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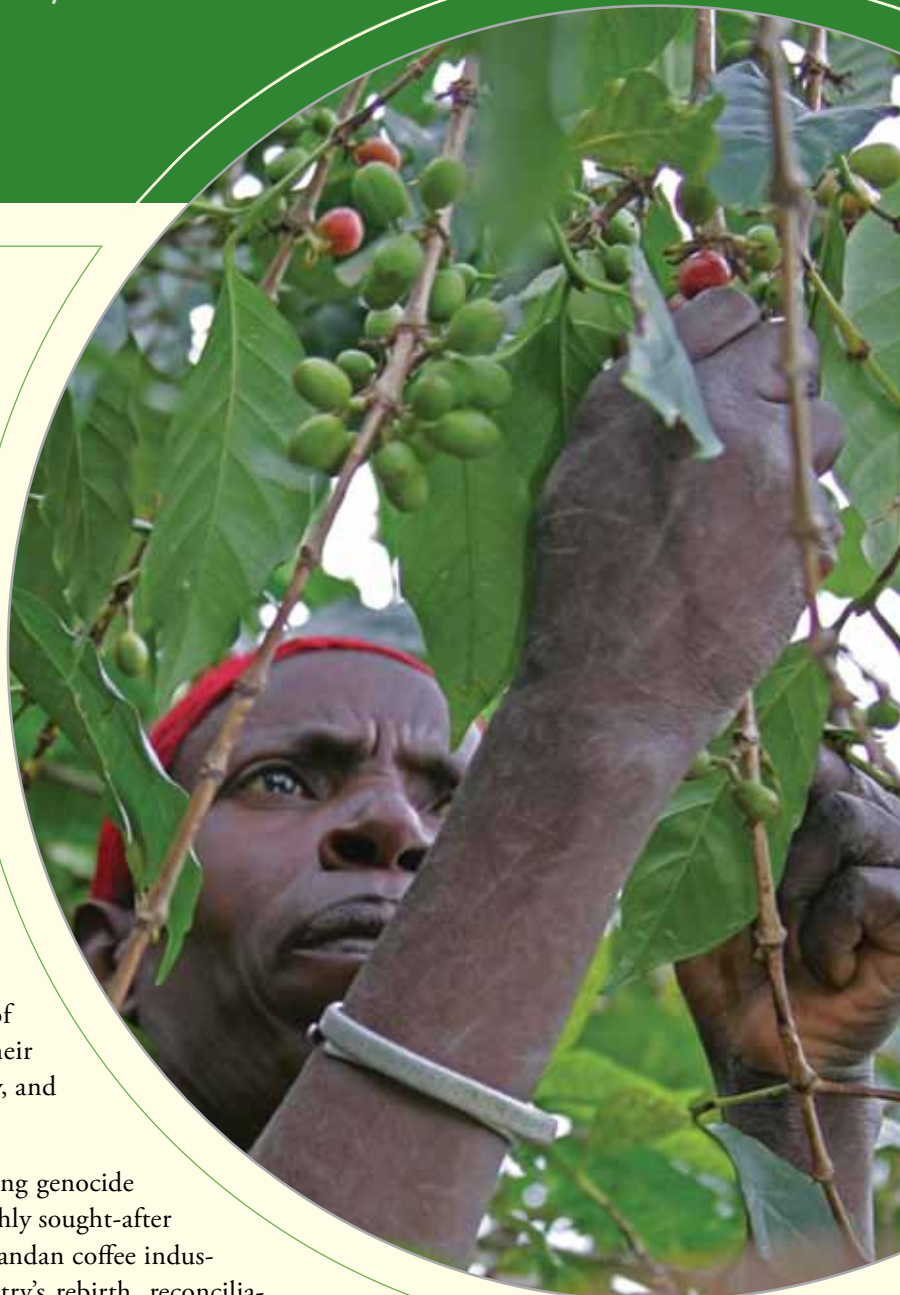
on population, environment,
and security

Coffee and Community: Combining Agribusiness and Health in Rwanda

By Irene Kitzantides

Rwanda, “the land of a thousand hills,” is also the land of 10 million people, making it the most densely populated country in Africa. Due to the country’s rapid population growth, around 90 percent of Rwandans depend on ever-smaller plots of land for their food and livelihoods, leading to poverty, soil infertility, and food insecurity.

But, after an amazing recovery from the devastating genocide that ended in 1994, Rwanda is now a highly sought-after origin for specialty coffee. The Rwandan coffee industry holds the key to the country’s rebirth, reconciliation, and sustainable development—and also the health of its citizens. By combining community health education and agribusiness development, the Sustaining Partnerships to enhance Rural Development (SPREAD) Project seeks to improve both the lives and livelihoods of Rwandan coffee farmers and their families.



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The Legacy of Genocide

Rwanda has experienced a remarkable recovery since the civil war and genocide devastated the country's society, economy, and environment 16 years ago. Close to one million Rwandans were killed, and one-third of the population was displaced. GDP fell by half in a single year, 80 percent of the population plunged into poverty, and large areas of park, forest, and farmland were destroyed. Between 100,000 to 250,000 women were raped during this time, the majority of them infected with HIV (Thaxton, 2009).

The legacy of this tragedy is still apparent: Rwanda lost a significant portion of its trained human resources, suffered damage to its already struggling infrastructure, and must now balance administering justice and preaching forgiveness. Rwanda currently has an estimated 1.26 million orphans and one of the world's largest populations of both child- and female-headed households (Manning et al., 2008).

Despite such immense challenges, Rwanda has made tremendous progress in recent years. The country is now regarded as one of the safest in Africa, and tourists once again flock to visit its native mountain gorillas and other natural areas. Rwanda boasts rela-

tively low levels of corruption, a functioning central state with strong institutions, ambitious government policies, and one of the highest economic growth rates in the region (UNDP, 2007). It also strives to maintain a pro-business environment, leading to significant interest on the part of foreign investors.

Population-Environment Challenges

Rwanda's economic growth and development are hampered, however, by its population-environment challenges. The country is the size of the U.S. state of Maryland, but holds roughly double the population (around 10.6 million) in 2010. With around 403 people per square kilometer, it is the most densely populated country in Africa (UNPD, 2011). Around 71 percent of working adults are classified as subsistence or unpaid farmers, which combined with high fertility rates, leads to extreme pressure on already scarce land (World Bank, 2011).

These population-environment interactions are outpacing economic growth, leaving 90 percent of Rwandans living on less than US\$2 per day. At its current growth rate of 2.9 percent, the population is projected to reach 15.8 million by 2025, which will likely intensify over-cultivation of land and soil infertility, thus decreasing agricultural production (UNPD, 2011).

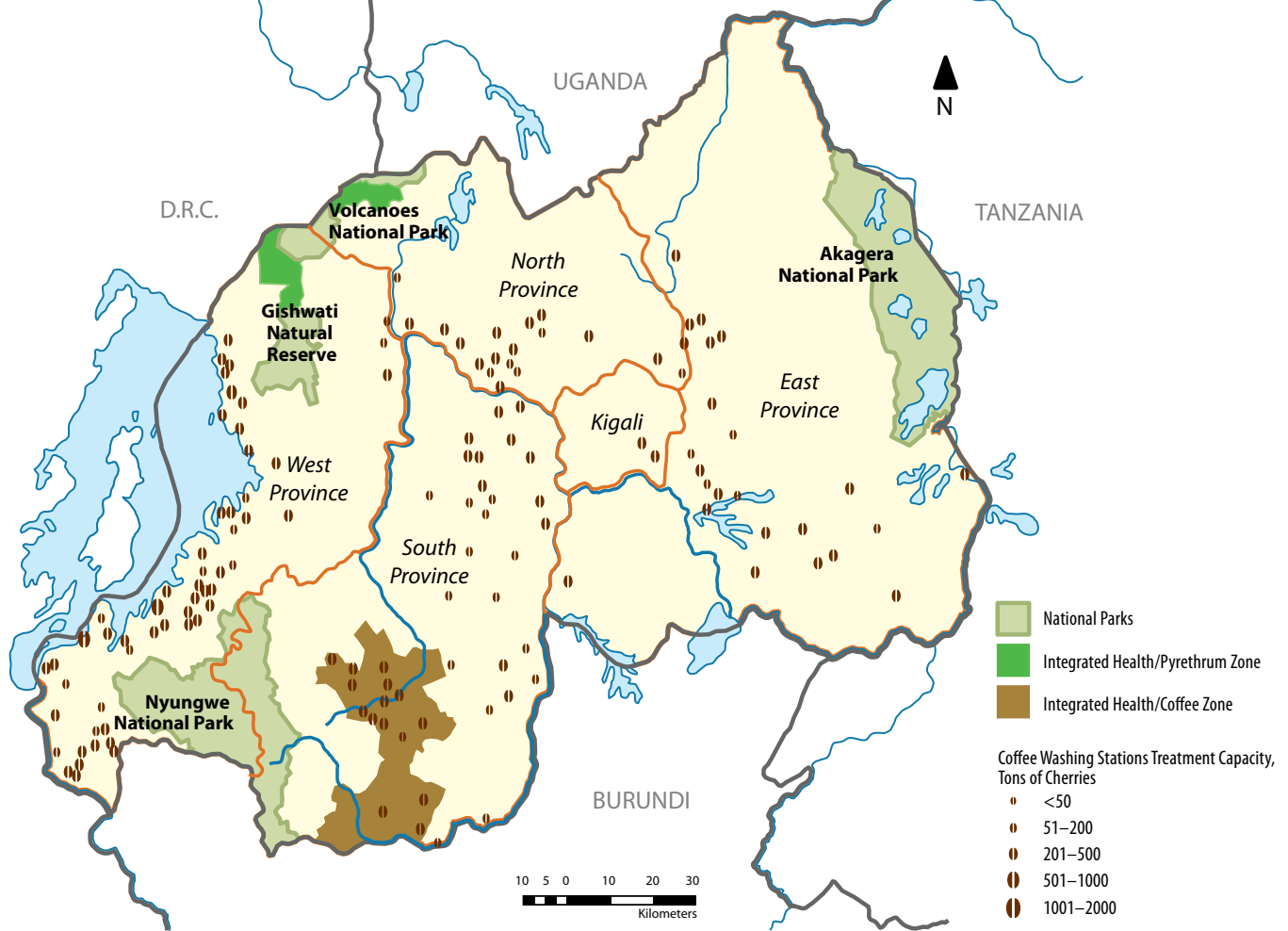
Food insecurity remains a real concern: The average plot size for farming is around 0.8 hectares, and more than a quarter of cultivating households farm less than 0.2 hectares; the Food and Agricultural Organization estimates that at least 0.9 hectares are required to satisfy the nutritional needs of a household.

“Family planning is very important, because it has allowed us to put some of our money into savings.”

—Female community member
(Source: Kitzantides, 2010)

Youth peer educators learn how to demonstrate condom use (Photo courtesy The Norman Borlaug Institute)





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Author Irene Kitzantides discusses “Coffee and Contraception: Combining Agribusiness and Community Health Projects in Rwanda” at the Wilson Center in May 2010: http://www.wilsoncenter.org/index.cfm?topic_id=1413&fuseaction=topics.event_summary&event_id=608523

Map of SPREAD activities in Rwanda

A short video interview with Irene Kitzantides features photos from the SPREAD Project: http://www.youtube.com/watch?v=P9rx_eKGJ_w

The SPREAD Project’s “Farmer Portal” includes video interviews with Rwandan coffee farmers: <http://www.spreadproject.org/portal/index.html>

On “Coffee Lifeline,” listen to episodes from the *Imbere Heza* radio program: <http://www.coffeelifeline.org/index.html>

“Integrating Population, Health, and Environment in Rwanda” from the Population Reference Bureau outlines the country’s integrated challenges and opportunities: <http://prb.org/pdf09/phe-rwanda.pdf>

Find out more about USAID’s investments in health and economic growth in Rwanda: <http://www.usaid.gov/rw/>

The Global Coffee Quality Research Initiative builds on the experiences of the SPREAD Project to continue research and development on increasing the quantity and quality of specialty coffee worldwide: <http://gcqri.org/>

RWANDA'S COFFEE INDUSTRY

Since 2000, the United States Agency for International Development (USAID) has committed \$12 million to develop Rwanda's specialty coffee industry.

With this support, the industry has grown from zero exports and zero dollars in 2000 to 3,045 metric tons and \$11.6 million in export revenue in 2009—making it one of the country's largest export earners.

Today, the U.S. and international demand for Rwanda's world-renowned specialty coffee exceeds supply. Rwandan coffee has been featured as a "Black Apron Exclusive" by Starbucks and praised as the "best of the best" by Green Mountain Coffee. In 2008 and 2010, Rwanda hosted "The Cup of Excellence"—the first African country to host this world-renowned coffee competition.

<http://www.usaid.gov/rw/>

http://www.spreadproject.org/speciality_coffee.php

<http://www.cupofexcellence.org/>

Reproductive Health Successes

Despite the tremendous obstacles of small land area, high population growth, and the legacy of civil war and genocide, Rwanda has made remarkable progress in improving its health indicators, particularly those related to reproductive health. Like many African nations, Rwandans face several barriers to family planning, including a traditional pro-birth culture, religious opposition to contraception, and a lack of information and services available in the rural areas where the majority of the population lives.

However, thanks to strong government leadership and support from development partners, increased access to a variety of contraceptive methods, and improved health care work force training, modern contraceptive prevalence rates made an astounding jump from 10 percent to 27 percent between 2005 and 2007 (INSR & ORC Macro, 2006; MOH, NISR, & ICF Macro, 2009). The total fertility rate (TFR) decreased from 6.1 to 5.5 in the same time period, while the infant mortality rate decreased 28 percent and under-5 mortality rate by 32 percent.

HIV/AIDS rates, though low relative to the region, are at 3 percent nationally, rising to 7 percent in urban areas (INSR & ORC Macro, 2006). Condom use remains low due to cultural taboos and lack of access, especially in rural areas, and myths run rampant about side effects of family planning. Diarrheal disease, malaria, maternal and child health, and poor access to basic health services and information in rural areas are still serious concerns.

The Rwandan government understands the threats posed by these population, health, and environment challenges to Rwanda's newfound security and development. The country's Vision 2020 plan delineates the government's commitment to halving the poverty rate and increasing the per capita GDP from less than US\$300 to US\$900 (UNDP, 2007).

In support of this vision, USAID has dedicated more than \$12 million since 2000 to developing the enormous potential of the specialty coffee sector in Rwanda (USAID, 2010). More than 50,000 Rwandan coffee farmers have benefited from the growth and improvements in the specialty coffee sector, increasing their incomes and improving their lives.

Rwandan Coffee: Growing a Specialty Market

Rwanda's climate and altitude provides almost perfect growing conditions for Arabica coffee, a finer variety that fetches a higher price than others. Since 1917, Rwanda has exported coffee, which has been a major source of income for its rural population. However, poor agricultural and processing practices limited its quality.

But by 2005, this small African nation was generating sales of more than \$3.6 million in the specialty coffee market (Chemonics, 2006). USAID assistance was largely responsible for the industry's early success; the U.S. development agency invested in initial feasibility studies by industry experts and provided technical and financial assistance to construct more than 45 coffee washing stations and improve agricultural practices, coffee processing, business development, and management.

Since Rwandan coffee farmers own such small parcels of land, which are shared with other food crops, the average farmer grows only 150-300 trees, as compared with an average 12,000 trees per small-holder farm in Central America (Chemonics, 2006). USAID development assistance thus focused on forming and strengthening cooperatives, so that farmers could together garner a higher price for their coffee. Quality control and marketing were strengthened by training world-class coffee "cuppers" (tasters) and establishing relationships between Rwandan producers and specialty importers and roasters.

The SPREAD Story: A Holistic Approach to Development

Since 2006, the SPREAD ("Sustaining Partnerships to enhance Rural Enterprise and Agribusiness Development") Project, a cooperative agreement between USAID and Texas A & M University, has focused primarily on furthering the development of Rwanda's specialty coffee sector. In addition, SPREAD has expanded its efforts to include some technical assistance for other high-value agricultural commodities, such as pyrethrum (used to produce a natural insecticide) and birds-eye chili pepper.



Coffee farmer,
Southern Province
(Photo courtesy
Nick Fraser,
www.nickfraser.org)

But Rwanda's farming families need more than simply increased incomes to improve their lives: they also need better health care and services, as well as education about preventive health practices and issues like alcohol abuse that can affect household health. USAID recognized that the coffee sector provides an ideal opportunity to reach a sizable segment of the population that may otherwise be overlooked. SPREAD pools funding for economic growth, HIV/AIDS prevention, and family planning and maternal and child health promotion, as well as support from the U.S. and UK specialty coffee industries, to combine its agribusiness efforts with an innovative community health component.

This unique example of integrated programming is inspired by the population, health and environment (PHE) approach to development, which aims to solve development problems in a holistic fashion and build synergies across sectors that are traditionally siloed. In the past, PHE projects have focused on integrating environmental conservation or natu-



Female coffee farmers listen to an education session by cooperative health agents (Photo courtesy Nick Fraser, www.nickfraser.org)

ral resource management programs with community health efforts; the SPREAD project is one of a few that are emphasizing agricultural and economic development, which some argue would be a productive avenue for expanding the approach (see, e.g., Clarke, 2010).

SPREAD's Evolution

Integrating community health into the existing SPREAD program was designed to take advantage of a number of potential co-benefits and synergies:

- First, as revenues from coffee increase, farmers could spend more money on family health services, education, hygiene, and nutritional needs.
- Second, SPREAD's existing community engagement structure (the coffee cooperatives) provided a ready mechanism for rapidly disseminating health information and services at the community level.

- Third, meeting the farmers' health needs not only helps achieve the overall goal of improving farmers' lives and livelihoods, but could also increase buy-in from the cooperative members, thus improving cooperative development and coffee quality (D'Agnes, 2007).

Rather than re-invent the wheel, SPREAD built on existing resources, such as training, program strategies, educational materials, and human resources from the Ministry of Health (MINISANTE), Population Services International (PSI), the International Planned Parenthood Federation in Rwanda (ARBEF), and community health services.

Starting in January 2008, SPREAD:

- Trained and mentored existing coffee extension agents (*animateurs de café*) to become health educators, who reached farmers primarily through small-group education sessions and referrals to local health services;
- Created a new system of both Youth and Adult Peer Educators;
- Facilitated the sales of PSI's "Prudence" condoms and "Sur Eau" drinking water purification solution via cooperative offices, coffee-washing stations during harvest season, and community-based distribution by coffee extension agents and Peer Educators;

"The big lesson I learned is that you cannot achieve your coffee production objectives at 100 percent without addressing the health of the farmers."

—Cooperative leader

(Source: Kitzantides, 2010)

- Coordinated with local health centers to conduct mobile voluntary counseling and testing for HIV, family planning clinics, and intestinal parasite treatment at convenient locations during harvest season;
- Integrated health messages into the weekly coffee talk-show produced by the National University of Rwanda's (NUR) Radio Salus, *Imbere Heza*, supported by Coffee Lifeline;
- Facilitated the creation of community theater groups and competitions, for both youth and adults, that conveyed messages about improving community health and agribusiness development; and,
- Established demonstration gardens and held training sessions on improving household nutrition with kitchen gardens.

Smaller-scale activities include supplying safe drinking water and portable hand-washing equipment to promote hygiene at coffee-washing stations and offices; and helping two of the target cooperatives fulfill fair trade requirements through provision of First Aid training and supplies. SPREAD also leveraged the strengths of its local partners, working

“Combining health with cooperative activities is a good idea, because SPREAD is looking at saving the entire person and his/her family.”

—Community health worker
(Source: Kitzantides, 2010)

with Africare's mobile cinema equipment to show HIV prevention films and with UK-based Health Unlimited to facilitate community theater troupes.

SPREAD's Success

The health program provided its integrated services to three coffee cooperatives and one privately owned enterprise in the southern districts of Rwanda, totaling around 11,000 coffee farmers, plus their families and neighbors as no one is turned away. As of May 2010, SPREAD had achieved impressive results:

About the Author

Irene Kitzantides was a Population, Health and Environment Advisor with the USAID Global Health Fellowship Program, based at the SPREAD Project in Butare, Rwanda from 2008 to 2010. Previously, she served as a natural resource management/environmental education volunteer with the Peace Corps in the Casamance region of Senegal, West Africa. She holds a Master's in Public Health from the University of Washington in community-oriented public health practice, and a bachelor's degree in anthropology from the University of Virginia.

- Trained more than 540 animateurs de café and Peer Educators (men, women and youth) to hold weekly education sessions with their peers, reaching more than 95,000 farmers;
- Tested 7,544 farmers for HIV at or near coffee sales/washing stations during harvest season;
- Sold 248 bottles of “Sur Eau,” purifying 248,000 liters of drinking water;
- Sold 1,428 condoms via cooperative structures;
- Reached 347 new female family planning users; and,
- Referred more than 1,000 people for voluntary counseling and testing, 546 for family planning, and 734 for antenatal care (Kitzantides, 2010).

Interviews and focus groups conducted with farmer beneficiaries, cooperative health agents, and partner cooperatives demonstrate that they recognized the added value of the integrated health program (Kitzantides, 2010). The Peer Educators are

“The quality of life of people has improved thanks to this program, because if farmers are healthy, they are able to do their coffee activities no problem which increases their income.”

—District official

(Source: Kitzantides, 2010)

increasingly integrated into coffee activities, helping to mobilize farmers for improved agricultural and business practices. Non-health staff within SPREAD, as well as single-sector NGO partner organizations and local health officials, recognized the importance of helping farmers meet both income and health-related needs and indicated an interest in integrating health and agribusiness in their own activities.

SPREAD’s health program has also launched an integrated sub-program, combining pyrethrum agribusiness and health services, in the Northern and Western provinces around Volcanoes National Park. This sub-program is building the capacity of local health centers to provide more youth-friendly reproductive health services, as well as water and sanitation interventions, in response to local conditions.

Polygamy is practiced in the zone around the Volcanoes National Park with the highest population density, where a great number of youth have no land to farm and few alternative livelihoods. Thus, they are at high risk for sexually transmitted infections and unwanted pregnancies. Access to water is also extremely difficult due to the volcanic rock, so communities often resort to unhygienic practices, such as digging troughs lined with plastic sheeting to catch rainwater for drinking, or suffer months with very limited access.

A cooperative health agent demonstrates use of portable hand-washing equipment at Maraba Cooperative’s coffee washing station (Photo courtesy Nick Fraser, www.nickfraser.org)



Challenges and Constraints

Integrating a sound community health program into an already established agribusiness project is not without challenges. The overall project was structurally separated into three programs: coffee quality, cooperative development, research, and community health. Limited resources and high demands across all three programs meant collaboration fell on the shoulders of already overstretched staff, and this effort was made even more difficult when program staff were located at three different sites throughout the country with limited telecommunication networks.

Each of the funding streams had its own set of required indicators for reporting to donors and, at times, separate systems and points of contact, which produced a high volume of reporting requirements. Monitoring and evaluation of integrated benchmarks received less attention than it should have, again due to the twin constraints of little time, small staff, and few resources.

Recommendations and Lessons Learned

My experience with integrating health services into the SPREAD program leads me to offer the following recommendations:

- Farming families need more than simply increased incomes to improve their lives and livelihoods; although more formal study is required, project data and qualitative input from stakeholders suggest it is feasible, cost-effective, and worthwhile for agribusinesses to combine health outreach with cooperative extension activities.
- Although coffee farming cooperatives may not be deemed “high risk” for HIV or other diseases, the members still have high unmet need for basic health information and services, and perhaps a greater likelihood of improving their lives and livelihoods.
- Funders could raise the bar of integrated approaches by investing in evaluation, recognizing and replicating best practices, and building the capacity of implementing partners. Funders

“Men are now sensitive to the problems of overpopulation and come together with their wives to plan births together.”

—Cooperative health agent
(Source: Kitzantides, 2010)

should be flexible enough to allow implementers to appropriately target interventions to best meet local needs, which should be reflected in appropriate project frameworks and measures.

- Project designers and managers should include time in the design and planning phases to think through and articulate the overall goal, objectives, and strategies, so that integration makes operational and conceptual sense:
- Look beyond funding prescriptions: Spend time getting to know the cross-cutting issues at play in the community, such as youth development, gender, money management, and alcohol—all of which could impact both health and agribusiness development.
- Determine which activities make sense to integrate: What new activities need to happen to ensure optimal synergy, and what can be derived from other partners?
- Consider structuring programs horizontally rather than vertically: For example, a community outreach program could be responsible for both agribusiness and health education objectives, rather than having separate agribusiness and health teams.
- Design integrated program plans, results framework, and monitoring and evaluation plans and indicators; dedicate staff and funds for appropriate monitoring and evaluation; and collect baseline data to allow for true measures of program outcomes and impact.

- Engage with the community partners and local health officials and centers to align with governmental goals, build on one another's strengths, and reduce duplicative service delivery.
- The community-based, peer-to-peer approach is an invaluable way to reach farmers with behavior change communication, and strong support, mentoring, and supervision of community outreach agents and peer educators is essential to maintaining their job satisfaction and ensuring the quality and consistency of their outreach.

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The heavily cultivated hills of Rwanda's Southern Province (Photo courtesy Nick Fraser, www.nickfraser.org)

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One Woodrow Wilson Plaza
1300 Pennsylvania Avenue, NW
Washington, DC 20004-3027
Tel: 202-691-4000, Fax: 202-691-4001
ecsp@wilsoncenter.org
www.wilsoncenter.org/ecsp
www.newsecuritybeat.org

Editor

Meaghan Parker

Design and Production

Lianne Hepler

Cover Photograph

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Staff

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