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POLICY & ISSUE BRIEF

Population, Climate Change, and Sustainable Development in Kenya

Kenya is characterized by a rapidly growing population, rapid urbanization and growing urban poverty, water scarcity, falling food production and low resilience to climate change. The combined effects of climate change and rapid population growth are increasing food insecurity, environmental degradation and poverty levels in Kenya.

Kenya has been a pioneer in instituting policies and programmes to address population challenges. The country was also among the first in setting up a climate change response strategy. The 2013-2017 implementation plan for the country's development blueprint, Vision 2030, has identified population dynamics and climate change among key priorities. However, the two issues are not strongly linked in current policies and intervention programs to address them are implemented separately.

Addressing population growth and climate change together should be a top development priority if Kenya is to achieve sustainable development. In order to enhance integrated responses, the government of Kenya, donors and program implementers should harmonize roles of various climate change coordination entities, integrate population dynamics in all climate change policies and strategies (and vice versa), secure financial and other resources for climate change and population responses, and enhance local technical capacity in multidisciplinary program design and research.

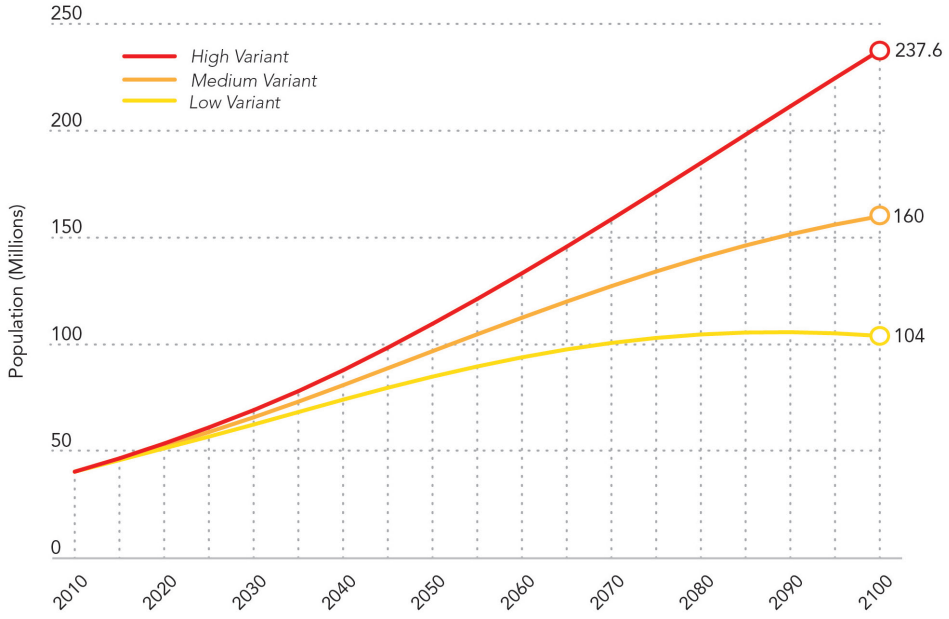
Population Dynamics in Kenya

Kenya's population grew from about 5.4 million in 1948 to about 41 million in 2012.[1] It is projected to reach 94 million by 2050 and more than 160 million by 2100 (Figure 1).[2] This growth is largely a result of past high fertility, which peaked at 8.1 children per woman in 1978 and has since declined modestly to 4.6 children per woman in 2008.[3] The UN medium projection assumes Kenya's 2008 fertility rate will decline to 4.2 by 2030 and 2.9 by 2050.

The decline in fertility has been attributed to increasing demand for smaller families, and use of modern contraception, which increased from 7 percent in 1978 to 46 percent in 2008.[4] Addressing barriers of access and use of family planning would further reduce fertility. In 2008, about one in four married women who wanted to postpone their next birth or stop childbearing altogether were not using any method of contraception. Seventeen percent of all recent births were unintended and 26 percent were mistimed.[5]

Currently, Kenya's population is dominated by young people who need to be supported by those in the workforce. Close to half of all Kenyans (42 percent) are below age 15 years.[6] This young age structure also means that the population will continue to grow for several generations even after reaching replacement level fertility (about 2.1 children per woman) because there are many young people who are likely to start their own families. If replacement level fertility is reached in

FIGURE 1: Kenya's population will continue to grow during the rest of this century



Source: United Nations Department of Economic and Social Affairs, Population Division 2011. *World Population Prospects: The 2010 Revision*. New York: UN Population Division.

Kenya's population grew from about 5.4 million in 1948 to about 41 million today, and it is projected to reach 96 million by 2050. The population is growing at a time when the country is experiencing climate change effects such as erratic rainfall, food insecurity and flooding. Addressing population growth and climate change together should be a top priority if Kenya is to achieve sustainable development.

2020, Kenya's population would stabilize at around 80 million by 2080.[7] However, if replacement level fertility is reached in 2080, the population would stabilize at 190 million by 2140 (Figure 2).

Additionally, when birth rates decline rapidly, there are more working-age adults relative to children. This shift in the age structure of a population can create what is called the demographic dividend — economic growth resulting from increased productivity and greater savings due to lower numbers of dependents. Benefits of the demographic dividend are optimized when accompanied by investments in health and education, and pro-growth, job-creating economic reforms.

Planning for Urbanization

About a quarter of Kenya's population currently lives in urban areas, but the country is urbanizing quickly and it is projected that close to half of all Kenyans will be urban residents by 2050.[8] The growth of urban poverty in Kenya (about 55 percent of urban residents currently live in poverty in slum settlements) presents a major development challenge for the country (Figure 3). Slum residents are highly vulnerable to climate change effects such as flooding, fires, and landslides and often lack basic amenities and proper sanitation. Better urban planning and reforms, could help Kenya make the most of the socioeconomic benefits of urbanization and reduce reliance on natural resources such as agricultural land.

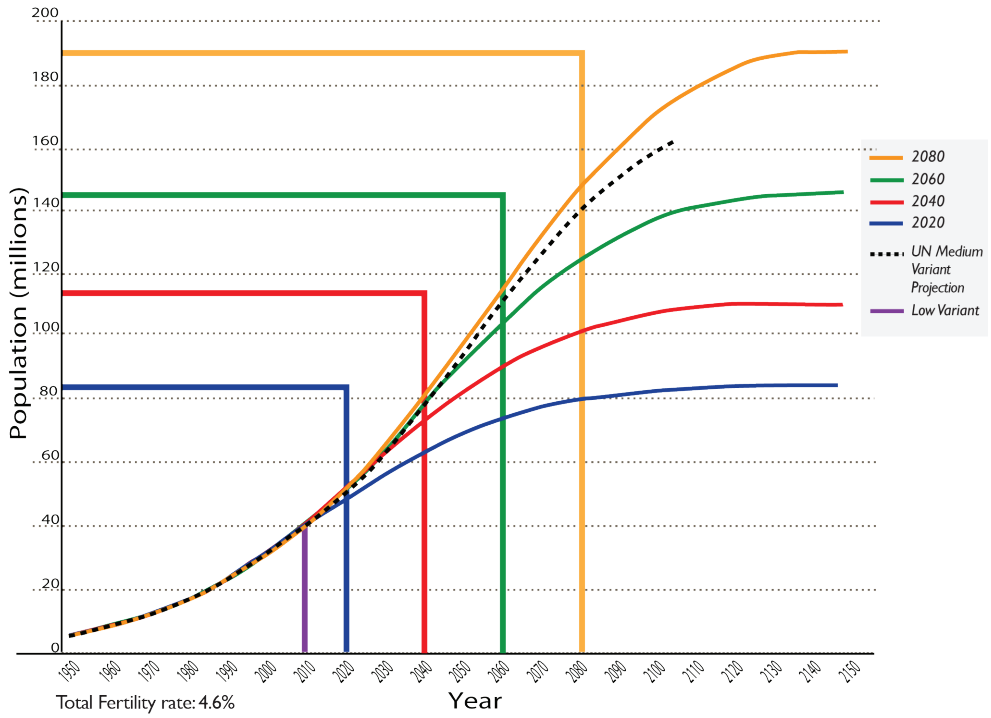
Population Growth and Natural Resources

In non-industrialized countries like Kenya, rapid population growth places enormous pressure on natural resources such as forests, water and land. Already scarce farmland must be subdivided among more people resulting in smaller and overused plots and poorer land quality. About 20 percent of Kenya's land area is suitable for agricultural production[9,10] and most of this land is in areas where population is growing rapidly such as Rift Valley, Western, and Nyanza provinces. As the population increases, the number of people per square kilometer of arable land will increase from about 348 now to 831 by 2050. With estimates that at least 80 percent of Kenyan households use firewood or charcoal for cooking and heating,[11,12] population growth and associated increases in demand for farming and residential land will undoubtedly accelerate deforestation and exacerbate effects of climate change in the country.

The livelihoods of the majority of Kenyans depend on rain-fed small-scale farming, a practice that is highly vulnerable to the effects of climate change. Agriculture contributes about 24 percent of Kenya's gross domestic product, and supports at least 75 percent of the total population.[13,14] Frequent droughts and flooding in various parts of the country have led to recurring food shortages, and it is estimated that more than 10 million people in Kenya suffer from chronic food insecurity and poor nutrition. At any one time, about 2 million people require assistance to access food.[15,16] Food insecurity is associated with conflict and displacement of households, increased pressure on water and grazing resources, and soaring food prices.[17]

Kenya's annual agricultural production could decline due to climate change, loss of soil fertility, and other factors.[18] While slowing population growth would help alleviate the situation, there is also urgent need for a more diversified economy, development of irrigation, and adoption of better agricultural systems.[19]

FIGURE 2: The year in which Kenya reaches replacement level fertility has a major impact on its ultimate population size



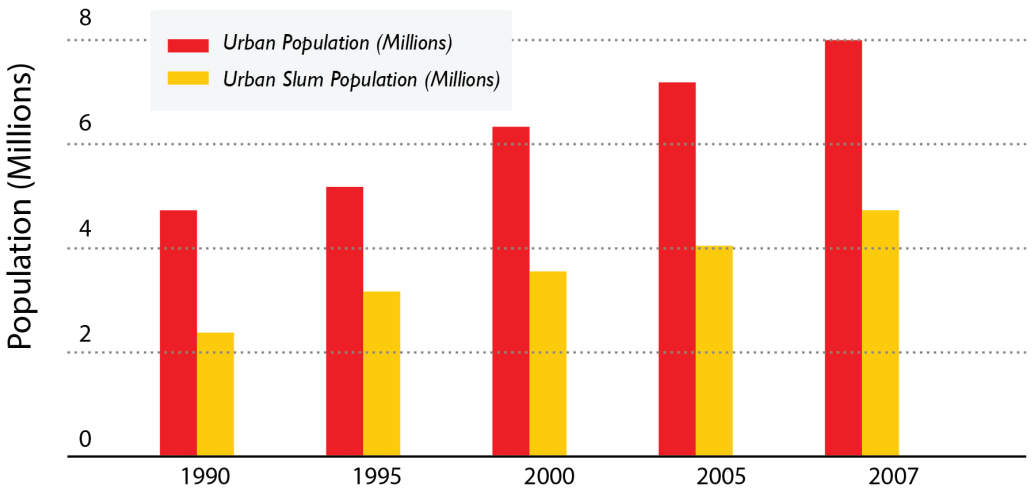
Source: Venture Strategies for Health and Development. 2012. *Demographic Momentum Graphs*. Berkeley: Venture Strategies for Health and Development.

MAIN CLIMATE CHANGE AND ENVIRONMENTAL CHALLENGES IN KENYA

(Based on stakeholder interviews)

- Unpredictable weather patterns, including rainfall
- Flooding and displacement of people from flood-prone areas
- Droughts
- Short rainy seasons and prolonged dry spells during rainy season
- Drying up of rivers and lakes
- Rising sea levels and changes in the intensity of ocean currents
- Desertification of arid and semi-arid regions
- Water scarcity
- Bush fires
- Low and unstable hydro-electricity production
- Declining flora and fauna, and declining rare natural species

FIGURE 3: Kenya's urban population and those living in urban poverty has been growing steadily



Source: UN-HABITAT. 2011. *State of the Worlds Cities 2010/2011: Bridging the Urban Divide.* Nairobi: UN-HABITAT.

Kenya is already a water-scarce country and as population grows and climate change compounds water shortages, the country's water demands will increasingly exceed freshwater sources.[20] Rising sea levels, increases in water temperatures, and drying of rivers and lakes are threatening the livelihoods of people along Kenya's coast and other water-bodies across the country. Fish stocks are dwindling due to overfishing and changing water temperatures, and people living in low-lands are frequently displaced due to flooding.

Climate Change Impacts in Kenya

Like many other African countries that depend on rain-fed agriculture for economic survival, Kenya is highly vulnerable to the effects of climate change. Some of these effects are already being seen: erratic rainfall, increased water scarcity, rising temperatures, and extreme weather events such as heat waves, floods and droughts. Decreases in agricultural production and environmental degradation as a result of climate change threaten the country's economy and its people's well-being.

Climate change also contributes to low fish stocks, unstable hydroelectric production, and rapid deforestation i Kenya.

Policy Framework for Integrating Population Dynamics and Climate Change

Given the strong links between population dynamics and climate change, integrated policy and program response would make sense and offer combined benefits for sustainable development in Kenya. Kenya's development blueprint, Vision 2030, recognizes population growth and urbanization as priority challenges for the country's development. Although climate change was not highlighted in the original Vision 2030 document, it has since been included in the Vision's Second Medium Term Plan for 2013-2017.

However, the two issues are not well linked at the policy level and programs to address them are mostly implemented separately. For instance, although Kenya has made progress in establishing an institutional and policy framework for coordinating climate change work, the 2010 National Climate Change Response Strategy does not make reference to population dynamics. Similarly, while the 2012 National Population Policy states that population pressure contributes to environmental degradation and climate change, it does not indicate how population affects resilience to climate change or how the two issues can be addressed together. Several sectoral policies that tackle climate-related issues like water, forestry, and land use recognize the role of population growth in environmental degradation. But they leave it to the ministries of health and planning to address population challenges.

In general, policy makers and experts see the need to link population dynamics and climate change. However, they explain that the two issues are not well integrated because of the following challenges:

a) Weak coordination mechanisms for climate change policies and programs across multiple government sectors
b) Fragmentation of policies
c) Insufficient funding
d) Weak technical capacity in research, program design, implementation, and evaluation
e) Poor harmonization of population and climate change programs at the community level.

Recommendations

Immediate and decisive action on the following recommendations would improve Kenya's capacity to address its climate change and population challenges in an integrated manner and promote sustainable development:

1. **Incorporate population dynamics in all climate change policies and strategies.** These include the Climate Change Act, the Climate Change Action Plan, and the Climate Change Policy that are being developed in Kenya. The new climate change policy should help harmonize sectoral policies on climate change issues. The policy should also be compatible with the country's plan to transition to a devolved government structure in 2013.
2. **Strengthen climate change coordination and governance mechanisms.** Roles and responsibilities of different entities coordinating climate change activities in Kenya, such as the Climate Change Units, should be clarified. Institutions should

embrace and promote the multidimensional nature of climate change and ease its mainstreaming in other development sectors, including population.

3. **Secure financial resources from the government of Kenya, development partners, and non-governmental sources.** Currently, climate change and population initiatives in Kenya are largely donor-driven. The government should continue providing its own funding for family planning as it has done since 2005. The establishment of the "Special Climate Change Adaptation Fund" is a start in addressing funding challenges. The government should provide more funds and staff for climate change units in ministries to ensure effective responses to climate change.
4. **Mainstream population issues within other development sectors, including environment and climate change.** The new population policy should be fully implemented. Incorporating population issues in the work of the climate change units would help integrate the two issues at implementation level. The government should also address population issues such as urban planning, infrastructure development, and safeguarding the lives of the urban poor against effects of climate change.
5. **Take gender issues into account in the design of climate change policies and adaptation strategies.** Target women with climate change adaptation strategies, involve them in planning and implementation of interventions, enhance access to education, and create more livelihood opportunities for women. Strengthening the resilience of women will help communities respond to climate change and reduce poverty.
6. **Prioritize meeting of women and their partners' needs for family planning.** Family planning can help reduce unplanned births, improve health outcomes for women and children, and slow population growth. It would help ease pressure on the environment and natural resources, strengthen resilience to climate change, and enhance economic growth by empowering women.
7. **Enhance investments in public health, education and empowerment of women, and adopt pro-growth, investment-conducive, and job-creating economic reforms.** These steps will help optimize Kenya's potential to benefit from the demographic dividend.
8. **Enhance the design and implementation of programs that help Kenyans to adapt to climate change.** These programs could include diversification of food crops and alternative energy sources, reforestation, water conservation and recycling, modernization of agricultural production, expansion of agricultural land under irrigation, and safeguarding coastal populations against rising sea levels and temperatures. These interventions will help to reduce food insecurity and poverty, slow deforestation, and enhance Kenya's carbon credits.
9. **Enhance local technical capacity of governments, and NGOs.** Building local capacity in proposal development can boost the country's chances of tapping into international funding for climate change work, such as the Adaptation Fund and the Green Climate Fund. Investments should be made in the Meteorological Department, to buy equipment and enhance its capacity to generate timely and reliable data. Local research capacity should also be enhanced to ensure evidence-based programs.
10. **Train local researchers and other experts in multidisciplinary approaches and encourage networking among professionals working in climate change, population dynamics, and other development sectors.** Lack of evidence on links between climate change and population dynamics has contributed to the lack of integrated policies and programs. Local experts should be trained on climate change issues from a multidisciplinary perspective, both in institutions of higher learning and workshops. The Kenya Population, Health and Environment (PHE) Network, which is housed at the National Council for Population and Development, provides a valuable entry point for enhancing networking and collaboration on these issues.

This brief is based on the full report ***Population Dynamics, Climate Change, and Sustainable Development in Kenya***.[21] *The report is based on an assessment of the landscape for integrating population and climate change in development policies in Kenya that AFIDEP and PAI conducted between September 2011 and March 2012. The study involved a desk review of policy documents and general literature, analysis of demographic data, and interviews with 20 stakeholders including key policymakers, program managers, and donors, and reviewed identified existing policy gaps. The full report can be obtained from www.populationaction.org and www.afidep.org.*

Notes

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