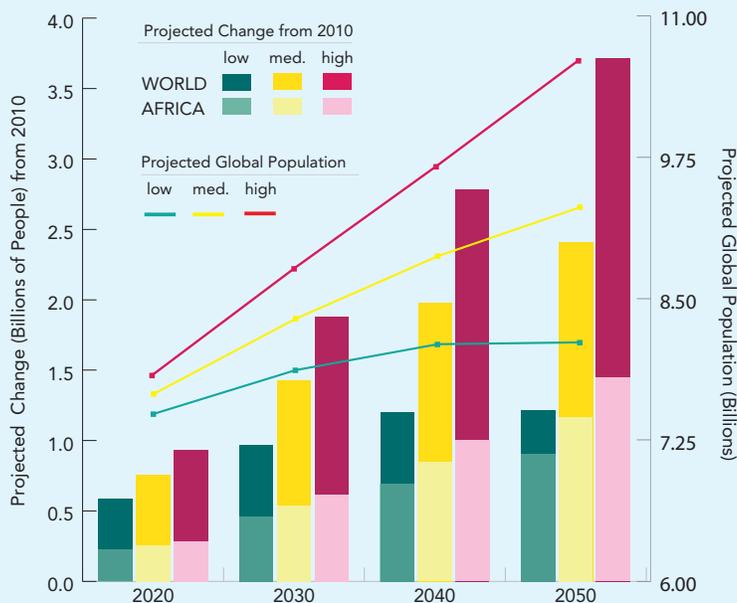


Population, Climate Change, and Sustainable Development in Africa

FIGURE 1: Africa's Projected Population Growth, 2010-2050



Source: Created using data from UN Population Division 2011

Population growth is occurring more rapidly in Africa than in other regions of the world (Figure 1), increasing vulnerability to climate change impacts and undermining sustainable development efforts on the continent. Indeed, most sub-Saharan development policies note that the region's rapid population growth inhibits efforts to alleviate poverty, ensure food security, preserve the environment, and improve Africans' well-being. The link between population dynamics and sustainable development, including climate change, is particularly critical for Africa. This is important given that a large share of Africa's population lives in areas susceptible to climate variation and extreme weather events. Policymakers need to connect population dynamics and climate change as continued rapid population growth will diminish the capacity of communities to adapt to climate change impacts, and ultimately, jeopardize their economic and human welfare.

Population Dynamics in sub-Saharan Africa

Sub-Saharan Africa is home to around 900 million people, a number that is projected to grow to 1.2 billion by 2025, and to 2 billion by 2050¹. With an average population growth rate of more than 2 percent for most countries, the region has the fastest growing population in the world. Of the 2.4 billion people who are projected to be added to the world by 2050, 46 percent will be born in sub-Saharan Africa (Figure 1). The region will contribute 77 percent of the total increase in global population by 2100. Thirty-one countries out of the region's 51 are projected to at least double their population by 2050, according to the latest population projections².

Africa's high population growth rate is driven largely by high total fertility. Although the region's population growth rate has slowed, fertility rates remain high at 5.2 children per woman on average (compared to a world average of 2.5). Only 15 countries, mostly in northern and southern Africa have fertility rates below 4³.

High-fertility countries exhibit youthful age structures, characterized by high proportions of young people. The median age of population in sub-Saharan Africa is around 18 years, but it is as low as 15 years in some countries like Niger. The population below the age of 15 years grew by 150 percent in the region between 1970 and 2005. In countries like Niger, it increased by 200 percent⁴.

Such young age structures mean that populations will continue to grow for some time, even after attaining replacement level fertility, as the current generation of young people become parents themselves. For example, let's assume that Nigeria, Africa's most populous country, reduces its current fertility rate of 5.7 children per woman to the replacement level of 2.1 children by 2020. Nigeria's current population of 160.3 million will continue to grow for many more years before it stabilizes at about 300 million around the year 2100.

Urbanization

Most of the expected population growth in sub-Saharan Africa will be absorbed in urban areas. While the urbanization process has stabilized in most developed countries with about 75 percent of the population living in urban areas, most African countries are currently transitioning from being predominantly rural to urban⁵.

In 2010, sub-Saharan Africa was mainly rural with a little more than a third of the population (36 percent) living in urban areas. Globally, 52 percent of the population lives in urban areas. However, the total urban population in sub-Saharan Africa is expected to increase from 298 million in 2010 to about 1.1 billion in 2050, representing 8 percent and 17 percent of the total world urban population respectively⁶.

In developed countries, urbanization has been accompanied by social and economic development. If properly managed, an increase in the absolute number of urban inhabitants could propel social and economic growth. The scale of urban growth in Africa overwhelms the capacity of governments to provide basic services such as education, health services, housing, potable water, electricity and waste disposal⁷. As such, most urban dwellers in sub-Saharan African cities live in overcrowded informal settlements, or slums.

Climate change further compounds the challenges associated with the rapid rate of urbanization in sub-Saharan Africa by increasing vulnerabilities of the urban dwellers, especially for the many cities located in low coastal areas that are prone to rising sea levels.

Implications of Population Growth on Climate Change and Sustainable Development in sub-Saharan Africa

Population growth will continue to influence development challenges in Africa. Climate change is likely to compound the challenges, as it could potentially affect the availability of natural resources such as agricultural land and water.

Population growth and food security

Populations in sub-Saharan Africa will grow rapidly as agricultural production is estimated to decline in the coming decades. Pressure on crop land is increasing, mostly due to population growth. Sub-Saharan Africa is one of the regions projected to be most severely affected by drought and temperature increases. It is likely that food crises, such as those that have occurred in the Horn of Africa, will become more common. Even in the short-term, every country on the continent, except Zambia, is projected to experience a decline in agricultural production. The dual challenges of population growth and climate change are likely to compound food insecurity.

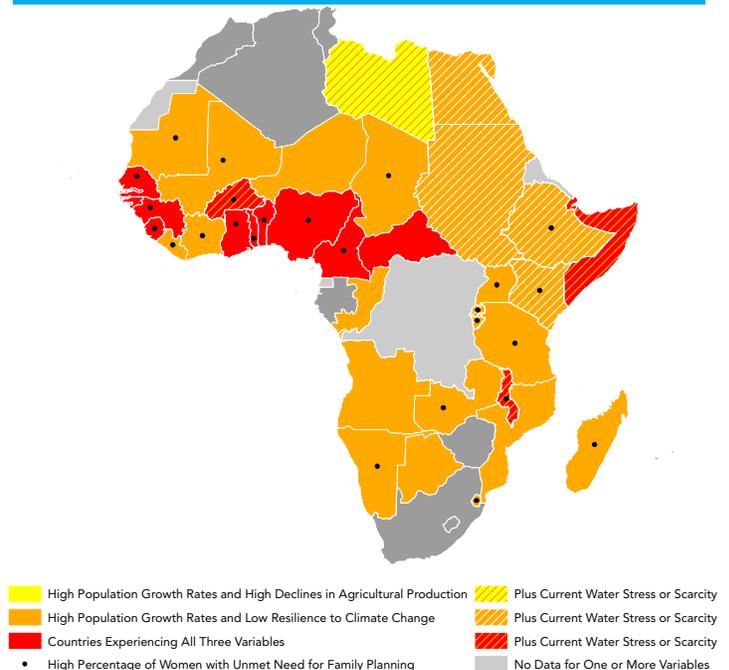
Population growth and water resources

Sub-Saharan Africa is projected to be severely impacted by water scarcity, which will be exacerbated by climate change effects. About 400 million people in 15 countries in sub-Saharan Africa currently suffer from water scarcity. That number is projected to double to over 800 million by 2050 as more countries become water scarce. Djibouti, Cape Verde, Kenya and Burkina Faso are the most severely affected by water scarcity. Countries with acute water scarcity all have high population growth rates. Population growth and anticipated climate change are likely to make water scarcity in these countries even more acute.

Population and Climate Change Hotspots

Many countries are experiencing the twin challenges of high rates of population growth and negative consequences of climate change in Africa. We consider countries that are experiencing high rates of population growth, high projected declines in agricultural production, and low resilience to climate change to be population and climate change hotspots (Figure 2). All the 15 "hotspot" countries in Africa are in sub-Saharan Africa and four of these countries (Burkina Faso, Djibouti, Malawi and Somalia) are also currently experiencing water stress or scarcity.

FIGURE 2: Population and Climate Change Hotspots in Africa



Source: PAI, Mapping Population and Climate Change website⁸

Many of the hotspot countries already face widespread poverty, low levels of education, limited access to health services, and high levels of gender inequality. The impacts of climate change are magnifying these challenges. These conditions will likely extend to even more countries as population grows and limited natural and environment resources are stretched.

Most of the hotspot countries have high numbers of women who want to prevent pregnancy, but lack contraception. Fertility is very high partly because of the inability of women and their partners to access and use contraception.

Implications for Malawi and Kenya

Malawi and Kenya are two countries that show the risks and challenges posed by climate change and population dynamics. Both countries experience high rates of population growth and high urbanization rates as well as large numbers of urban dwellers living in slum settlements. In addition, their agricultural-based economies are undermined by erratic climatic conditions, leading to food insecurity. These challenges are exacerbated by water scarcity problems and by a low resilience to consequences of climate change.

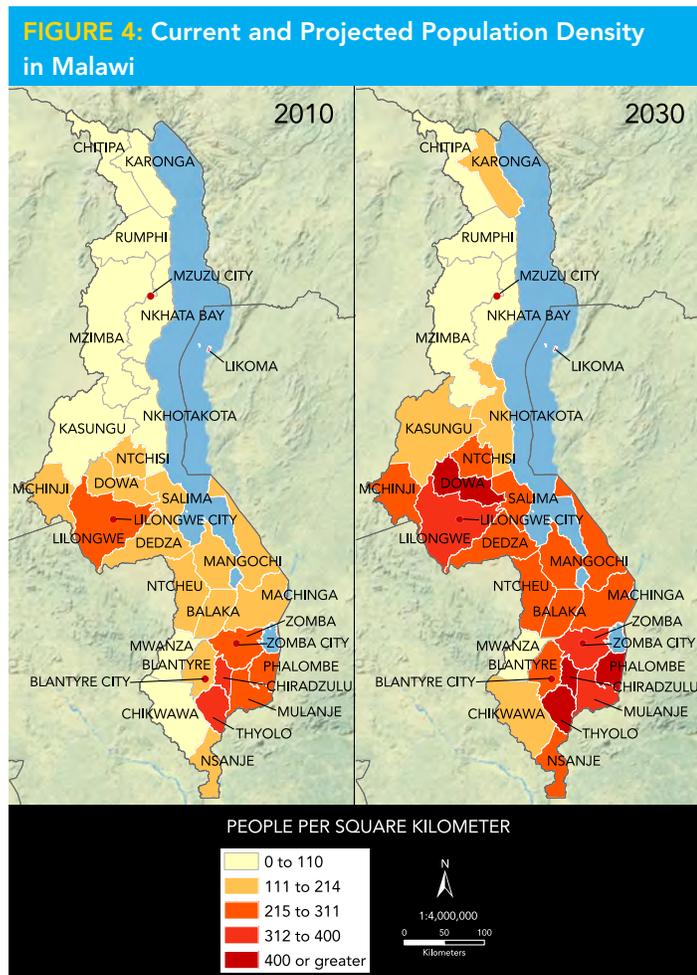
Rapid population growth in Kenya and Malawi has exerted enormous pressure on land and other natural resources, leading to fragmentation of small-holder land holdings, and over-exploitation of land and resources. These effects will only get worse as the population grows.

Challenges in Kenya

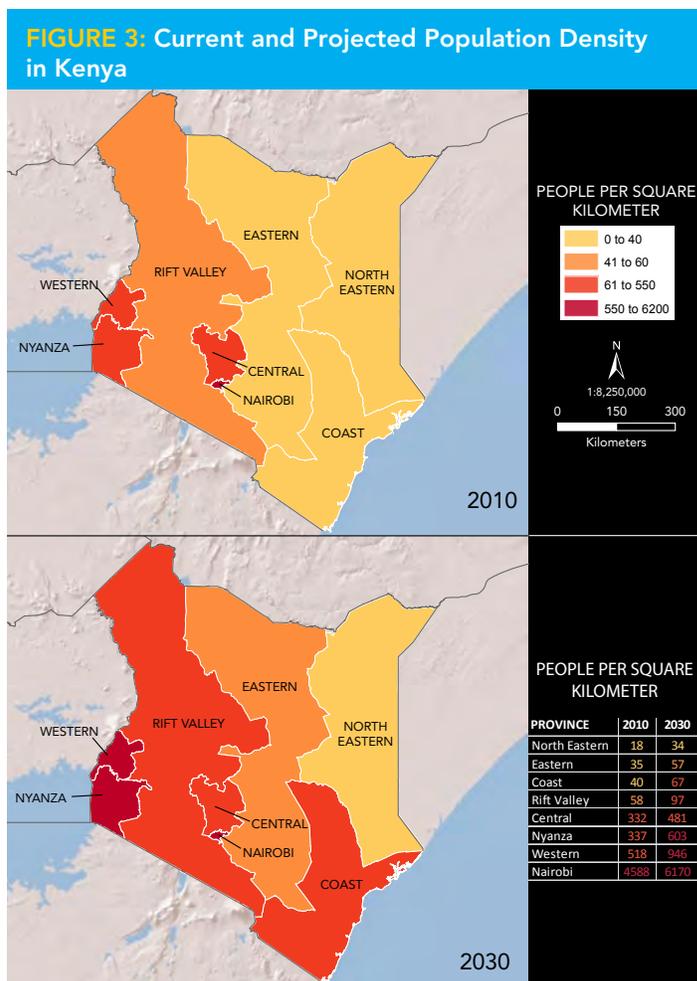
In Kenya, there are currently 70 people per square kilometer of land (Figure 3). However, 80 percent of the country’s land area is arid or semi-arid and currently not utilized for agricultural production. The population density will grow to 276 people per square kilometer by 2050. Western and Nyanza provinces’ already high population density will be amplified as high levels of fertility continue rapid population growth. Population density is also increasing in the Rift Valley province, one of the main agricultural breadbaskets for the country. This will increase pressure on land, lead to greater land fragmentation, and exacerbate food insecurity.

Challenges in Malawi

Malawi’s current population density of 126 people per square kilometer is among the highest in Africa, and it will grow six-fold, to 803, by 2050. The number of people sharing a square kilometer of arable land is already at 766. Between 2010 and 2030, close to half of Malawi’s land area will have excessively high levels of population density, and a quarter will have densities that are higher than the current average (Figure 4).



Source: Created using data from National Statistical Office of Malawi 2008^{11,12}



Source: Created using data from Kenya National Bureau of Statistics 2010⁹ and projections from SPECTRUM model¹⁰

Programme Opportunities in Kenya and Malawi

Our stakeholder interviews conducted in Kenya and Malawi reveal a high level of awareness of key population and climate change challenges among policymakers, as well as the need to link and integrate the two issues at policy and programme levels. However, there is limited prioritization of population, environment and climate change in broader development policies and strategies. Population, climate change and environmental issues are not effectively integrated at policy and programme levels. This lack of integration limits potential combined benefits, such as reduction of poverty and hunger and increased resilience to climate change impacts. Stakeholders indicated that the lack of effective integration at the policy and programme levels are due to the following challenges:

- Weak coordination and governance mechanisms for climate change
- Lack of over-arching climate change policies that would harmonize fragmented and conflicting policies on various climate change issues among various ministries
- Weak technical capacity in generating evidence to show the benefits of integrated programmes
- Lack of funding to facilitate development and implementation of integrated programmes.

“Currently, most of the environment policies do not seriously cater for population dynamics and even if they are included, policies usually take too long to be approved in Malawi, meaning that the original policy continues to be used even if there is need for change. The current policies should therefore be reviewed to include issues of Climate Change and population and how they affect each other” — (Government Official, Malawi)

Policy Recommendations

Governments and key officials should reinforce ongoing efforts to integrate policies and programmes to address climate change and mainstream it in other development sectors. This should include setting up strong coordination and governance mechanisms. Oversight is needed to make sure various sectors work together and avoid duplicating efforts and wasting resources. Some key policy priorities include:

- Prioritize population dynamics in core national development and climate change plans, with adequate resources allocated to ensure effective implementation of integrated strategies and programmes. Climate change strategies and plans should expand access to family planning. This will boost resilience to the adverse effects of climate change and reduce emissions.
- Enhance technical capacity in programme design, research and application of research evidence in decision-making processes in Africa. Most of the technical research on climate

change issues is driven by experts from developed countries, and few localized studies demonstrate how global climate change analyses are relevant at national and sub-national levels. It is important to strengthen technical capacity of local experts to design and implement integrated programmes, and to monitor and evaluate these programmes.

- Incorporate population dynamics, reproductive health, and family planning into development and climate change strategies of key African regional and global institutions and frameworks that promote sustainable development. Such institutions include the African Union and the UN Economic Commission for Africa. The frameworks include the post-2015 MDG, the International Conference on Population and Development (ICPD), and the post-Rio +20 agendas.

This policy brief is based on a full report, **Population, Climate Change, and Sustainable Development in Africa**,¹³ which can be obtained from: www.populationaction.org and www.afidep.org

Notes

- 1 United Nations Population Division. 2011. *World Population Prospects: The 2010 Revision*. New York: UN Population Division; United Nations Population Division.
- 2 UN Population Division. 2011.
- 3 UN Population Division. 2011.
- 4 Das Gupta, M, J Bongaarts, J Cleland. 2011. *Population, Poverty, and Sustainable Development: A Review of the Evidence*. Policy Research Working Paper # 5719. The World Bank. Washington, D.C
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- 7 African Population and Health Research Center. *Population and Health Dynamics in Nairobi's Informal Settlements: Report of the Nairobi Cross-sectional Slums Survey (NCSS) 2000*. Nairobi, Kenya: African Population and Health Research Center; 2002.
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- 13 Mutunga C, E Zulu, and R-M De Souza. 2012. *Population Dynamics, Climate Change, and Sustainable Development in Africa*. Washington, DC and Nairobi: Population Action International (PAI) and African Institute for Development Policy (AFIDEP).

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