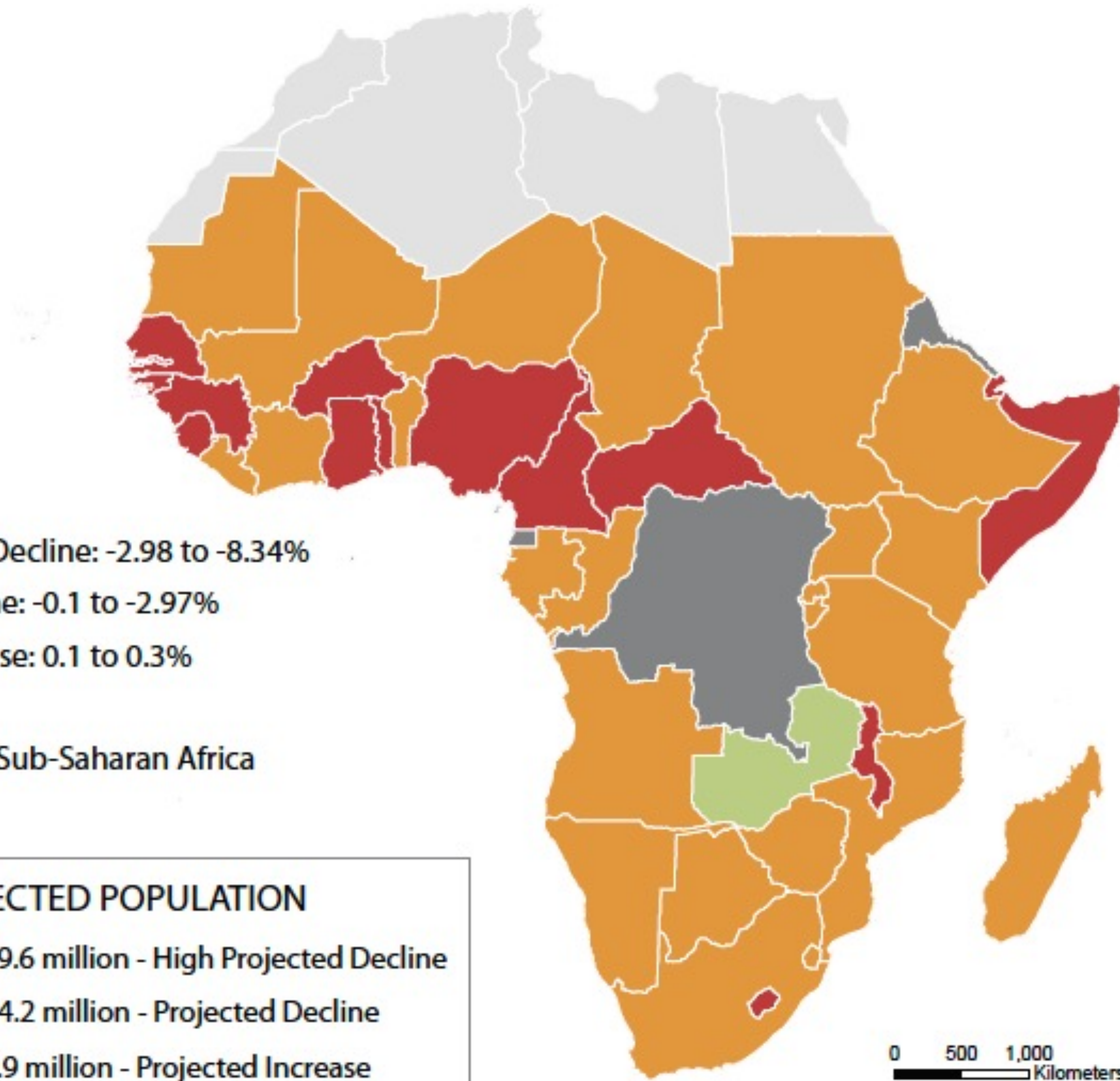
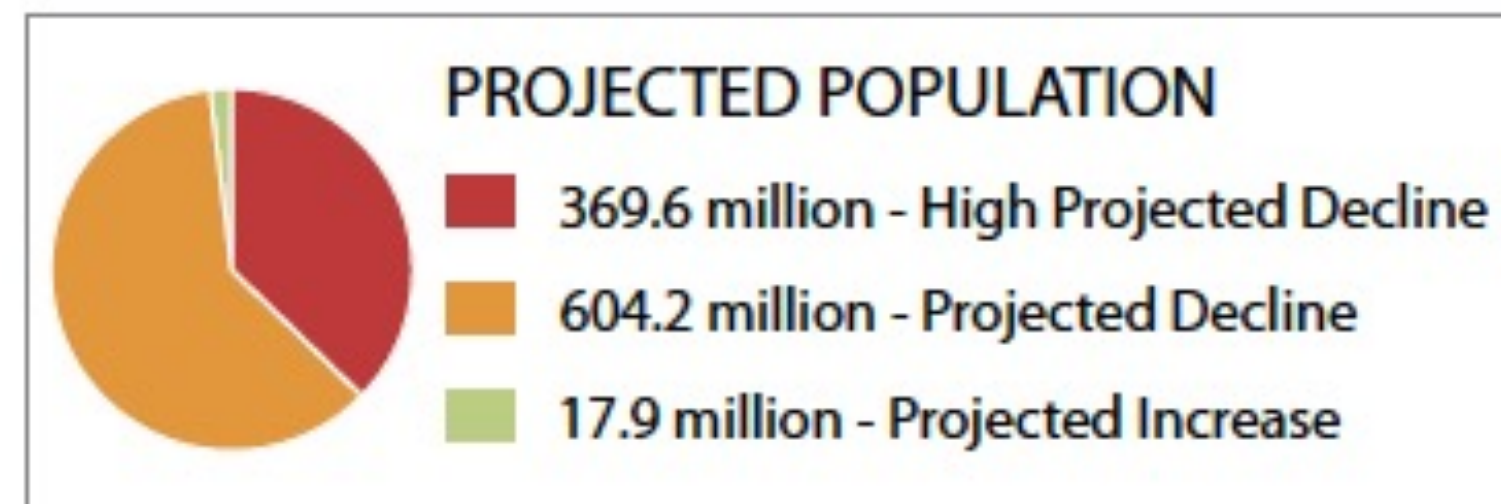
Figure: Effect of a 1% increase in temperature on real per capita out put at the grid level



Agricultural production, population and climate change, 1990-2020

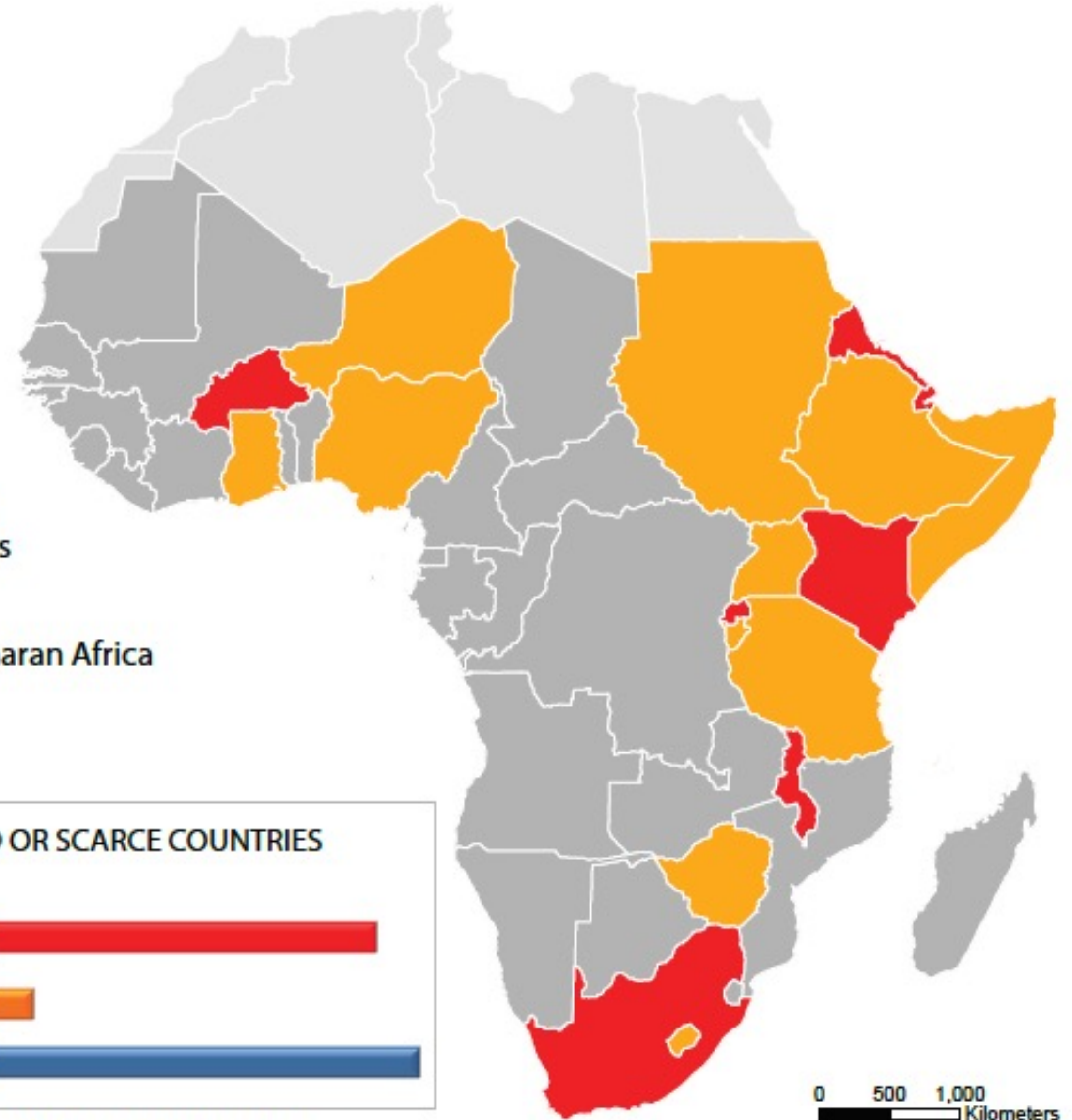


- High Projected Decline: -2.98 to -8.34%
- Projected Decline: -0.1 to -2.97%
- Projected Increase: 0.1 to 0.3%
- No Data
- Not included in Sub-Saharan Africa

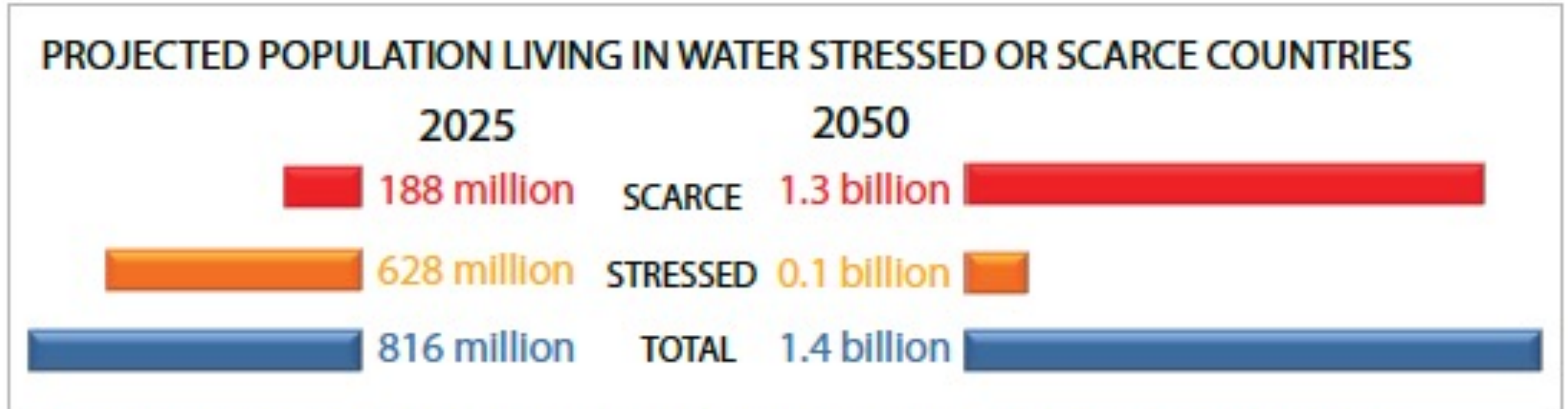


Source: PAI, Mapping Population and Climate Change website. <http://populationaction.org/climatemap>

Population and Water Availability

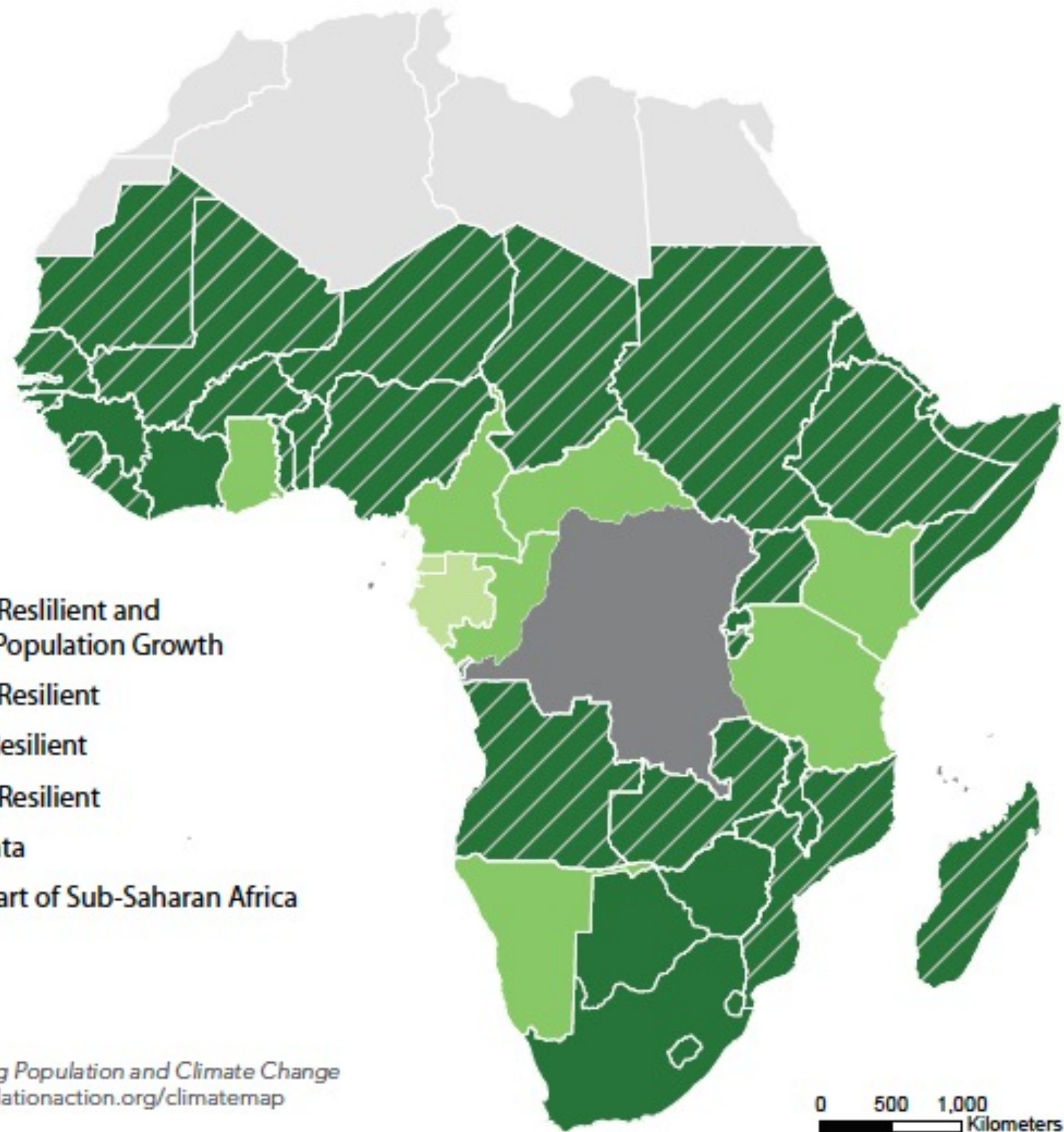


- Water Scarce Countries
- Water Stressed Countries
- Relative Sufficiency
- Not included in Sub-Saharan Africa



Source: PAI, Mapping Population and Climate Change website. <http://populationaction.org/climatemap>

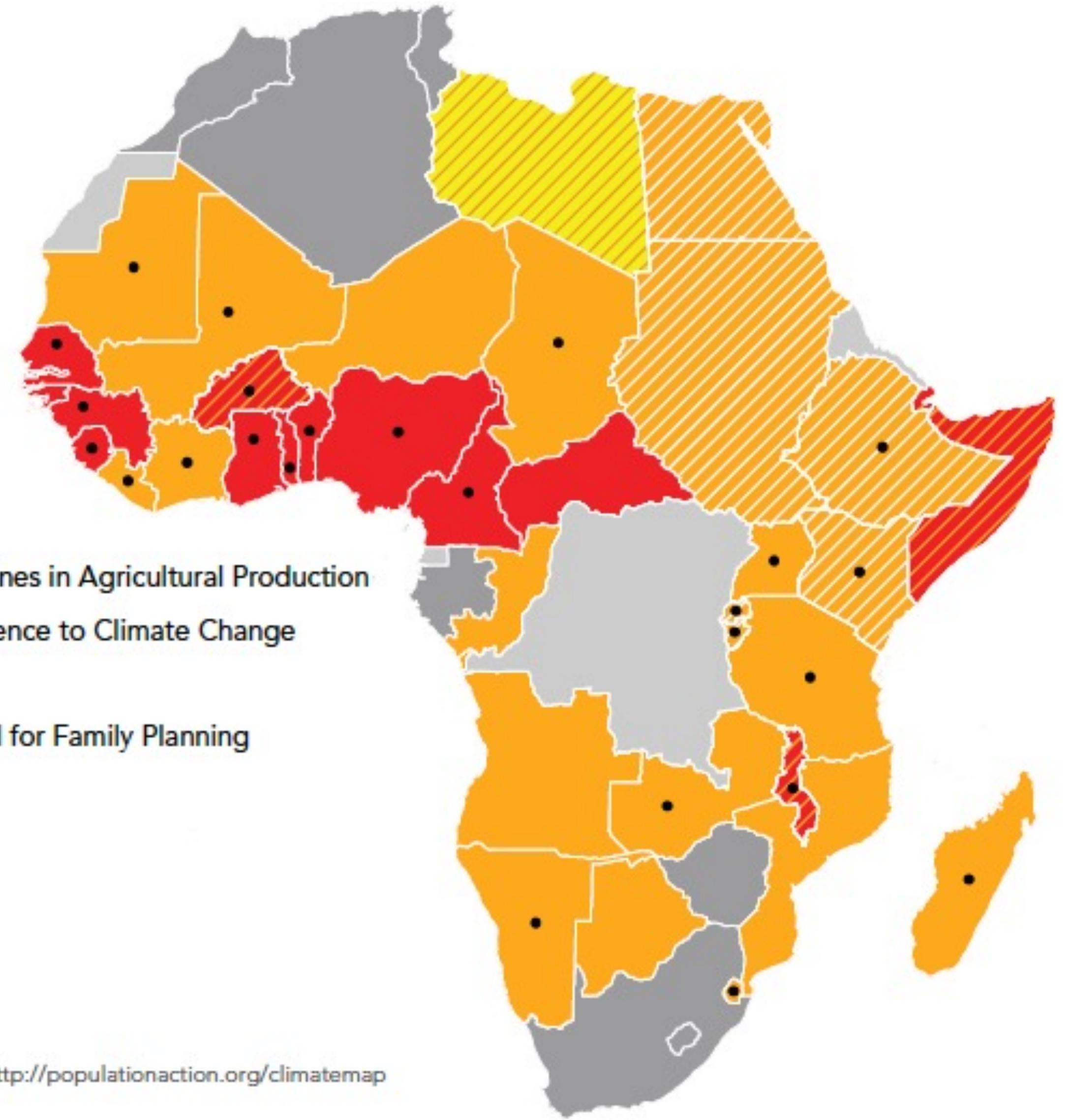
High population growth and resilience to climate change in SSA











Source: PAI, Mapping Population and Climate Change website. <http://populationaction.org/climatemap>

0 500 1,000 Kilometers

Population and Climate Change Hotspots



-  High Population Growth Rates and High Declines in Agricultural Production
-  High Population Growth Rates and Low Resilience to Climate Change
-  Countries Experiencing All Three Variables
-  High Percentage of Women with Unmet Need for Family Planning
-  Plus Current Water Stress or Scarcity
-  Plus Current Water Stress or Scarcity
-  Plus Current Water Stress or Scarcity
-  No Data for One or More Variables

Source: PAI, Mapping Population and Climate Change website. <http://populationaction.org/climate-map>

PED and Systems Thinking approach

- Holistic approach to analysis that takes into consideration the interconnection of many important components.
- Systems thinking can be harnessed to enable the public and policy makers to understand the interlinkages and relationships between voluntary FP/RH, environment and development.
- The **DPSIR** (*drivers, pressures, states, impacts, responses*) model can be adapted to implement a systems thinking approach to PED.



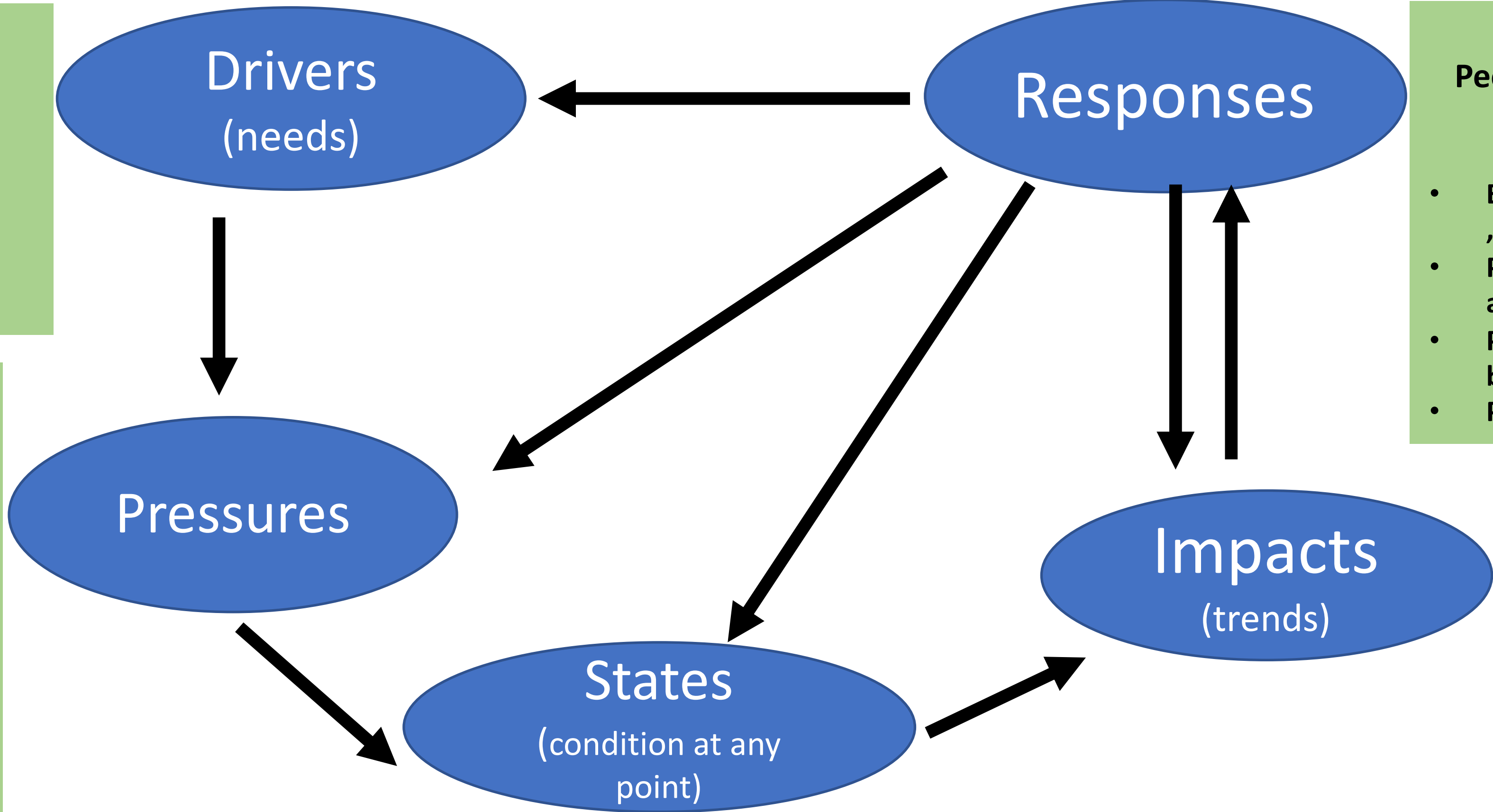
Systems Thinking Approach



Adaptation of DPSIR Model applied to Population, Environment and Development

- **Health and ecosystems services**
 - Food
 - clean air & water
 - Shelter
 - Income/livelihoods
 - Health care
- **Education**

- **Individual behaviors**
 - Poor health seeking
 - Migration
 - Illegal, unreported & unregulated extraction
 - Poor waste disposal
- **Natural**
 - Global warming
- **Structural/institutional**
 - Poor governance
 - Lack of political will
 - Limited access to health & ecosystems services
 - Low compliance to policies
- **Cultural**
 - Gender norms/traditions



- PED approach**
People. Environment. Economy. Governance
- Evidenced based PED policy reforms , programs & budgets
 - PED behavior change strategies & advocacy
 - PED champions & constituency building
 - Public-private partnerships

- Human & Ecosystems Well-being**
- **Vulnerable people & community**
 - Unmet demand for FP/RH
 - Poor health & nutrition
 - High maternal and infant mortality rates
 - **Resource degradation**
 - Habitat destruction (land and marine)
 - Biodiversity loss

- **Demographic changes**
 - Population growth rate
 - Migration rate
 - Fertility rate
- **Poverty index**
- **Equity/inequity ratio**
- **Pollution rate**
- **Food In/security**
- **Weather disturbances**
 - Frequency of Cyclones & Storm surge

THANK YOU