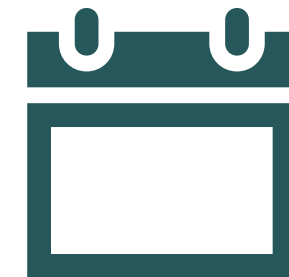


The Population, Environment and Development (PED) Approach to tackling Climate Change in Africa



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22 July, 2021

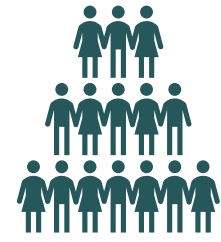


**UN Expert Group Virtual Meeting on
Population and Development**

AFIDEP

African Institute for
Development Policy

Outline



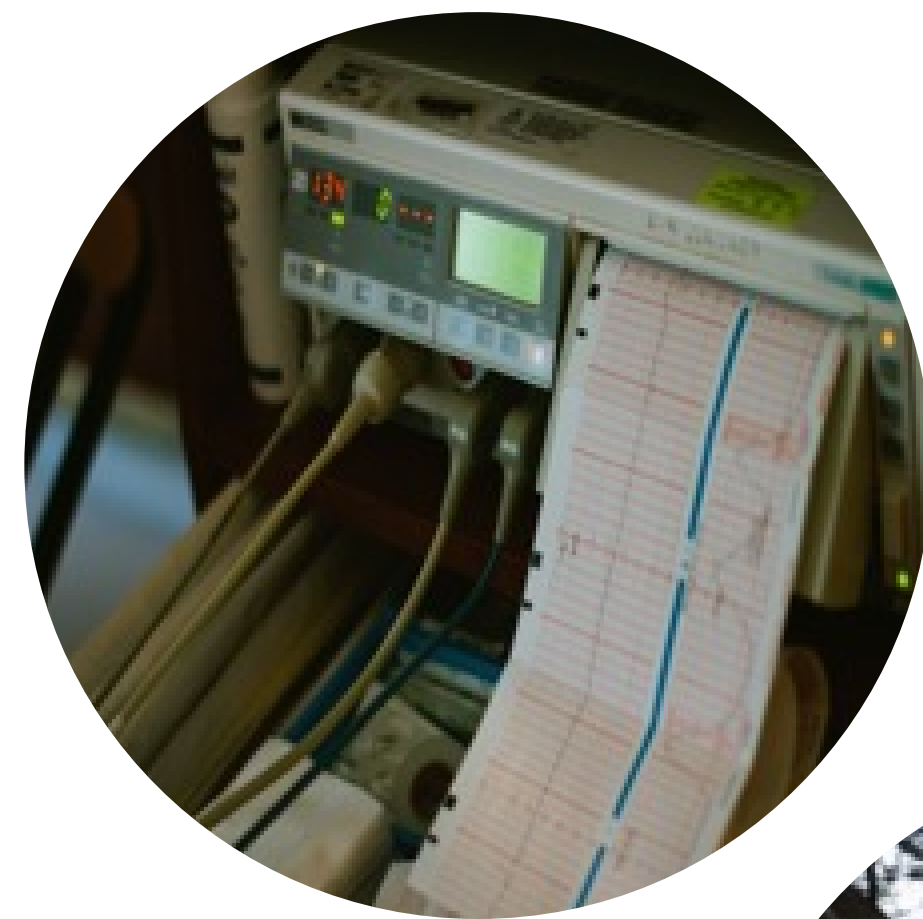
1. Demographic trends



2. Drivers and impact of rapid population growth in Africa



3. Climate change and the PED approach

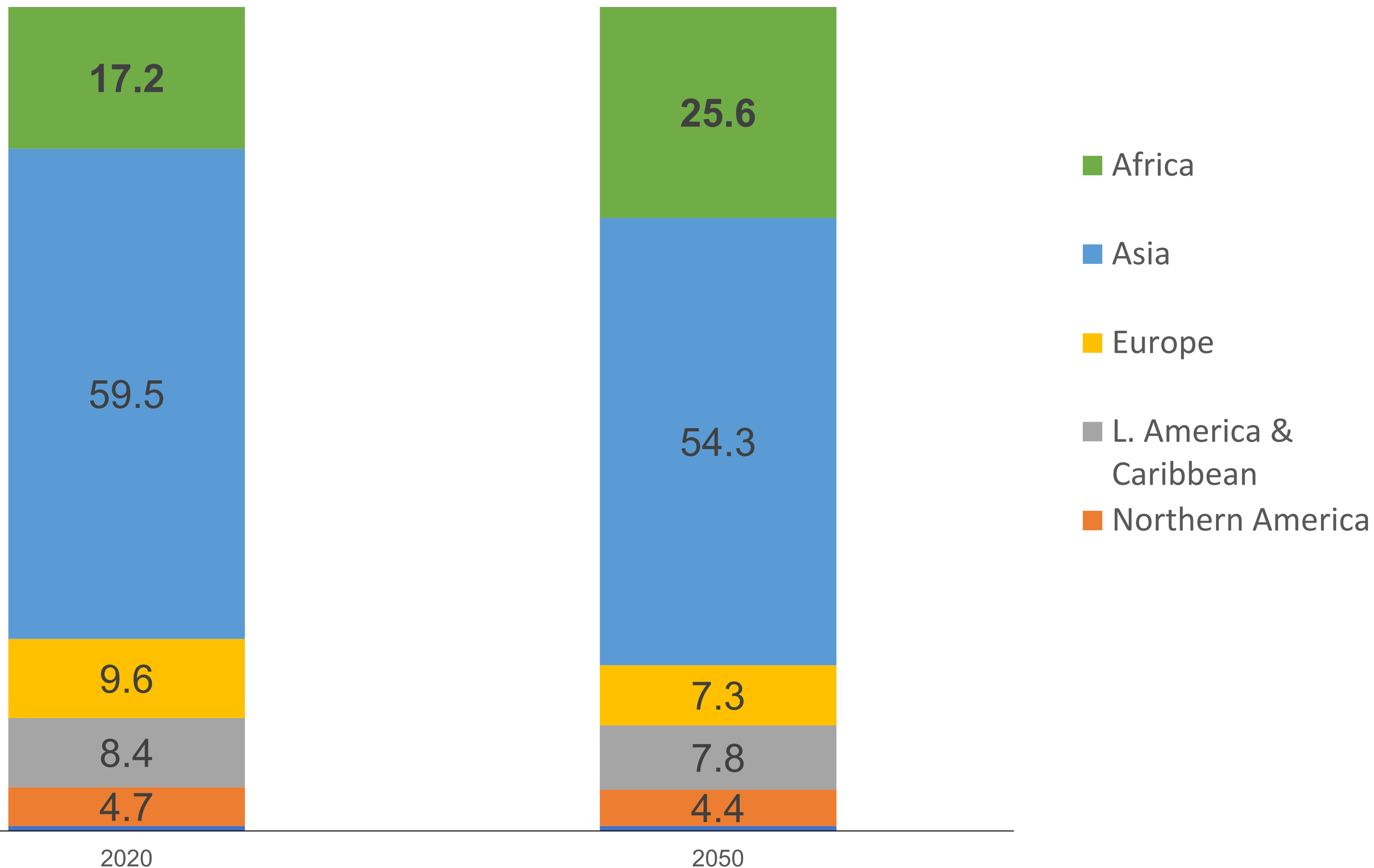


**Sustainable development
priorities revolve around
the wellbeing of people
and the environment**

Africa is the
fastest growing
world region



Regions by their contribution to total World Population (%)



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



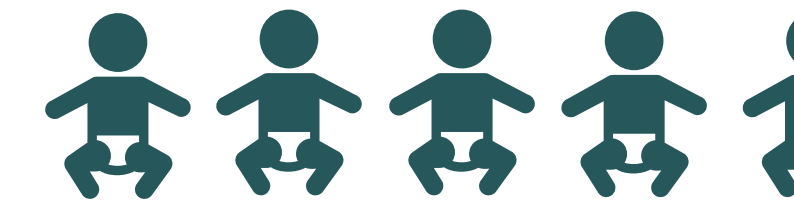
Many African countries are projected to almost double their populations in 30 years

Top 10 most populous African countries in 2020	Top 10 most populous African countries in 2050
1. Nigeria – 206 million	1. Nigeria – 401 million
2. Ethiopia – 115 million	2. Ethiopia – 205 million
3. Egypt – 102 million	3. D.R. Congo – 194 million
4. D.R. Congo – 89 million	4. Egypt – 160 million
5. Tanzania – 59 million	5. Tanzania – 129 million
6. South Africa - 59 million	6. Kenya - 91 million
7. Kenya – 53 million	7. Uganda – 89 million
8. Uganda – 45 million	8. Sudan – 81 million
9. Algeria – 43 million	9. Angola – 77 million
10.Sudan – 43 million	10.South Africa – 75 million

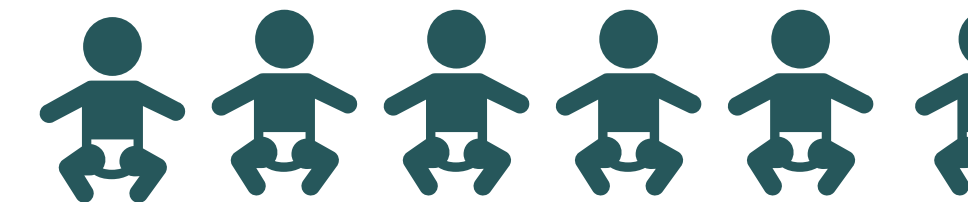
The average number of children varies greatly by region in Africa



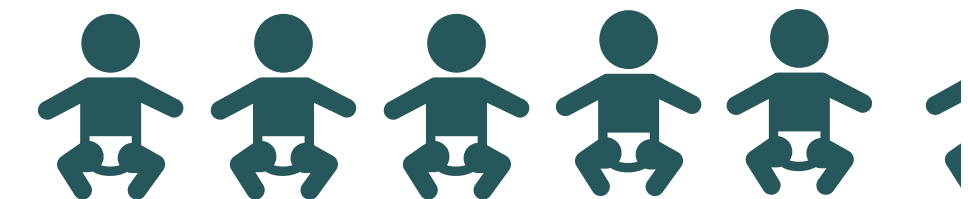
Africa – 4.4



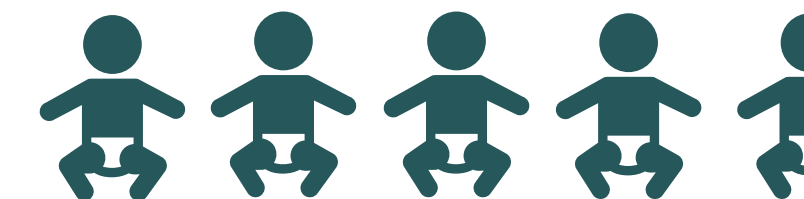
Middle Africa – 5.53



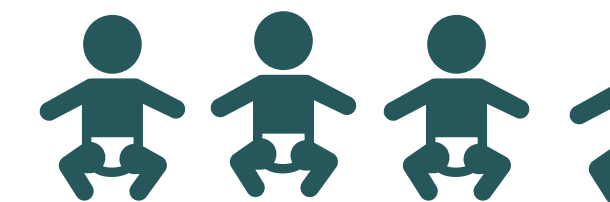
Western Africa – 5.18



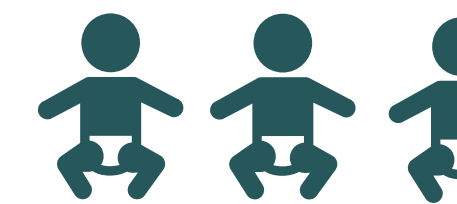
Eastern Africa – 4.43



Northern Africa – 3.25



Southern Africa – 2.50





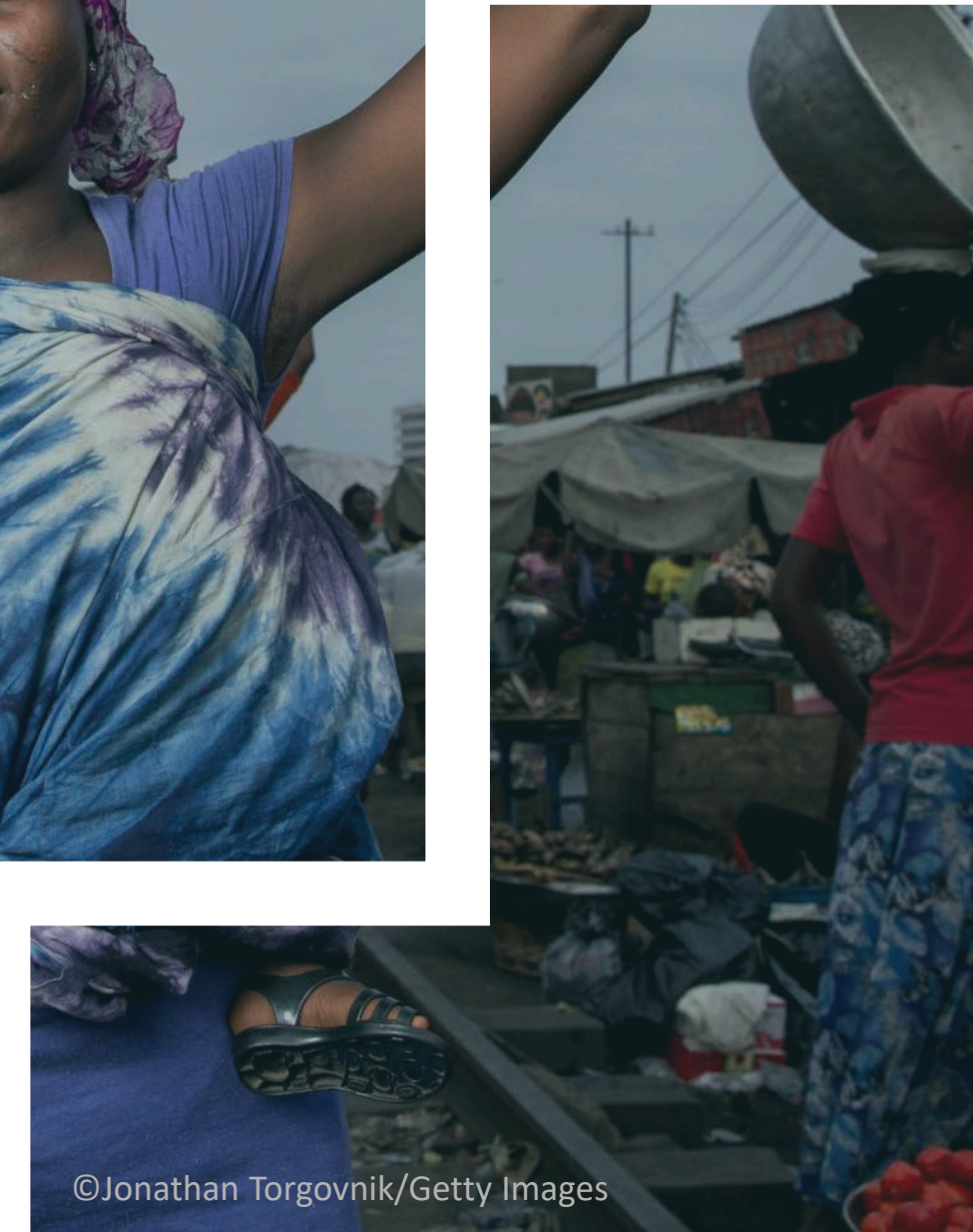
High fertility has persisted in Africa because...

- Child mortality remains relatively 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 and high unmet need for family planning
- High desired family size
- Inadequate information and access to adolescent sexual and reproductive health
- Limited education especially for girls

But things are changing – especially in Northern and Southern Africa

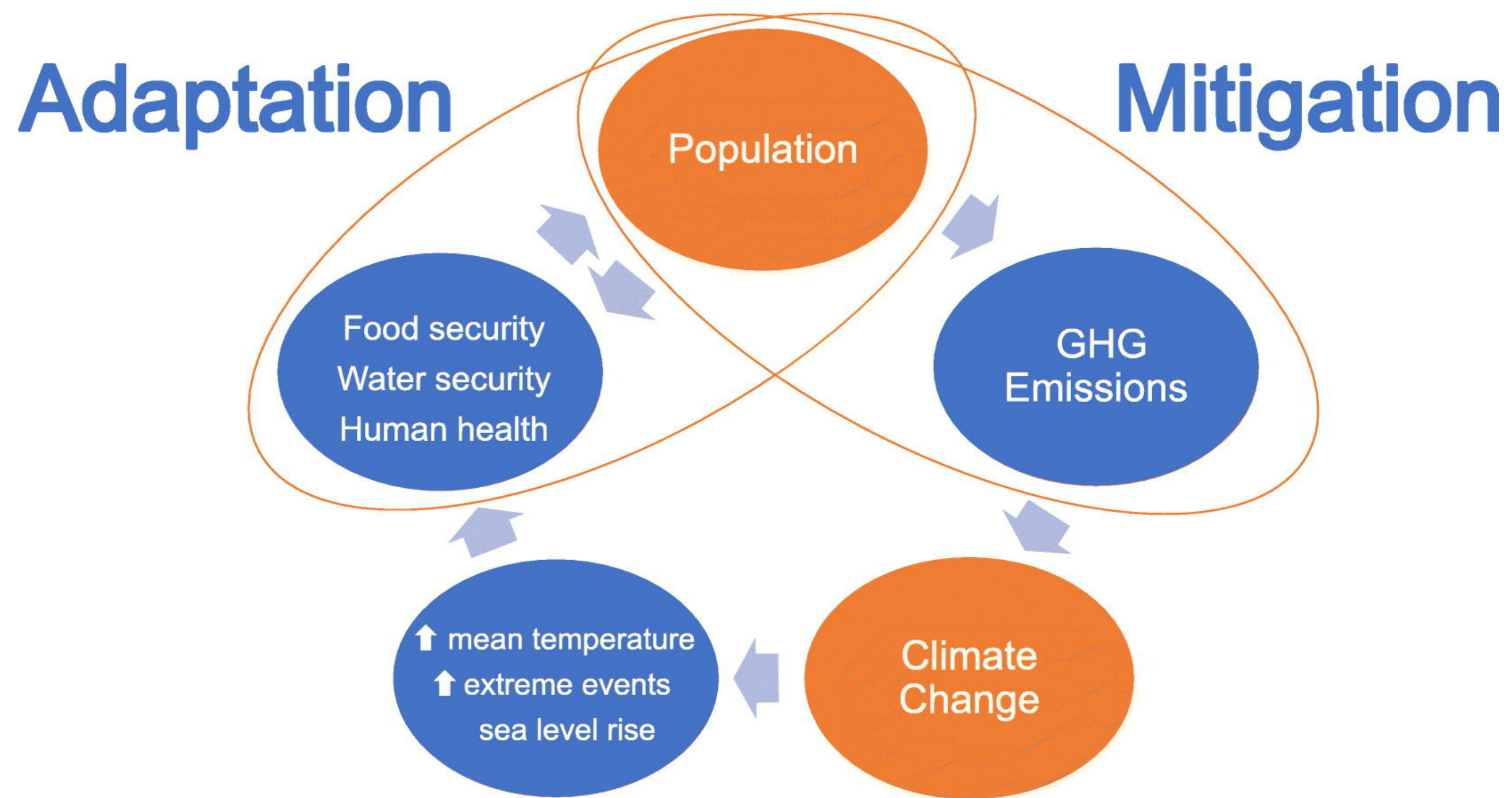
Impact of rapid population growth

- 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**





Population and Climate Change



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

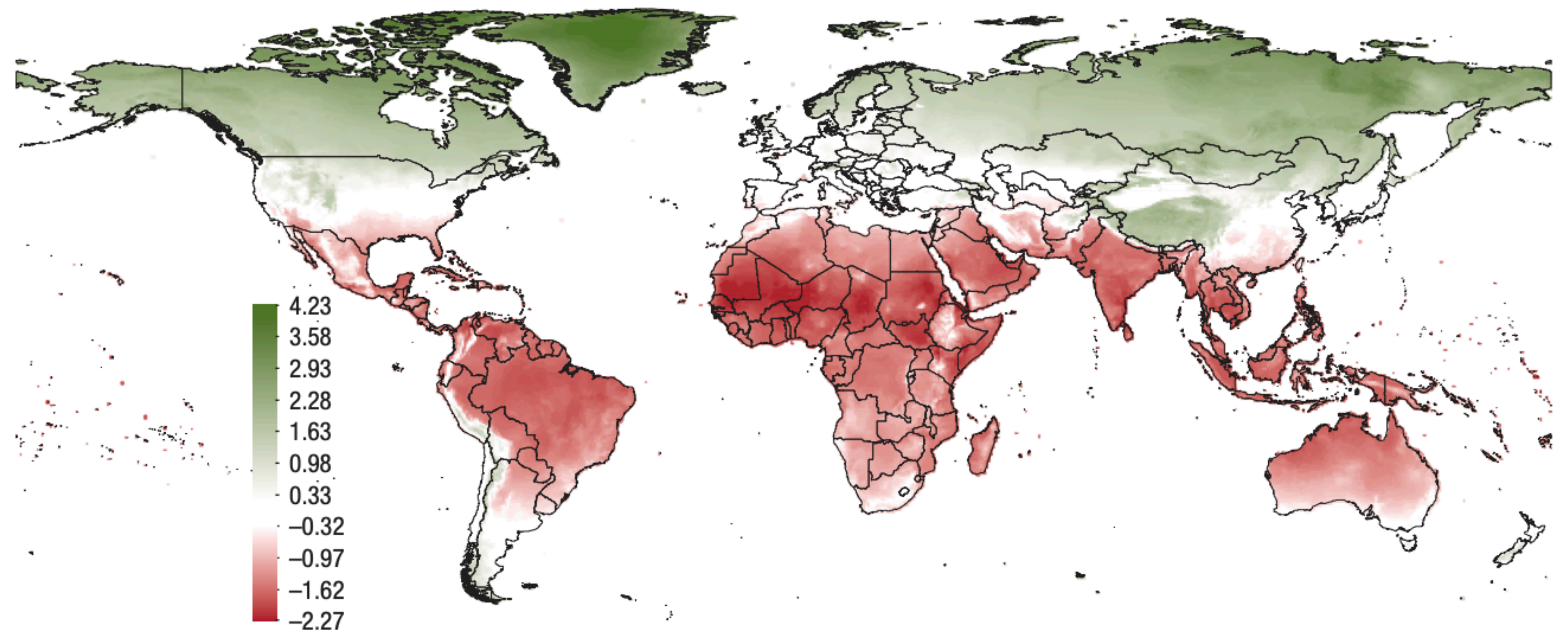
Adaptation – actions that aim at reducing vulnerability of populations to climate change impact

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 output at the grid level

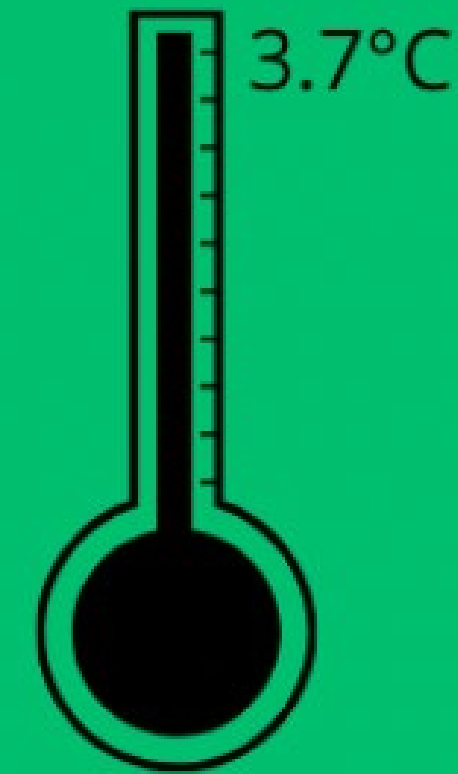


Health impact of climate change

Global warming, malaria and dengue

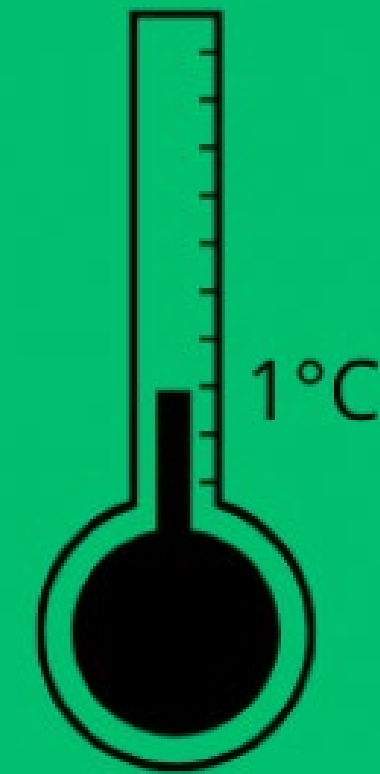


Additional people at risk by 2100 due to rising temperatures and population growth:



4.7 billion people*

VS.



2.4 billion people**

Relative to 1970-1999:

*in worst-case scenario where emissions continue to rise at current levels

**in scenario where emissions are reduced the most

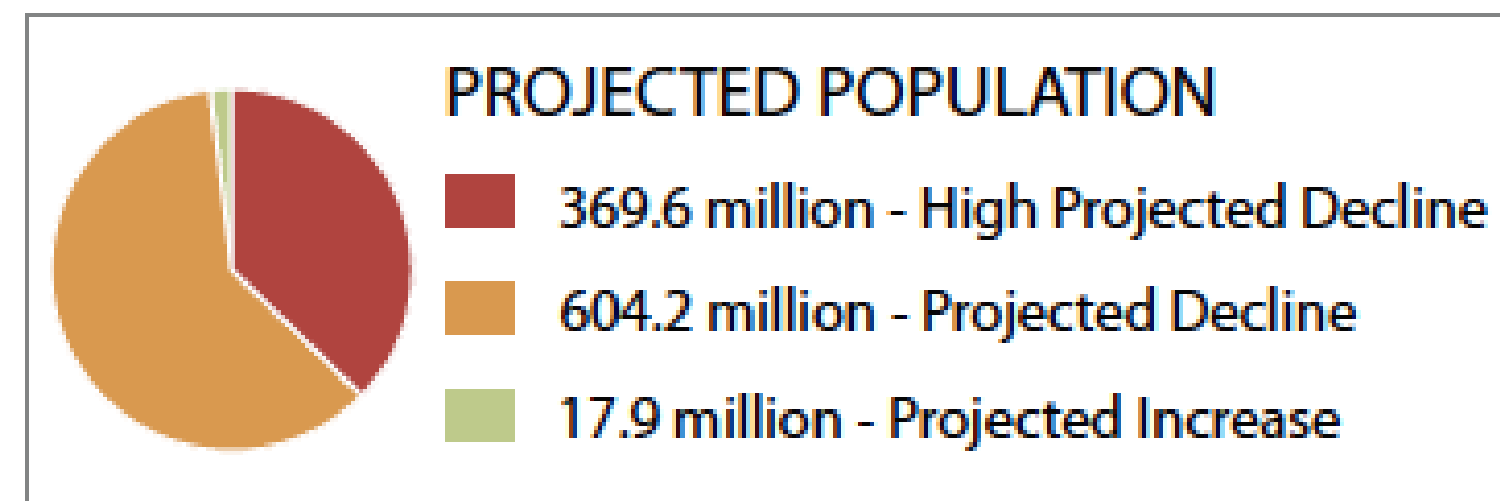
A study by Colón-González et al (2021) estimates that because of climate change:

- Malaria suitability will increase by 1.6 additional months in tropical highlands in Africa and Eastern Mediterranean and Americas
- Dengue suitability will also increase in some world regions

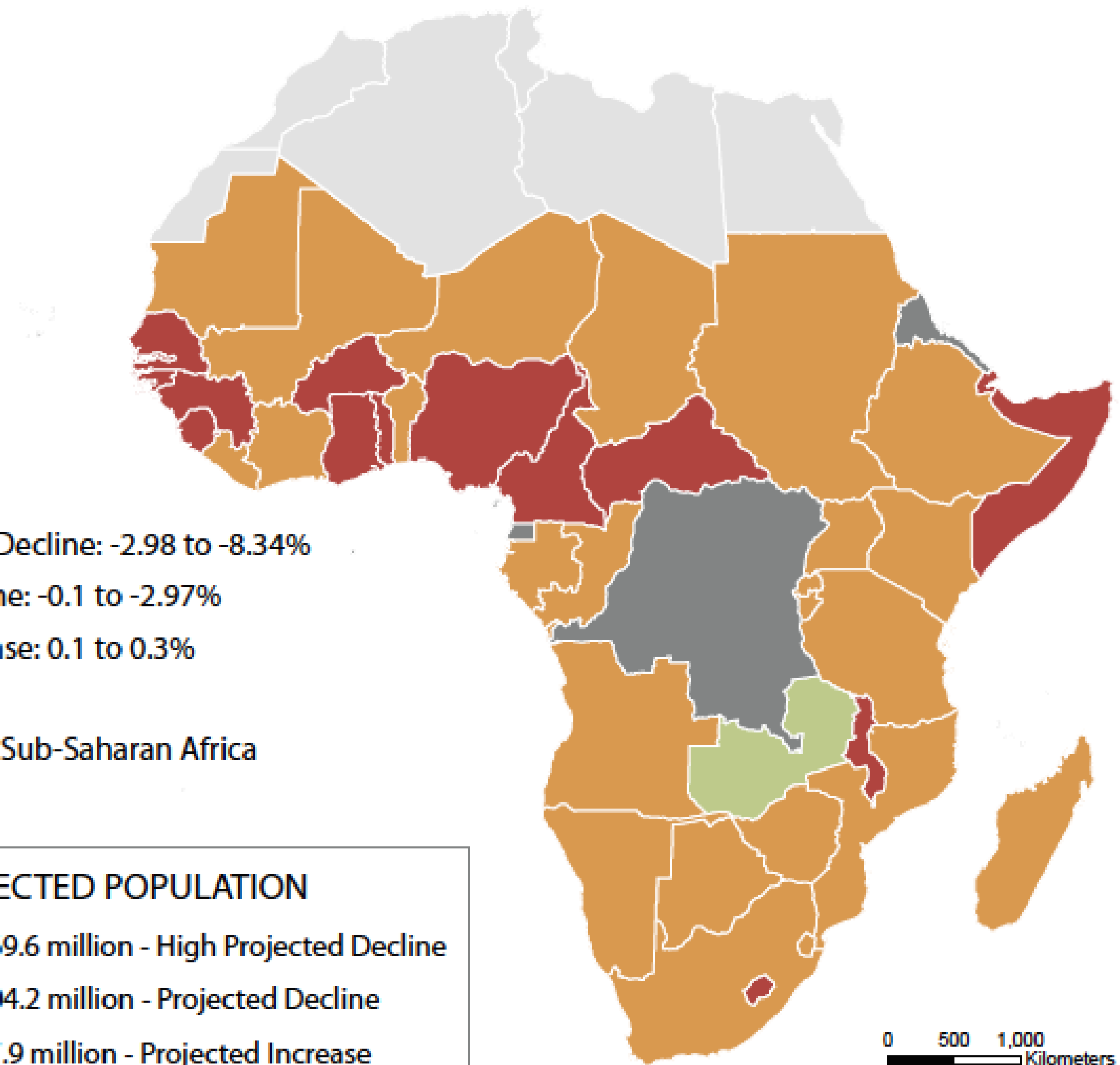
Agricultural production, population and climate change, 1990-2020



- 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







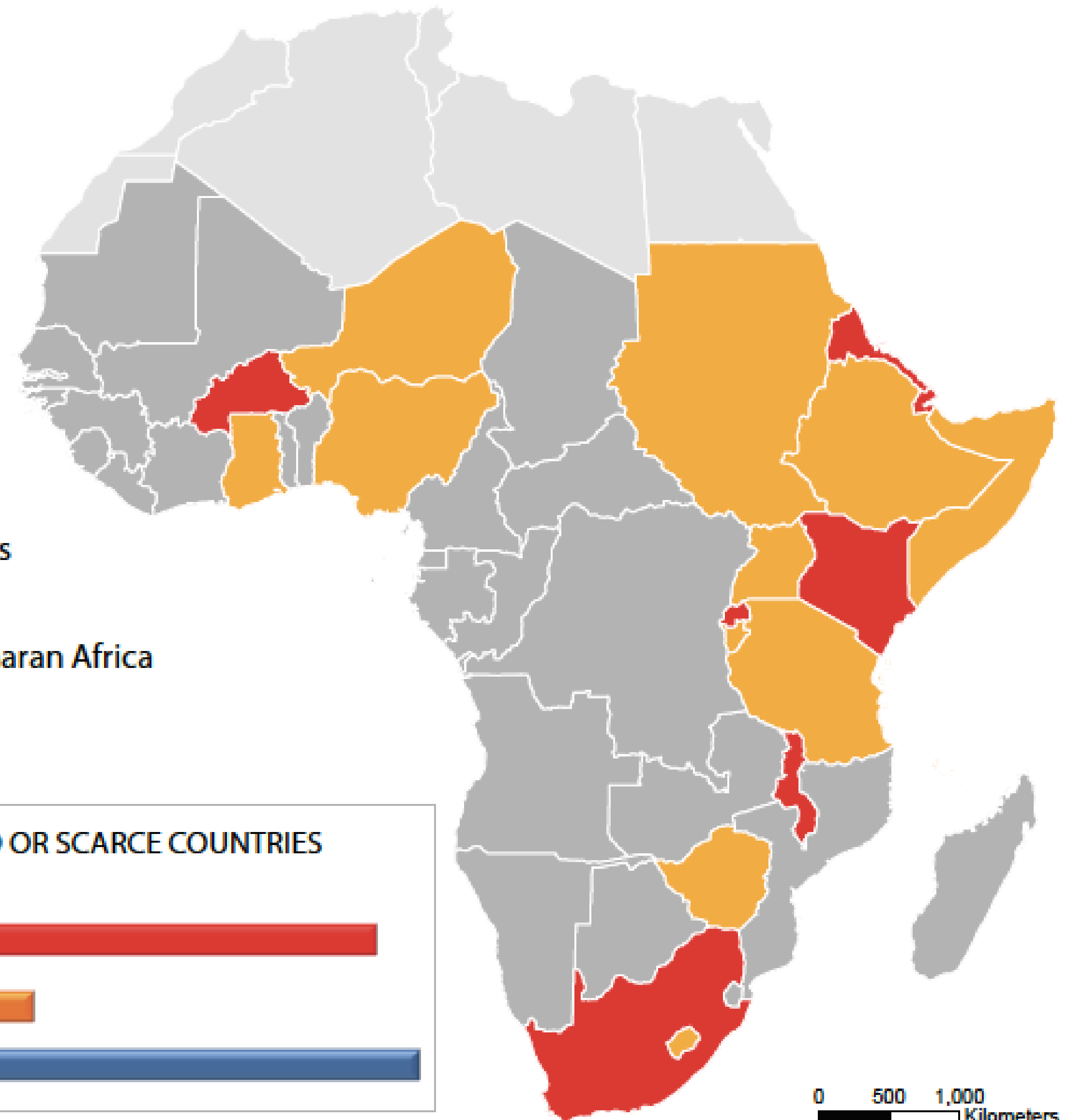
Source: PAI, Mapping Population and Climate Change website. <http://populationaction.org/climatemap>



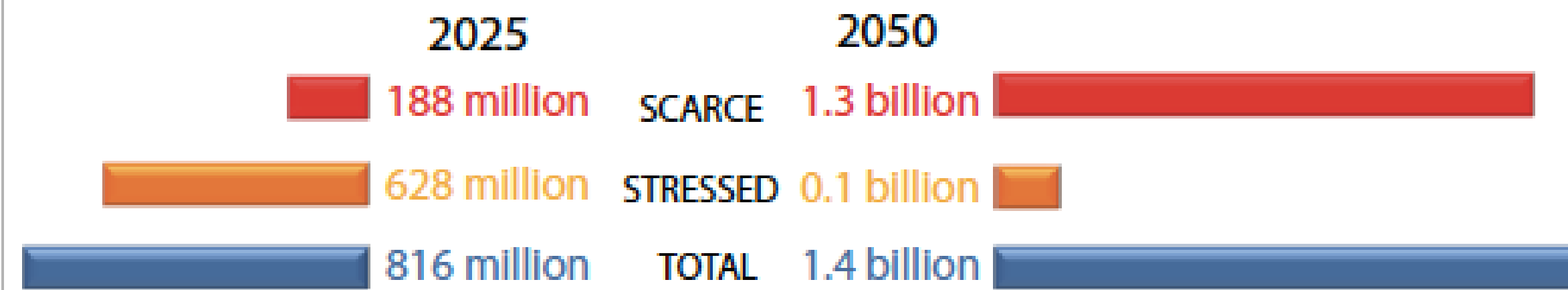
Population and Water Availability



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

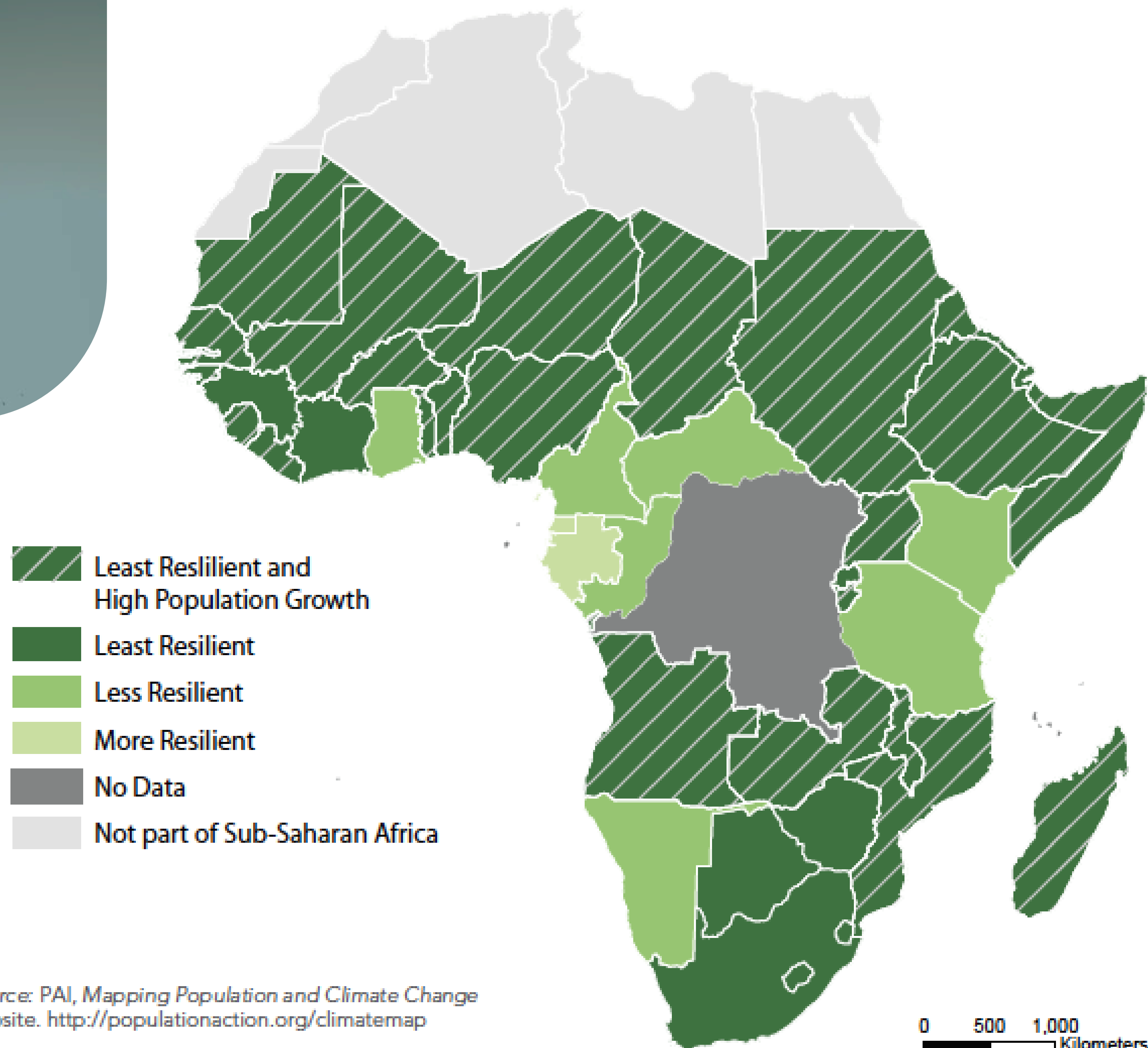


PROJECTED POPULATION LIVING IN WATER STRESSED OR SCARCE COUNTRIES

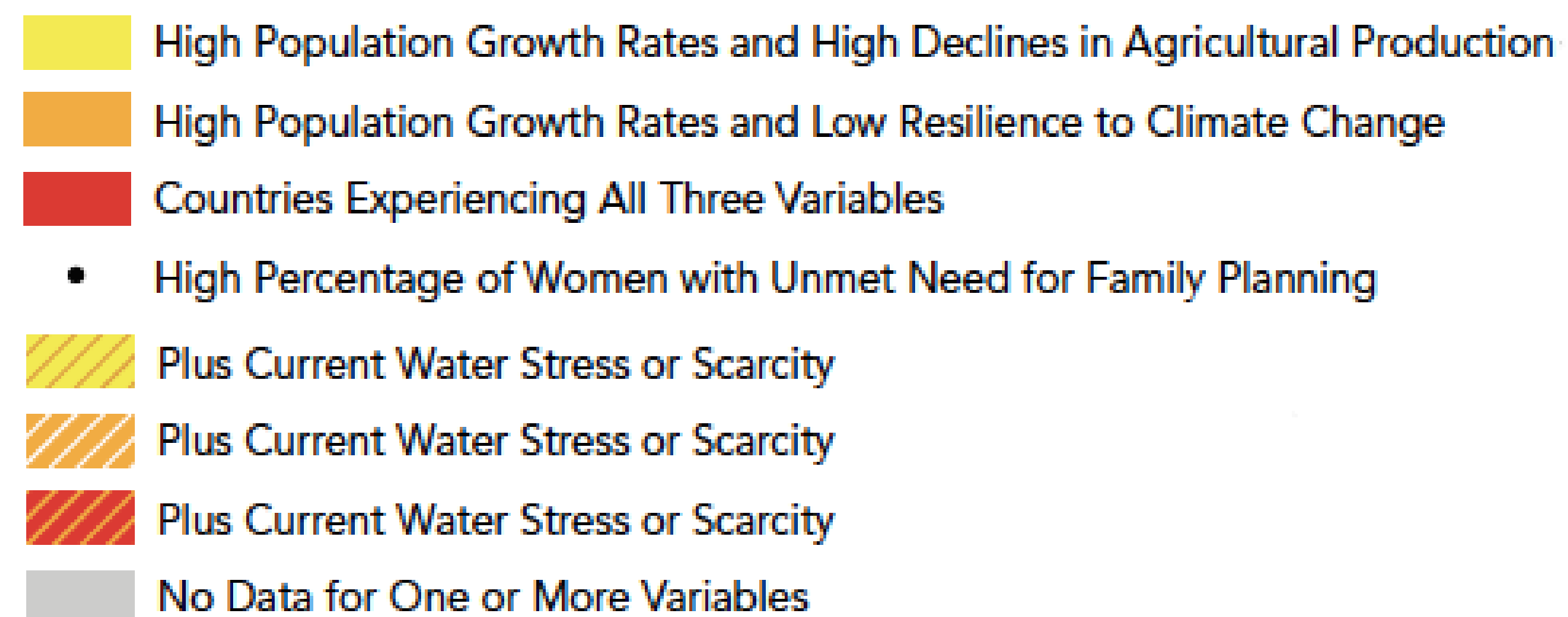


Source: PAI, Mapping Population and Climate Change website. <http://populationaction.org/climatemap>

High population growth and resilience to climate change in SSA



Population and Climate Change Hotspots



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

Population, Environment and Development (PED) and Systems Thinking approach

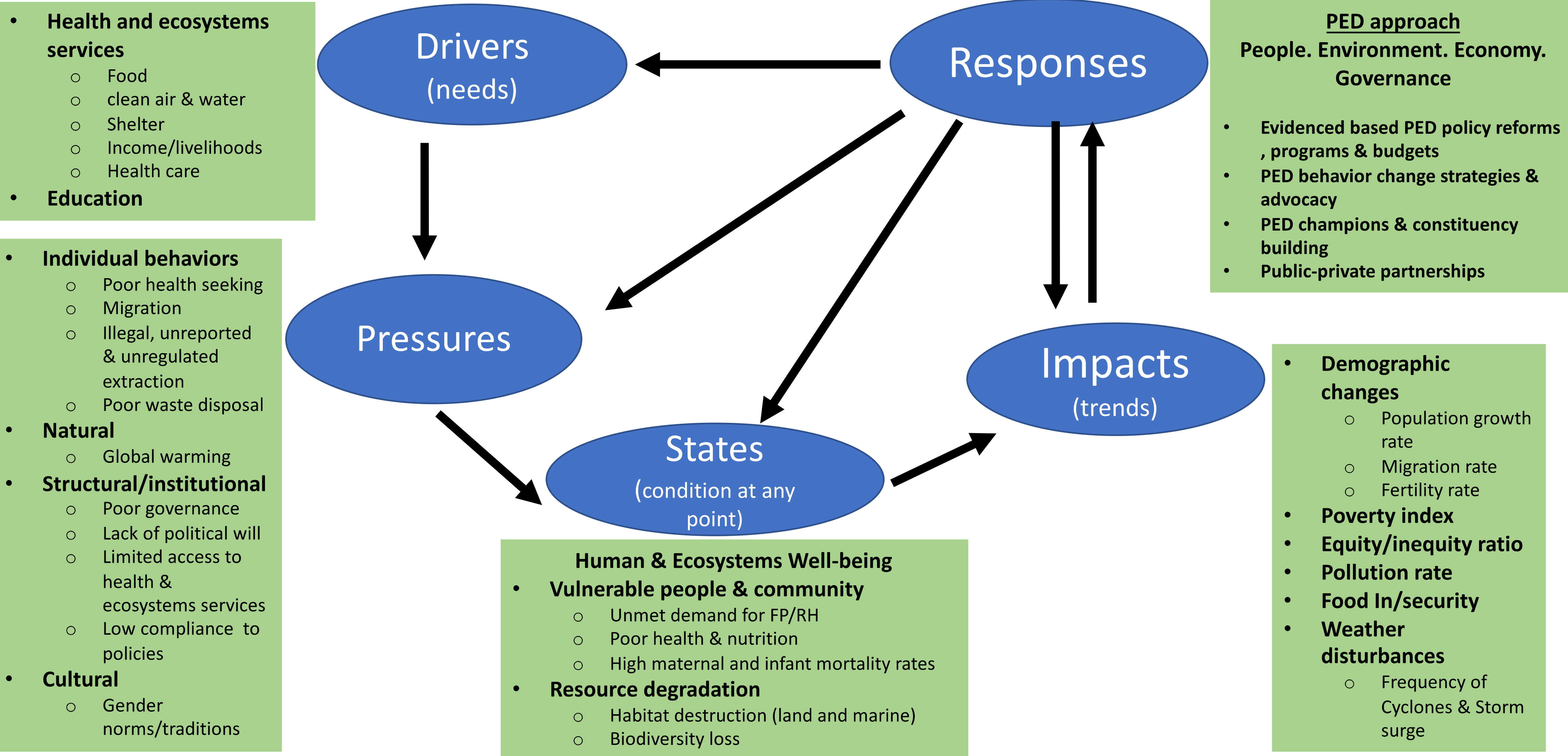
- Holistic approach to analysis that takes into consideration the interconnection of many important components.
- Systems thinking can be harnessed to enable the public and policy makers to understand the interlinkages and relationships between voluntary FP/RH, environment and development.
- The **DPSIR**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



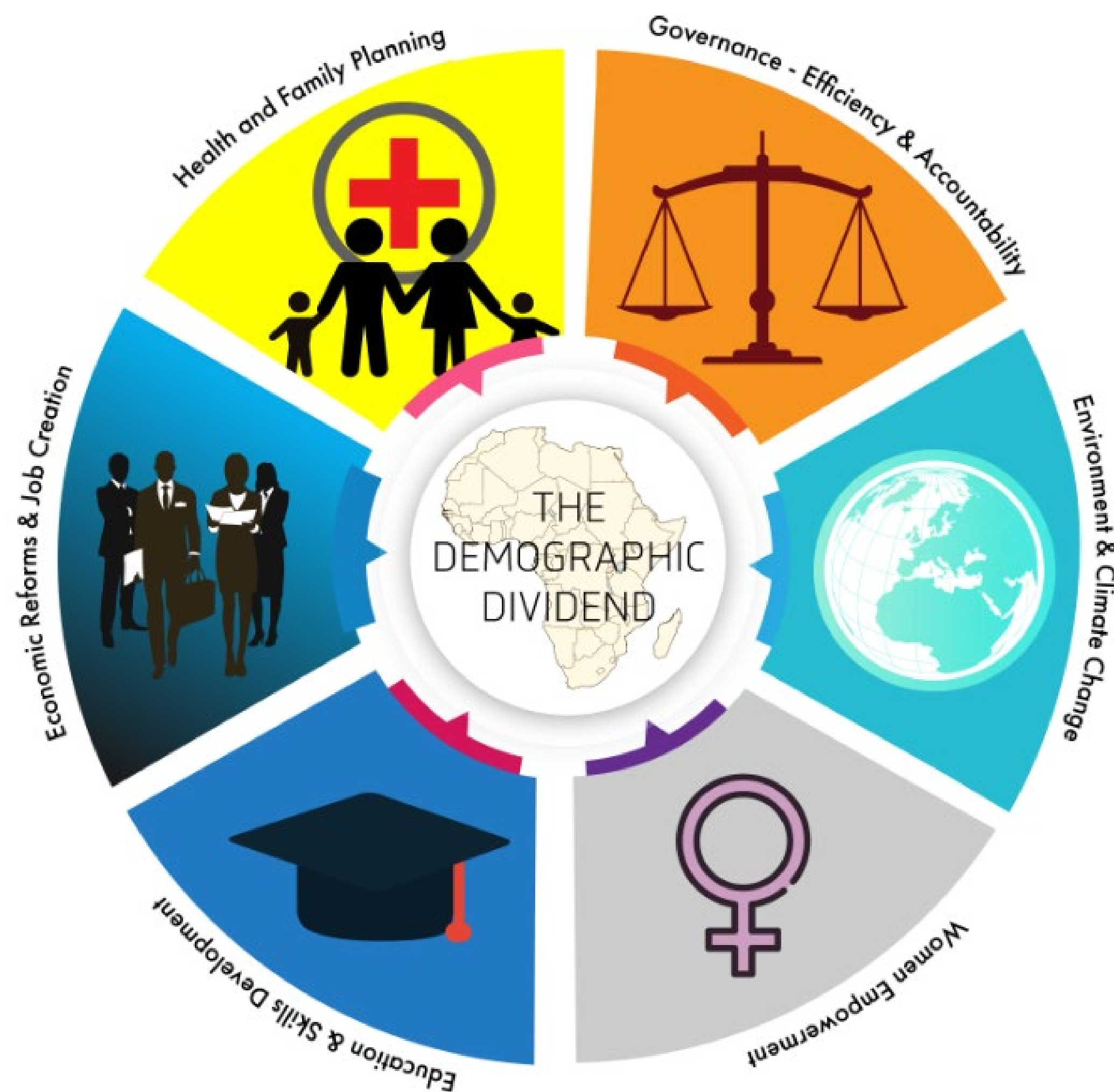
Systems Thinking Approach



Adaptation of DPSIR Model applied to Population, Environment and Development



Priority investment areas for harnessing the Demographic Dividend in Africa should include climate change



THANK YOU