Using the RAPID Model to Make the Case for Renewed Attention to Family Planning in Sub-Saharan Africa: FOCUS ON TANZANIA

Trainer Majige Selemani, a principal statistician from the Planning Commission of the President’s Office, assists district officials in using the RAPID Model during a training held in Morogoro region in July 2008. Photo by Leah Samike.

Helping couples achieve their desired family size through family planning (FP) leads to benefits at the individual, household, and societal levels. Good public policies can be adopted to help satisfy unmet need for family planning, slow rapid population growth, and, ultimately, reduce pressure on social services, the economy, and natural resources. With the emergence of other health and development priorities, however, family planning and reproductive health (FP/RH) programs have experienced waning support. Across sub-Saharan Africa, concerted advocacy is needed to place family planning high on the policy agenda.

Since 2006, the USAID | Health Policy Initiative, Task Order 1, has partnered with in-country stakeholders to strengthen commitment for FP programs in Tanzania. A major component of this effort is evidence-based advocacy using the RAPID Model (see Box 1). RAPID is a computer model that analyzes country-specific data to explore the effects of high fertility and rapid population growth on education, the economy, healthcare, urbanization and housing, agriculture, food security, and natural resources. Analyses based on RAPID demonstrate the magnitude and urgency of the issues, show the benefits of supporting FP programs, and stimulate policy dialogue on the way forward.

Tanzania has one of the fastest-growing populations in the world. In 2005, mainland Tanzania had a
population of about 36 million people. At the current growth rate of about 3 percent, the population will double in 25 years. Tanzanian women have, on average, 5.7 children throughout their lifetime—virtually unchanged over the past 10 years. Tanzania’s contraceptive prevalence rate (CPR) for modern methods is relatively low (20%). Further, about one-fifth (22%) of married women of reproductive age want to space or limit births but are not using any FP method. Tanzania is also among the world’s poorest countries. Continued rapid population growth threatens the country’s ability to achieve national socioeconomic goals and affects the health and welfare of families.

As a first step toward building broad-based support for FP programs in Tanzania, the Health Policy Initiative targeted a range of audiences, including members of Parliament and religious leaders. Specifically, the project sought to

- Use RAPID to increase awareness of the impact of rapid population growth on the achievement of Tanzania’s health and socioeconomic development goals;
- Mobilize key opinion leaders to support family planning in their communities; and
- Build capacity of national and district health, budget, and planning officers to use RAPID to analyze the effect of population factors and policy options in their own sector or district.

Based on the project’s experiences in Tanzania, this brief offers guidance on using the RAPID Model as an evidence-based advocacy tool to help make the case for renewed attention to family planning.

**Applying the RAPID Model**

Successful advocacy efforts to reposition family planning must be country driven. The process of applying RAPID fosters country-driven approaches by involving in-country stakeholders, using country- or region-specific data, linking family planning to national or subnational goals, and building capacity to use RAPID for FP analysis and advocacy. The steps in applying RAPID in Tanzania illuminate this process.

1. **Identify in-country partners and target audiences.** Involvement of in-country partners is essential. These partners can help identify needs and priorities, as well as serve as policy champions who foster buy-in and sustain long-term commitment to FP programs. Beginning in mid-2006, the Health Policy Initiative partnered with Tanzania’s Population Planning Unit (PPU). Formerly part of the Ministry of Planning, Economy, and Empowerment (MPEE), the PPU now sits under the Planning Commission of the President’s Office. The unit provides strategic leadership on population and development issues, including formulation of the National Population Policy (2006) and its implementation strategy (2007). The unit is a natural ally to champion FP policies, programs, and resources. With the PPU, the project identified key target audiences (including ministry technical staff and religious leaders) and began to explore ideas for disseminating the findings of the RAPID analysis. Knowing the target audiences helps to focus the RAPID analysis on priority issues for key stakeholders.

2. **Understand the country context.** It is important to have a solid understanding of the country’s context and

---

**Box 1. What is the RAPID Model?**

RAPID is one of the computer models contained in the Spectrum Suite of Policy Models. It examines the effects of population factors on education, the economy, health, urbanization and housing, agriculture, food security, and natural resources. The model combines socioeconomic indicators—such as labor force participation, primary school enrollment, and number of nurses per capita—with demographic information and population projections to estimate impacts as much as 30 years into the future. Different scenarios are projected so that policymakers can compare the consequences if the country/region continues to have high fertility vs. the benefits of reducing fertility, in part, through FP programs. As RAPID is easily tailored to the country or region, users can analyze specific indicators of interest, such as migration, fuel wood consumption, and water use.

RAPID projections are useful at various stages in the policy process, including problem identification, agenda setting, policy dialogue, and monitoring of activities over time. Use of the model enables analysis of country-specific variables, in-country ownership of findings, constituency building, and information sharing across audiences (e.g., senior decisionmakers, budget planners, religious leaders), sectors (e.g., environment, health, education, economy), and levels (e.g., national, decentralized).

To download the RAPID Model and user manual, please visit: www.healthpolicyinitiative.com/index.cfm?id=software&get=Spectrum
its aspirations in order to design relevant advocacy messages. This stage could involve a review of existing policy documents, assessment of progress indicators in various sectors, and interviews with key stakeholders to identify priority issues and challenges. Tanzania’s development agenda is set out in the Development Vision 2025, National Strategy for Growth and Reduction of Poverty, and in other commitments, such as the Millennium Development Goals (MDGs). Some objectives include universal primary education, food self-sufficiency, quality primary healthcare for all, reduced maternal and infant mortality, absence of abject poverty, and gender equality. Tanzania also aspires to become a middle-income country, with a diversified economy and high annual economic growth rate.

Yet, even with high economic growth, Tanzania will struggle to meet the demands of its ever-growing population. As discussed earlier, Tanzania has a high total fertility rate (TFR), high level of unmet need for family planning, and low modern CPR (see Box 2). The RAPID Model illustrates the effects of continued rapid population growth on the demand for food, jobs, housing, energy, healthcare services, and education. Thus, RAPID can be used to show that family planning is a strong complement to—rather than a trade-off with—other health, development, and poverty-reduction efforts.

3. Compile and input data. The purpose of RAPID is to analyze and package information for advocacy and policymaking. For this reason, the model strives to use data that are already available. While manipulating the model requires some demographic or epidemiological experience, the results can be used by a broad range of stakeholders to engage in evidence-based advocacy. The Health Policy Initiative and PPU collected demographic and socioeconomic data for Tanzania and applied the model. Major sources of data included the Tanzania Demographic and Health Surveys (TDHS), Population and Housing Census, Poverty and Human Development Reports, Economic Surveys, and statistics gathered by various ministries and programs.

4. Build the model and analyze scenarios. RAPID projects different scenarios for the selected country or region, based on continued high fertility and declining fertility. Setting up the projections involves making decisions and assumptions that should be informed by the country’s goals and priorities. For example, stakeholders involved in building the model might be interested to show the resources required simply to maintain the current level of services into the future (e.g., how many primary schools will be needed to maintain the current enrollment rate in 2025?). Or, they may wish to project what would be required to improve service coverage (e.g., how many schools will be needed to achieve universal primary education in 2025?). Answers to these types of questions determine how the analysis proceeds.

The model was used to project two scenarios for Tanzania’s mainland population growth up to 2035. Under the high fertility scenario, Tanzania’s TFR declines slightly from 5.7 in 2005 to 5.0 in 2035. Under the declining fertility scenario, the TFR declines gradually from 5.7 in 2005 to just over two children per woman (2.2) in 2035, or what demographers call replacement-level fertility. The RAPID analysis considered various issues, such as the impact of high and declining fertility on the number of teachers and nurses required, growth of the urban population, fuel wood consumption, housing and food crop production needs, gross domestic product (GDP) per capita, and other indicators (see Box 3).

5. Gain consensus on key findings. Target audiences and stakeholders are more likely to accept and act on evidence-based analyses when there is broad consensus on the data and methods used. In the course of finalizing the RAPID analysis and dissemination plan, the Health Policy Initiative sought input from various partners, including the PPU, MPPE, the Ministry of Health and Social Welfare (MOHSW), University of Dar es Salaam, Tanzania Network Gender Program, and other government departments and civil society groups. Involvement of these institutions increased ownership for the activity and will help to promote data use in the future.

Box 2. Tanzania At-a-Glance

- Tanzania is ranked 151 out of 182 countries on the Human Development Index.
- Tanzania continues to have high fertility (a TFR of 5.8 children per woman in 1996 and 5.7 in 2004–05).
- Modern CPR is relatively low (20%) and unmet need for family planning is high (22%).
- Tanzania’s population continues to grow rapidly, despite HIV and AIDS.
- Tanzania has a maternal mortality ratio of 578 deaths per 100,000 live births.
- Tanzania has a large young population (44% under age 15).
- Teenage pregnancy is high—more than half (52%) of 19 year-olds are already mothers or pregnant with their first child.
6. Prepare the briefing materials. One of the benefits of RAPID is that it can present complex information in a manner that is user-friendly and clearly demonstrates the magnitude and urgency of the issues. Based on the RAPID analysis in Tanzania, the Health Policy Initiative and PPU prepared a briefing booklet and PowerPoint presentation of key findings. The booklet—Tanzania: Population, Reproductive Health, and Development—and presentation contain sections on the country’s socioeconomic goals, demographics and population trends, and priority sectors. Through charts and graphs, target audiences can see the difference in resources needed under scenarios of high fertility and declining fertility. The materials conclude by presenting illustrative recommendations to encourage dialogue on the policy response. Specific policy reforms are then explored and refined during the RAPID training workshops and discussions following presentations to key target audiences.

To ensure widespread access to the information, the Health Policy Initiative facilitated printing and dissemination of the RAPID booklet in English (2,000 copies) and Kiswahili (4,800 copies). PowerPoint presentations and training materials on using RAPID are also available in both languages.

7. Finalize dissemination plan and build in-country capacity to use RAPID. The RAPID dissemination strategy for Tanzania, whose development was led by the PPU after gaining consensus on key findings, outlined national and district-level activities to share findings of the RAPID analysis and build capacity to use the model. Strengthening and institutionalizing the capacity of FP champions to use policy and advocacy tools is essential for fostering long-term commitment to family planning. As part of the dissemination plan in Tanzania, the Health Policy Initiative trained 12 master trainers on applying and using the RAPID Model. The training of master trainers reviewed the demographic and health situation as well as the RAPID analysis findings in Tanzania, provided guidance on how to use the RAPID Model and train others in its use, and strengthened presentation skills. These master trainers then went on to train primary trainers who, in turn, trained community health workers and other key stakeholders.


The RAPID analysis reinforces a range of advocacy messages by using evidence to demonstrate the benefits of slowing population growth, in part, through family planning. Tanzania’s full RAPID analysis is presented in the 2006 briefing booklet, Tanzania: Population, Reproductive Health, and Development.

Tanzania’s population continues to grow. With high fertility, Tanzania’s mainland population is projected to more than double, reaching 86.6 million by 2035 (see Figure 1). Declining fertility, on the other hand, could lower the country’s population size by more than 20 million people over the 30-year period.

High fertility makes it more difficult to achieve development goals. Population size and age structure influence Tanzania’s ability to meet the health, education, housing, nutrition, and other basic needs of its citizens today and into the future. For example, with high fertility, primary school enrollment (at current rates) will more than double, from 7.5 million students in 2005 to 16 million in 2035. In contrast, with declining fertility, the student population will increase gradually, to only 10.1 million by 2035. Rapid growth of the student population will necessitate building new schools and recruiting and retaining additional teachers. Already lacking resources to meet the needs of its students, Tanzania will face an even bigger challenge in achieving universal primary education in the future if high fertility persists.

Lower fertility improves economic indicators and saves money. Tanzania’s economy grew by 6.8 percent in 2005 and 7.1 percent in 2007. The country’s goal is to achieve an 8 percent annual growth rate by 2010 and, eventually, become a middle-income country. The RAPID projections assumed that the economic growth rate does reach 8 percent by 2010 and stays at this level throughout the projection period. Under high fertility, GDP per capita would increase to US$841 in 2025 and US$1,354 in 2035—falling within the comparable gross national income (GNI) range the World Bank uses to classify lower middle-income countries (e.g., US$826–$3,255). With declining fertility, the GDP per capita still falls within the lower middle-income range, but increases more rapidly, to US$947 in 2025 and US$1,775 in 2035.

RAPID also considered the resources saved in the education and health sectors. With declining fertility, Tanzania could save a cumulative total of US$2.1 billion in the education sector and US$2.2 billion in the health sector from 2005–2035—
because there would be fewer people in need of services. These savings could be used to invest in rural schools and health facilities, as well as to enhance teacher and healthcare provider training.

**Lower fertility reduces the severity of human resource shortages.** Tanzania is struggling to fill its health posts. In 2005, the Ministry of Health and Social Welfare reported that only about one-third of medical officer positions and about one-quarter of assistant medical officer and public health nurse positions were actually occupied. In 2002, the country had only one nurse per 1,520 people. To maintain even this inadequate staffing level, Tanzania would need to more than double the nursing force by 2035 if high fertility continues. Declining fertility would reduce the severity of the nursing shortage.

In the education sector, under high fertility, the number of teachers required would also increase substantially—from 135,000 in 2005 to 356,000 in 2035. With declining fertility, only 225,000 primary school teachers would be required by 2035—cutting the number of new teachers needed by more than half.

**Lower fertility protects the environment.** Rapid population growth adds to the demand for food, housing, clean water, and energy. In some places, Tanzania is already experiencing deforestation, desertification, and soil erosion. With high fertility, food crop production will need to increase substantially (from 13 to 32 million tons) by 2035. With declining fertility, only 25 million tons of food crop production would be required by 2035.

High fertility will also dramatically increase the size of the urban population (from 8 to 39 million), doubling the need for urban housing units from 3.5 million in 2005 to 7 million by 2035. Declining fertility, in contrast, would reduce the urban population by 9 million people and the number of housing units required by 2 million units.

**FP saves lives.** Family planning prevents unintended pregnancies and enables healthy timing and spacing of pregnancies, which gives women time to recover between pregnancies and promotes infant survival. Healthier women and smaller families lead to healthier children and more household resources available for each family member, helping to create a path out of poverty. In Tanzania, the maternal mortality ratio (578 maternal deaths per 100,000 live births) has remained virtually unchanged over the past decade. Further, the 2004–05 TDHS finds that the infant mortality rate is highest when births are spaced less than two years apart (143 infant deaths per 1,000 live births). Infant survival improves dramatically when births are spaced 2–3 years apart (72 infant deaths per 1,000 live births) or 3–4 years apart (55 infant deaths per 1,000 live births).

The Health Policy Initiative’s additional analysis on achieving the MDGs found that satisfying unmet FP need in Tanzania would save the lives of about 5,200 women and avert the deaths of nearly 300,000 children from 2005–2015, the target date of the MDGs.9

**For More Information:**

Tanzania RAPID booklet (English)  
www.healthpolicyinitiative.com/Publications/Documents/348_1_Tanzania_RAPID_English_acc.pdf

Tanzania RAPID booklet (Swahili)  
www.healthpolicyinitiative.com/Publications/Documents/785_1_Tanzania_RAPID_Kiswahili_acc.pdf

Tanzania RAPID Presentation (English)  
www.healthpolicyinitiative.com/Publications/Documents/786_1_Tanzania_RAPID_English_Omega_acc.pdf

---

8. **Organize policy dialogue forums and disseminate findings to target audiences.** RAPID can be used with diverse audiences (e.g., senior decisionmakers, budget planners, religious leaders); for various sectors (e.g., environment, health, education, economy); and at different levels (e.g., national, decentralized). This flexibility allows advocates and planners to tailor the analysis and advocacy to the priorities and concerns of different groups. Depending on the audience, additional analyses and advocacy messages can be shared, such as models that estimate FP resources, commodities, and services required to achieve specified goals.

As discussed in the next section, the Health Policy Initiative and partners—including the PPU and master trainers—targeted members of Parliament, senior technical ministry staff, district health and planning officers, religious leaders, and the media. Dissemination focused on presenting the RAPID analysis findings to raise awareness and strengthen commitment, helping participants use the model in their own settings (where relevant), and stimulating policy dialogue in support of FP programs.

**Organizing Policy Dialogue and Advocacy**

Advocates and policymakers interested in repositioning family planning must identify and target the decisionmakers and opinion leaders who can effect policy change, marshal resources, coordinate responses, and influence attitudes toward family planning. In Tanzania, beginning in late 2007, the Health Policy Initiative supported RAPID workshops for four key audiences.
National policymakers. National policymakers, such as ministry personnel and members of Parliament, set the country’s policies, priorities, goals, and plans, including making decisions regarding the use of central resources. They must be mobilized to provide high-level leadership on FP issues, encourage multisectoral engagement in FP efforts, and help sensitize the public to encourage healthy timing and spacing of pregnancies and adopting a small family norm.

In March 2008, the Health Policy Initiative supported the PPU, which extended the invitations, and the master trainers to conduct a workshop for 24 senior policy and planning officers from 15 central and sectoral ministries. The workshop offered an overview of the country’s national development and poverty reduction priorities as outlined in the Development Vision 2025, National Strategy for Growth and Reduction of Poverty, and National Population Policy; presented the RAPID analysis; and explored recommended policy options. The senior officers noted that advocacy messages are needed for higher-level officials to gain political support for improving reproductive health services.

In collaboration with the PPU and the Tanzania Parliamentary Association for Population and Development, the Health Policy Initiative also presented the RAPID findings to 108 members of Parliament. As a result, some members of Parliament have recommended expanding FP services to ensure access and use; supported the integration of population issues into development planning and poverty-reduction strategies; and used RAPID findings to make the case for support of family planning during parliamentary sessions.

District officials. Tanzania is undergoing a process of decentralization in which district officials are gaining greater responsibility for determining local budget allocations and program implementation strategies. Thus, a primary focus of the RAPID dissemination efforts has been to strengthen the capacity of district officials to analyze local data and integrate population factors into development plans and budgets. In 2008–09, the Health Policy Initiative provided logistic and financial support to the PPU to organize RAPID workshops in six high-priority regions, reaching 116 officials from 34 districts across Dar es Salaam, Dodoma, Morogoro, Lindi, Mtwara, and Coast (Pwani). The workshops were conducted by the in-country master trainers and convened under an invitation from the President’s Office, reflecting high-level commitment to the activity.

Participants included district health officers, planning/budget officers, and statisticians. During the first two days of the five-day workshops, participants learned about the country’s socioeconomic and poverty reduction priorities, the National Population Policy, the current demographic situation, and the impact of high fertility and rapid population growth on different sectors. The final three days were spent learning to use RAPID to analyze district-level data, make projections, and assess different policy and program options. During the workshops, participants shared their experiences related to district operations—especially regarding insufficient resources for the provision of social services, limited use of technical analysis for decisionmaking, low awareness among decision makers regarding the need for family planning, and the challenges that technical personnel face in influencing resource allocation decisions. District technical staff acknowledged the need for increased resources for family planning and, to achieve it, they recommended advocacy efforts for high-level officials, including district executive directors, district heads of departments, and councilors who control the district council budgets. Despite these challenges, the participants committed themselves to push for integration of population issues into district planning and improved resource allocation for FP services.

Religious leaders. Religious beliefs have a strong influence on Tanzanians’ life choices, including decisions regarding the use of FP methods, birth spacing, and age at marriage. As a result, family planning and reproductive health can be sensitive topics for both politicians and communities. By speaking
out in support of family planning, religious leaders can encourage FP use among their followers and help alleviate cultural barriers to government support for FP programs. The Health Policy Initiative carried out advocacy using RAPID, which has been instrumental in urging Muslim and Christian leaders in Tanzania to recognize FP services as essential to the improved health of individuals and families in the communities they serve (see Box 4).

**Journalists.** Print and broadcast media can educate both communities and the government on the benefits of family planning, as well as foster public demand for services and help monitor the performance of FP programs. However, for journalists and editors to report on these issues, they must first understand and care about the effect of rapid population growth on the well-being of families and the nation’s development.

In late 2007, the Health Policy Initiative oriented 22 journalists from the Association of Journalists Against AIDS in Tanzania (AJAAT) on population issues and socioeconomic development using the RAPID Model. Ten journalists underwent a second training to enable them to use RAPID and present the analysis in their respective media houses. As a result, the trained journalists prepared 17 articles on population and FP issues. The journalists also made RAPID presentations to press clubs and media houses, and integrated reproductive health topics into existing TV talk shows.

**Lessons Learned and Next Steps**

Ultimately, Tanzania aspires to become a strong, middle-income country, but this will be difficult if the country does not achieve fertility decline and slow the growth of its population. To date, the RAPID dissemination activities have raised awareness among national officials of the link between family planning and achievement of socioeconomic development goals. RAPID has also helped to mobilize religious leaders in support of family planning and catalyze initial media interest in population and FP issues. Moreover, RAPID serves as a tool to help national- and district-level technical staff promote evidence-based advocacy, policy dialogue, and decisionmaking.

These activities have helped to lay the groundwork for broader support for family planning in Tanzania. Recommended next steps include the following:

1. **Support trained FP champions through additional advocacy training and improved data collection.** The participants in the RAPID trainings reported that the model shows a clear link between population growth and development goals; calculates realistic projections based on available data; demonstrates the magnitude of current and future issues; and helps identify gaps for improved planning of development responses. However, the participants also expressed the need for additional training and follow-up support on RAPID, data analysis, and advocacy skills, as well as mechanisms to ensure data collection and quality. Further, additional resources are needed to monitor the long-term impact of advocacy efforts by those trained to use the RAPID Model.

2. **Build on the momentum within the audiences reached to date and expand advocacy to reach new constituencies.** Participants in the RAPID activities

---

**Box 4. Muslim and Christian Leaders Voice Support for Family Planning**

In 2008, the Health Policy Initiative and National Muslim Council of Tanzania (BAKWATA) organized RAPID workshops for 34 members of the Ulamaa (Supreme Clerical Council for Muslim Leaders). Following the presentations, BAKWATA formed a technical team to identify the links among reproductive health, population and development, and Islamic teachings. Based on the team’s recommendations, the Ulamaa issued an official clerical statement (fatwa), on May 14, 2008, that supports expanded use of family planning and birth spacing among Muslim families. The Ulamaa also prepared a DVD message and guidelines for disseminating the declaration to communities. As the fatwa was issued by the highest clerical body, it will contribute to increased awareness and use of FP services among Muslims in Tanzania.

The Health Policy Initiative also organized an advocacy workshop to present the RAPID analysis to the bishops of the Christian Council of Tanzania (CCT), an overarching organization for four denominations (Anglican, Lutheran, Mennonite, and Moravian). As a result, the bishops issued an official statement in support of expanding FP service use, issued on June 27, 2008. The statement was signed by the CCT Secretary General and Chairperson, disseminated through a press release, and covered in the media. In addition, the Health Policy Initiative partnered with CCT to conduct a one-day session on reproductive health, population, and development for 80 women leaders from all dioceses as part of the CCT Women’s Annual General Meeting in July 2008. The session provided an opportunity to disseminate the bishops’ statement on FP support and to gather recommendations regarding men’s role in promoting FP services.
stressed the need to change the mindsets of the senior-most officials in the ministries and district councils who have decisionmaking authority over program priorities and budgets. Key audiences for further advocacy should include directors of policy and planning and permanent secretaries at the ministry level; executive directors and heads of departments at the district level; and additional members of Parliament.

3. **Translate renewed commitment into action.** A necessary next step is to encourage policy reform and increased resource allocation for family planning. As a follow-on activity, the Health Policy Initiative will provide assistance to the MOHSW and other partners to design a costed implementation plan to hasten achievement of the FP goals outlined in the National Road Map/Strategic Action Plan to Accelerate Reduction of Maternal, Newborn, and Child Deaths in Tanzania (2008–2015). With a costed action plan, FP advocates and policymakers will be better able to plan responses and advocate for needed resources, including at the decentralized levels.

Throughout the process, stakeholders already reached by the RAPID dissemination—including the PPU, master trainers, members of Parliament, national- and district-level officials, religious leaders, and journalists—will be vital FP policy champions to help move the debate forward and provide the impetus for increased attention to family planning in Tanzania.

---

**ENDNOTES**


2 According to the Tanzania Demographic and Health Survey (TDHS), Tanzania had a total fertility rate (TFR) of 5.8 children per woman in 1996, which declined slightly to 5.7 in 2004–2005. 2004–05 TDHS.

3 2004–05 TDHS.


7 The World Bank uses GNI per capita to classify economies, whereas the Economic Survey uses GDP per capita. The two are very close in Tanzania and are sometimes used interchangeably. Thus, the World Bank benchmarks serve as a useful reference.

8 The original RAPID application calculated educational savings in Tshs. For consistency in this brief, this number (Tshs. 2.3 trillion) has been converted to US$ using the exchange rate of US$1=Tshs. 1085, an average of exchange rates in 2003–2005.