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REBUILDING A COMMUNITY TOGETHER:  
A CASE STUDY ON SOCIAL CAPITAL AND INTEGRATED RURAL DEVELOPMENT IN  
KIREHE DISTRICT, RWANDA

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## **Abstract**

A variety of contemporaneous factors contribute to the existence of sustained rural poverty, such as inefficient infrastructure, poor access to markets, difficulty in accessing credit, land tenure issues, gender inequality, lack of crop diversity, unsustainable or unproductive farming practices, and limited access to inputs and technology. With this in mind, integrated approaches to rural development have been popular among the donor community since the 1970's, with integrated development projects seeking to simultaneously address interrelated root causes of rural poverty. Projects that take integrated rural development approaches must engage a variety of individual actors, communities, and institutions in a diverse set of activities for a given geographic zone of intervention, which is not an easy task.

Integrated rural development projects face additional difficulties in post conflict areas. Post conflict areas have experienced tremendous shocks that catastrophically disrupt the effective function of existing social networks and institutions. The concept of social capital, defined by Putnam (1995) as the “features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit,” is a useful means of trying to understand the relationship community members have with social networks and institutions in rural post conflict areas, and can be used to guide research and policy decisions.

This research case study used field research and document reviews to examine social capital relationships in two integrated rural development projects in Kirehe District, Rwanda to gain a better understanding of the role social capital relationship plays in planning and executing development work. Models for analysis suggested by Woolcock and Narayan (2000) were used to frame research using four theoretical views of social capital: communitarian, networks, institutional, and synergy. The aim of the research was to apply social capital theory in gaining a holistic understanding of the interaction between social capital relationships and integrated rural development in a post conflict area. Results identified several areas where social capital relationships were having both positive and negative effects on project impact and sustainability, highlighting the relevance of understanding social capital when conducting both development research and policy.

**Keywords:** Rwanda, Post Conflict Development, Integrated Rural Development, Social Capital

## **Forward**

The research presented in this thesis is the culmination of two years of study with both Lund University in Lund, Sweden and with the Rwanda Ministry of Agriculture in Kigali and Kirehe District, Rwanda. During this time as a student and researcher, I have continued to learn, grow, and gain a better understanding of the complexities of our world every single day. For this immense gift of knowledge I have received in Sweden and Rwanda, I thank the supportive faculty of Lund University for an academically rigorous program, the dedicated staff at the Rwanda Ministry of Agriculture for their selfless efforts to rebuild a country and assist those in need, the people of Kirehe District who welcomed me into their community and their lives, and all of the other supportive friends I have made along the way. I prefer not to consider this thesis an end to these last years of learning, but as only the beginning of a shared journey.

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## Acronyms

CCI	Community Center of Innovation
CLGS	Local Watershed Management and Supervision Committee
IDP	Internally Displaced Person
IFAD	International Fund for Agricultural Development
KWAMP	Kirehe Community-Based Watershed Management Project
MinAgri	Rwanda Ministry of Agriculture and Animal Resources
MinaLoc	Ministry of Local Government
NIS	National Institute of Statistics of Rwanda
PAPSTA	Support Project to the Strategic Plan for the Transformation of Agriculture
PCU	Project Coordination Unit
POG	Pass on the Gift
PR	Resource Person
RV	Village Monitor

## **1.0 Introduction: Integrated Rural Development and the Relevance of Social Capital Approaches in Post Conflict Areas**

The root causes of sustained rural poverty in developing nations are numerous and diverse. A variety of contemporaneous factors such as inefficient infrastructure, poor access to markets, difficulty in accessing credit, land tenure issues, gender inequality, lack of crop diversity, unsustainable or unproductive farming practices, and limited access to inputs and technology can all contribute to the existence of rural poverty in a given area (Olayide et al 1980). With this in mind, integrated approaches to rural development have been popular among the donor community since the 1970's, with donors implementing holistic projects that seek to simultaneously address multiple interrelated causes in an effort to alleviate rural poverty (USAID 2005:2). Projects that take integrated rural development approaches must engage a variety of individual actors, communities, and institutions in a diverse set of activities for a given geographic zone of intervention, which is not an easy task (Olayide et al 1980). Reasons why integrated rural development projects fail are often cited as excessive top-down implementation, lack of a shared sense of ownership among community organizations and local institutions, and failure to use and to build capacity in existing social networks in favor of creating new project administration systems that may be more efficient, but are often unsustainable after project funding ends (ibid). Recognizing these common sources of failure, community development concepts such as participatory appraisal and community-based planning have become popular ways for donors to tailor integrated rural development projects to meet the diversity of local needs while also increasing participation and ownership by the whole community (Bryman 2004:7 & Putnam 2000).

Integrated rural development projects face additional difficulties in post conflict areas. Post conflict areas have experienced tremendous shocks that catastrophically disrupt the effective function of existing social networks and institutions. Conflicts often involve fighting between different ethnic or political groups within a society, creating strong divisions in communities that cannot immediately be repaired in post conflict reconciliation processes. Individuals fleeing areas of intense fighting can become internally displaced people or refugees, and may face land title disputes if they decide to return to their old homes after a conflict. Conflict also impacts the delivery of services from government institutions, as fighting can damage infrastructure and interrupt the normal functioning of government systems. If a new government emerges in a post conflict situation, the restoration of effective service delivery

can be further delayed while the new government rebuilds or restructures old institutions. Because integrated approaches to rural development seek to simultaneously engage multiple actors in the community in a variety of interrelated activities, understanding the degree to which a community's social networks and institutions have fallen into dysfunction becomes especially useful when taking community development approaches in post conflict areas. By identifying possible methods for projects to assist post conflict communities in repairing these dysfunctions, it becomes possible to rebuild and transform social networks and institutions to create sustainable positive change.

The concept of social capital, defined by Putnam (1995) as the “features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit,” is a useful means of trying to understand the relationship community members have with social networks and institutions in rural post conflict areas. Research in social capital theory has taken four different perspectives: *communitarian*, *networks*, *institutional*, and *synthesis* (Woolcock and Narayan 2000). The communitarian perspective focuses on how resource poor communities often rely on strong social ties between members of the community to help reduce individual risk and vulnerability (White & Smucker 1998). These types of ties within a homogenous group are referred to as “bonding” social capital. In the networks perspective of social capital, Granovetter and other scholars that followed him pointed out the importance of building social relationships outside of homogenous communities, arguing that building networks with dissimilar groups through “bridging” social capital gives communities access to additional outside opportunities (1973; Gittel & Vidal 1998). Creating “bridging” capital with outside groups can also reduce the negative impacts of strong intra-community bonding on individuals, such as limited job opportunities within a community, excessive social and financial obligations to support others, and negative stigma towards being more educated or successful than others in the group (Portes and Sensenbrenner 1993). Researchers taking the institutional perspective of social capital have also shown that beneficial social capital within communities and between social networks can still have limited positive impact unless the civic and government institutions that guide social interaction in a society are also functional and effective (Collier and Gunning 1999).

In post conflict areas, social “bonding” ties within communities have often been damaged, social networks created by “bridging” ties between different communities can collapse, and government institutions frequently fall into dysfunction. Within the domain of social capital



theory, the synergy perspective described by Woolcock & Narayan provides a helpful theoretical framework for taking a holistic look at all three of these social capital perspectives (*communitarian, networks, and institutional*) described above (2000). The synergy perspective focuses on understanding how effectively communities and networks are socially linked with state institutions. Even if a state has functional institutions capable of providing public services, if the quality of the partnerships and relationships between citizens and state institutions is poor, the impact of public services will be reduced (ibid). The synergy view can provide focus for research that seeks to identify dysfunctional relationships between social networks and institutions in a given post conflict area. Taking this perspective can also provide insight on what types of development policies would be most appropriate to improve relationships between institutions and the communities they serve, thus improving the effectiveness of service delivery on increasing a community’s social and economic well-being (ibid, 235-239). Table 1 summarizes these four social capital views.

<b>Viewpoint</b>	<b>Actors</b>	<b>Policy Prescriptions</b>
<i>Communitarian</i> – Local associations	Community groups Volunteer organizations	Small is beautiful Recognize social assets of the poor
<i>Networks View</i> – Bonding and bridging community ties	Entrepreneurs Business groups Information brokers	Decentralize Create enterprise zones Bridge social divides
<i>Institutional View</i> – Political and legal institutions	Private and public sectors	Grant civil and political liberties Institute transparency, accountability
<i>Synergy View</i> – Community networks and state-society relationships	Community groups, civil society, firms, states	Coproduction, Complementary participation, Linkages, Enhance capacity and scale of local organizations

Source: Woolcock and Narayan (2000:239)

Using this synergy view of social capital to guide research and analysis, the case study in this thesis examined two integrated rural development projects in Kirehe District, Rwanda. The projects are using aspects of community development in planning and execution, attempting to strengthen relationships between communities, social networks, and local institutions to reduce poverty in a post conflict area. This thesis explores the potential of the synergy view of social capital in guiding research and informing policy on integrated rural development project design and implementation in post conflict areas like Kirehe District.

## 1.1 Research Problem

Estimates of the number of ethnic Tutsi and moderate Hutu murdered as a result of the 1994 genocide in Rwanda range between 500,000 to 1 million, which was approximately 10 to 20% of Rwanda's total population at the time (Mwaura 1998:4). Additionally, an estimated 2 million people fled the country to escape violence, while 1.5 million residents were internally displaced (UNHCR 2000:246). The ethnic-based killings and resulting large-scale population movements within and out of the country shattered communities and social networks across Rwanda. The defeat of the Hutu-led government by the Tutsi-led Rwanda Patriotic Front in 1994 ended the genocide and four years of civil war, but the years of conflict and the transition to a new government seriously disrupted service delivery by federal, district, and local government institutions.

Now more than 18 years after the genocide, Rwanda is in the middle of a promising reconstruction process. Many Rwandans are returning home or resettling in new parts of the country after years of living as internally displaced people or refugees in neighboring countries. While reconciliation efforts between the Tutsi and Hutu have been encouraging, poverty remains persistent. The national poverty rate is 64%, with the majority of impoverished residents living in rural areas (IFAD 2011). Overall, 91% of Rwanda's population lives in rural areas and 80% of the population is engaged in farming. These statistics make a strong case for rural development efforts playing a key role in any poverty-alleviation strategy for Rwanda (ibid).

In an effort to help alleviate rural poverty in post conflict Rwanda, the International Fund for Agricultural Development (IFAD) is currently working in cooperation with the Rwanda Ministry of Agriculture and Animal Resources (MinAgri) to implement two rural development projects in Kirehe District, Rwanda. These projects are the Support Project to the Strategic Plan for the Transformation of Agriculture (PAPSTA), which started in 2006 and will continue through 2013, and the Kirehe Community-Based Watershed Management Project (KWAMP), which began in 2009 and is scheduled to conclude by 2016. Both projects take integrated rural development approaches, with PAPSTA focusing on building institutional capacity while simultaneously coordinating a variety of environmental protection and agricultural intensification activities with the local community (IFAD 2005). KWAMP is modeled after the PAPSTA design, and employs similar activities (IFAD 2008). Both

projects explicitly incorporate aspects of community planning in their project design and implementation (ibid).

While both projects have been considered to be among IFAD's more successful projects in both East Africa and globally in terms of using integrated development methods to alleviate rural poverty, IFAD, the project staff, the local government, and the local community have all expressed varying concerns about how sustainable the impacts of the projects can be after funding ends. There are concerns that the projects lack community ownership, the projects have created parallel streams of administration and service delivery to the community without effectively integrating with local government systems, relationships between the communities and local government still remain weak, and that the local government does not have the resources or interest in continuing to provide the same kinds of agricultural support services the projects have been providing to the community.

With these real world concerns in mind, social capital theory is useful in guiding research that seeks to examine the current state of relationships between the community, social networks, and local institutions in Kirehe District in the context of the integrated rural development efforts of the PAPSTA and KWAMP projects. The communitarian view of social capital is helpful in understanding how PAPSTA and KWAMP interventions are assisting in increasing "bonding" in a community dealing with post conflict issues of ethnic reconciliation and the return of IDPs and refugees. Examining the situation from a network view can also reveal existing links between different social groups in Kirehe, and shed light on how the projects can assist in fostering more positive "bridging" relationships as Kirehe District continues to rebuild relationships between communities. Because many of the local government institutions in Kirehe District were newly created when the federal government changed after the civil war and genocide, taking an institutional view of social capital is also helpful in understanding the evolving relationship between the still-developing local institutions in Kirehe District and the communities they serve. Finally, the synergy view can be used to take a holistic survey of social capital across all levels in Kirehe District, combining communitarian, network, and institutional perspectives. The benefit of the synergy view is that it examines the quality and effectiveness of the linkages between social capital in communities, networks, and government institutions, which provides insight on how PAPSTA and KWAMP can best implement development policies to strengthen these overall linkages. By identifying areas where positive synergies between all levels of social capital can be increased, PAPSTA and KWAMP project activities can be more effective, and have

longer term sustainable impact by strengthening relationships between local institutions and the community.

## **1.2 Purpose & Research Questions**

The purpose of this study is to investigate the existing social capital relationships in post conflict Kirehe District, Rwanda in the context of the PAPSTA and KWAMP integrated rural development projects. Research will involve interviewing farmers, project staff, and government officials to examine existing relationships on three different levels: communities, social networks, and local institutions. The synergy view will then be used to make a holistic examination of how effective linkages are between these communities, networks, and institutions in the context of project activities. Analysis will then be conducted to identify ways the PAPSTA and KWAMP projects could best implement policies to improve these linkages for the benefit of project impact and sustainability by local institutions after project funding ends. The research questions can be summarized as follows:

- What is the current state of social capital in communities, social networks, and local institutions in the context of PAPSTA/KWAMP integrated rural development efforts?
- Using the synergy view in the context of PAPSTA/KWAMP, what are the existing relationships that link communities and social networks with the local institutions that provide services to citizens?
- In what ways can the PAPSTA/KWAMP projects tailor their development policies to strengthen relationships between community and government institutions in an effort to improve project impact and sustainability?

## **1.3 Disposition**

This paper begins with a brief background on Kirehe District in Rwanda, including a description of the typical smallholder subsistence agriculture livelihood strategies in the area, an overview of Kirehe District government institutions, and a summary of the PAPSTA and KWAMP projects working in Kirehe District. The paper then describes the research design of the study, explaining the data collection methods that took place through interviews and document reviews. The research design section also addresses data quality and ethical issues. Following this, the analytical model for the study is outlined, referencing the social capital

theories and current research that frame the data analysis. Using data from interviews and document reviews, the data analysis section summarizes the current state of social capital relationships at the community, social network, and institutional level in the context of PAPSTA and KWAMP integrated rural development activities. The paper closes with a conclusion that summarizes the main findings of the study, and ends with final notes on future research directions.

## **2. Background: Kirehe District, Rwanda**

Kirehe District in Rwanda is an interesting case for investigating the importance of understanding social capital in the context of conducting integrated rural development projects in a post conflict area for several reasons, including its history, demographics, and geography. Historically, the Rwandan Civil War and genocide in the early 1990s led to the destruction of local communities across the country, as many residents were killed or displaced. More than 15 years after the genocide, the country is now in the middle of a promising reconstruction process, and many Rwandans are returning home or resettling in new parts of the country after years of living as displaced refugees. Demographically, 91% of the country's population lives in rural areas, 80% of the population is engaged in farming, and 64% of the population lives in poverty (IFAD 2011). With a population density of 380 people per km<sup>2</sup>, Rwanda is the most densely populated country in Africa, and the population continues to increase at a steady rate (UN 2009). Population density is high even in rural areas, with most smallholders conducting subsistence agriculture on tiny plots of land that average .6 ha (JICA 2009). The country is also very hilly. A third of cultivated land exists on slopes greater than 20%, which contributes to sustainability issues related to erosion (Bart 1993). Because of Rwanda's history of conflict that has damaged intra- and inter-community bonds, the country's high population pressure, and erosion problems that require the combined efforts of communities to control, it is extremely important to understand social capital concepts while conducting integrated rural development projects that seek to engage the community and rebuild local government institutions.

Kirehe District in the southeast corner of Eastern Province in Rwanda is much like the rest of the country in that the population consists mainly of rural smallholder subsistence farmers living on steep plateaus divided by lowland plains (Rwanda 2007:3-4). Additionally, the district's below-average rainfall, unpredictable rains during the two annual dry seasons, and erosion problems washing away otherwise fertile soil contribute to the fact that Kirehe has

historically been one of the poorest regions in the country (ibid). As of 2007, the district had a population of close to 300,000 residents living in an area of 1225 km<sup>2</sup>, which translates into a population density of about 245 people per km<sup>2</sup> (ibid). Although poverty rates have fallen from 59.3% in 2001 to 42.6% in 2011, poverty is still widespread in the Eastern Province where Kirehe District is located (NIS Rwanda 2011:134). Currently, 20.8% of Eastern Province residents live in extreme poverty (ibid:135).

## **2.1 Smallholder Agriculture in Kirehe District**

The economy of Kirehe District relies almost exclusively on the primary sector of natural resource exploitation, with agriculture playing the largest role (Rwanda 2007:3-4). The secondary sector of industry and agricultural processing is underdeveloped, and the tertiary service sector is almost nonexistent (ibid). Most farmers practice subsistence agriculture, with main crops being bananas, cassava, maize, beans, sweet potato, sorghum, vegetables, rice, and fruit trees. Eighty-seven percent of Kirehe households farm on less than 1 ha of land, with landless households consisting of 13% of this group (IFAD 2008b:9). Banana consisted of 63% of all agricultural production in the region in 2005, and remains the dominant crop in the district today (Rwanda 2007:4). Coffee, vanilla, patchouli, and grisidiya are the district's main cash crops. Most households have difficulty meeting food security needs with their own cereal production, and 70-90% of households experience food shortages every year (IFAD 2008b:9). Farmers face a diversity of difficulties with increasing yields and profitability of their farming: drought in the hillsides, flooding in lowland areas, lack of farming inputs and inadequate fertilizer, low market prices for staple crops and vegetables, and the unpredictable production and transportation of perishable fruit crops (ibid). Because the difficulties farmers face in Kirehe are diverse and interrelated, integrated rural development approaches are particularly appropriate.

## **2.2 Kirehe District Institutions**

When the Rwandan Patriotic Front captured the capital city of Kigali in 1994, toppling the old government and ending the Rwandan Civil War, a transitional national government was set up. Rwanda's modern government replaced this transitional government in 2003 when the Supreme Court approved the new Constitution of the Republic of Rwanda after a national referendum (Rwanda 2003). Even before the end of the transitional government, the new government began a widespread policy of decentralization in 2000, referring to the political

climate before the 1994 genocide as “a period of bad governance which was characterized by highly centralized authority and lack of citizen participation in leadership and development” (MinaLoc 2007:6). The goal of the national government’s current decentralization policy is “to ensure political, economic, social, managerial/administrative and technical empowerment of local populations to fight poverty by participating in planning and management of their development process” (ibid).

Kirehe District is a fairly new administrative division, created through the merger of three old districts in December 2005 as a result of decentralization reforms driven by the national government (Rwanda 2007:6). Kirehe District is governed by a democratically-elected District Council, with an Executive Council that manages daily affairs (IFAD 2008b:1). The district is further subdivided into 12 sectors, 60 cells, and 612 villages, with government offices and officials also present at the sector level (ibid:2). Starting in 2007, the district focused on bottom-up planning, and produced a District Development Plan for 2008-2012 based on an analysis of the development needs expressed by each of the 12 sectors in Kirehe District (ibid). Despite steps towards decentralization, local institutions are still new and relatively weak, lacking the capacity to independently deliver services to communities without significant financial and managerial assistance from the federal government (ibid; Rwanda MinaLoc 2011:9). While the Kirehe District Executive Council has staff assigned to economic and agricultural development efforts, the community feels that most of the agricultural development assistance they receive comes straight from the federal government in the form of MinAgri development projects like PAPSTA and KWAMP.

### **2.3 The PAPSTA and KWAMP Projects**

The PAPSTA and KWAMP projects are two integrated rural development projects currently operating in Kirehe District. The goal of both projects is to reduce rural poverty in Kirehe by developing sustainable and commercially profitable agriculture among smallholders (IFAD 2005; IFAD 2008b). Both projects are primarily financed through IFAD, and are implemented by the same Project Coordination Unit (PCU). The PCU falls under the Rwanda Ministry of Agriculture, and consists almost entirely of local Rwandan staff at the administrative headquarters in Kigali and in field offices throughout Kirehe District. The PAPSTA project began in 2006, with the goal of reducing poverty by shifting communities from subsistence agriculture to higher-yield and higher-profitability market-based farming (IFAD 2005). With a \$31.5 million USD budget that runs until 2013, PAPSTA conducts

integrated rural development efforts within geographically-defined watersheds. Because of Rwanda's prevailing rain-fed agriculture, the potential of community-wide irrigation projects to transform low-lying swamp land into productive agricultural land, and the difficulty in controlling erosion without coordinated community efforts, the watershed-based approach to the project seeks to engage all farmers who live in a shared watershed (ibid). The project operates in selected zones around the country, including a single watershed in Kirehe District (ibid). The KWAMP project, budgeted at \$49.3 million USD to run between 2009 and 2016, is a district-wide scale-up of the successful PAPSTA model, and operates in 15 watersheds across Kirehe (IFAD 2008b). Additionally, the KWAMP project implements aspects of community-based planning, addressing criticisms that the planning and implementation of PAPSTA was too top-down with not enough input from the community (ibid:vii).

The PAPSTA and KWAMP projects employ similar integrated rural development strategies, conducting activities in three areas: institutional development, agricultural intensification, and environmental protection (IFAD 2005; IFAD 2008b).

### **2.3.1 Institutional Capacity Building**

Project activities related to institutional development include external IFAD support in strategic and operational level capacity building with MinAgri and the PCU in Kigali. At the local level, the PCU facilitates institutional capacity building in Kirehe District through a variety of activities. The PCU has field staff consisting of trained agronomists and natural resource management specialists stationed at the Kirehe District Office, allowing them to coordinate daily with local government officials on the Kirehe District Executive Council. The PCU also has field staff assigned to each of the 16 different watersheds in which the PAPSTA and KWAMP projects are active (ibid).

In order to assist with the implementation of project activities in local communities in Kirehe, the PCU has built a network of contact farmers in each village. Each village has a single Resource Person (the acronym "PR" is used based on the original French term "*personnes ressource*"), elected by the residents of the watershed to be the lead point of contact with the PCU. Under each PR are three to five elected Village Monitors (or "RV," derived from the French "*relais villagois*"). Each RV is in turn responsible for ten households. All PRs and RVs operate on a volunteer basis, with only minimal compensation from the PCU for travel expenses to project meetings. With this PR/RV system, the PCU has created a



democratically-elected network that reaches every household in the village. The PR/RV system can be used to communicate information downwards, such as when the PCU wishes to communicate information regarding agricultural intensification to each household in the village. The system can also serve to communicate information upwards, such as when the PCU wishes to track changes in crop yields from the household level. The PR/RVs also serve as leaders when the PCU implements large-scale public works projects, such as coordinating members of the community to work together to dig trench networks or plant trees to prevent erosion (ibid). See Appendix C for a diagram of the PR/RV system.

In each watershed, the PCU has also coordinated the formation of Local Watershed Management and Supervision Committees (CLGS), which consist of a combination of sector-level government officials, the elected PR and RVs who represent the farmers in the watershed, representatives from farmer cooperatives in the watershed, and PCU field staff. The CLGS in each watershed meets every month to discuss project planning and execution of agricultural intensification and environmental protection activities, providing a regular forum for all shareholders to communicate (ibid).

Finally, the projects have invested in the construction of Community Centers of Innovation, physical facilities staffed by project agronomists and natural resource management specialists. Each CCI serves three sectors of Kirehe District. With offices, conference rooms, classrooms, computer rooms, and libraries, each CCI is meant to be a meeting place for the dissemination of agricultural knowledge that is easily accessible to community residents. The CCIs are envisioned to provide a place for community meetings and demand-driven agricultural training. The project paid for the construction of the CCIs and currently pays for their operation and staffing, although the intent is to turn over full responsibility for the operation of the centers to the District before project financing ends (IFAD 2008b:17).

### **2.3.2 Agricultural Intensification and Environmental Protection**

The projects take an integrated approach to rural development, conducting a variety of interrelated activities to develop sustainable and profitable commercial agriculture to reduce poverty in Kirehe District. These activities fall into four categories: value chain development, crop and livestock intensification, irrigation, and soil and water conservation.

To develop value chains, the PCU seeks to increase the real demand for agricultural products produced in Kirehe District. The projects attempt to do this is by increasing the availability of

input shops and collection points, as well as improving farmer access to storage, grading, and processing facilities. The PCU also coordinates activities that aim to increase the share of profits that smallholders directly receive for their products, working to build economic, social, and organizational capacities among farmers in the district. These activities involve such things as improving farmer access to market prices through communications technology, as well as working in an advisory capacity with emerging and existing farmer cooperatives.

The PCU conducts a variety of activities relating to crop and livestock intensification. The PCU holds training sessions for PR and RV farmers on agricultural best practices and innovations, relying on the ability of the PR/RV system to ensure that the information reaches every single household in the district. In terms of livestock, the PCU coordinates heavily with the local community and service providers to implement the national “One Cow Per Poor Family” program. In this program, the poorest families in a village are given a free cow (or goats, chickens, or rabbits if their land holdings are not large enough to support a cow) along with technical assistance on how to properly care for the cow. The families nutritionally benefit from the milk consumed at the household level and profit off of any surplus milk sold. Households can also employ the manure from the cow to fertilize their soil and to produce methane biogas for kitchen use and household lighting. Additionally, the PCU coordinates an artificial insemination system to produce calves among the distributed cows. Because ownership of cows is a cultural status symbol of wealth in Rwanda, and since historically only the Tutsi ethnic group was allowed to own cows while Hutus were primarily farmers, the current national policy of distributing cows to all poor farmers regardless of ethnicity is an attempt to alleviate poverty while also reducing ethnic tensions. In a further effort to strengthen intra-community ties, there is a “Pass on the Gift” policy among recipients of these cows.

Irrigation activities of the projects involve several small-scale irrigation projects to improve water management on agricultural land, and the construction of two dams in Sagatare and Cyunuzi marshlands. The construction of the dams was meant to transform the previously unproductive marshlands into fertile land for rice cultivation. The projects also plan on turning over operations and maintenance of the dams to Kirehe District and private parties. The communities in the rehabilitated marshlands are also expected to coordinate with the district on irrigation schedules for planting seasons.

The projects conduct soil and water conservation through coordination with the CLGS in each watershed. Because the terrain in Kirehe is so hilly, the intensification of agriculture risks washing away valuable topsoil. To mitigate these risks and ensure sustainable agriculture, PAPSTA and KWAMP are working with the district government and local communities in each watershed to carry out public works projects. These projects involve digging networks of anti-erosion trenches throughout watersheds, terracing land, and planting trees and hedges on community land to further control erosion. The PCU also works with farmers to teach them about soil and water conservation techniques they can employ on their own land.

### **2.3.3 Importance of Social Capital in the PAPSTA/KWAMP Design**

While the projects are coordinating agricultural intensification and environmental protection activities to directly address the needs of local smallholder farmers, they are also explicitly attempting to build positive social capital in Kirehe District. By creating structures like the PR/RV system of contact farmers in villages and employing the “Pass on the Gift” policy with distributed cows, the projects attempt to create positive “bonding” capital in communities that are recovering from ethnic violence and dealing with resettlement and returnee issues. The formation of a CLGS consisting of various stakeholders in each watershed, working with farmer cooperatives, and constructing CCIs are all meant to foster “bridging” capital and build stronger networks between farmers, markets, and local government. Finally, with PCU staff collocated at the Kirehe District Office, the projects are trying to build local institutional capacity in order to sustain project impact after financing for the projects ends. With social capital being developed at the community, networks, and institutional levels, the synthesis viewpoint becomes important in gaining a holistic understanding of how social capital relationships are developing across these levels.

## **3. Research Design**

The purpose of the research was to study social capital relationships in a post conflict area from the community, networks, institutional, and synthesis viewpoints as they related to integrated rural development efforts. Because social capital consists of relationships between people and organizations, social capital is not easily measured in a quantitative sense. However, Woolcock and Narayan have proposed several qualitative theoretical models for understanding social capital and its relationship to development policies from each of the four

viewpoints (2000). The models, which will be detailed further in the Section 4, attempt to identify positive and negative social capital relationships from each viewpoint, suggesting the most beneficial types of relationships that will contribute most to the impact and sustainability of development efforts. Using these models as a guide for mapping out relationships between the community and local institutions, the research design of the project employed an inductive approach that focused on qualitative data collection, primarily through semi-structured focus group and individual interviews with farmers, farmer cooperative members, project staff, and local government officials. The research also involved document analysis. The research was inductive in the sense that the data collection was meant to obtain a picture of the current state of social capital relationships at the community, networks, institutional, and synthesis levels from the point of view of all of the actors, and to identify generalities in social capital development in Kirehe (Bryman 2004:9). While the Woolcock and Narayan models were used to structure data analysis in a general sense, the study did not take a deductive approach of “testing” the models by attempting to gather enough data to prove the validity of the models.

The study took a critical realist epistemological stance, viewing the concept of social capital as a “generative mechanism” that is difficult to directly observe, although it has consistently observable effects (ibid:14-15). An objectivist ontological viewpoint was used for the study, with the notion that although the relationship between communities and networks with institutions is constantly being re-defined based on social relationships, there is an unchanging need for functional organizations and predictable cultural rules for societies to function (ibid:18).

### **3.1 The Case Study Approach**

The PAPSTA and KWAMP projects in Kirehe District presented an ideal “exemplifying case study” for examining social capital relationships in a post conflict area while also exploring the relevance of social capital theories in informing integrated rural development efforts (ibid:55). The case was geographically bound to the 16 watersheds in Kirehe District in which PAPSTA and KWAMP operate. Interviewees consisted of Kirehe farmers involved in PAPSTA/KWAMP, members of farmer cooperatives operating in PAPSTA/KWAMP watersheds, the PCU staff in Kigali and in field sites in Kirehe District, and officials from the Kirehe District local government.

## **3.2 Data Collection Methods**

Data collection consisted of conducting semi-structured focus group and individual interviews, as well as conducting a review of relevant documents.

### **3.2.1. Sampling**

The general goal of defining the sample for the study was to obtain a representative sample of the different types of farmers involved in the PAPSTA and KWAMP projects, as well as to have representative samples of the project staff and local government officials involved. Sampling for interviews employed a cluster sampling method (Bryman 2004: 175). Clusters were defined by geography and by role in the projects. Geographically, the clusters were a representative sample among the 16 watersheds in the PAPSTA and KWAMP projects. In each watershed examined, interviews and focus groups were conducted with farmers, project staff, and government officials. Deciding which project staff and government officials to interview in each cluster was predefined by the fact that they held job positions in the watershed. Research was conducted with the assistance of the PAPSTA/KWAMP PCU, and it was possible to quickly interview almost all PCU staff at the Kigali headquarters and in field sites across Kirehe District. Project staff in each area also had working relationships with local officials, which facilitated interviews of government officials working in each watershed.

The PAPSTA/KWAMP staff acted as gatekeepers to the farmers and identified all farmers participating in the focus groups and interviews. While this speeded up access to farmers and was desirable due to the limited time available to conduct the study, it also added an element of bias to the selection of farmers participating in the research. The PCU would have incentive to select the most active and successful farmers participating in the projects, and would also have incentive to coach the farmers to give positive interviews. To mitigate this bias, adequate time was allotted for in-depth semi-structured interviews. This allowed the interviewer to maneuver around responses that seemed to be rehearsed, with the overall intent of revealing both positive and negative issues related to social relationships in Kirehe District. Clusters from different geographic areas were also compared in an attempt to reduce sample bias.

### **3.2.2. Interviews**

A total of 26 individual interviews and eight focus groups were conducted in Kirehe District between August and December 2011 (Appendix A). The majority of key informant interviews were with project staff and local government officials. Focus groups consisted of farmers participating in the projects, and were of two different types. The first type was made up of average farmers who participated in and benefitted from the PAPSTA/KWAMP projects. The second type was made up of farmers who served in project leadership roles in addition to their normal status as project beneficiaries. Farmers of the second type were either members of their watershed's CLGS, PRs or RVs from a particular watershed, or members of various farmer cooperatives active in the watershed.

All interviews and focus groups were semi-structured to allow for flexibility and in-depth exploration of unexpected topics brought up by the participants (Kvale 1996:130). The interview guide contained general questions relating to the following topics: how the project was planned; what the different relationships were between the community, project staff, and local government in the execution of the projects; to what extent Community-Based Planning was actually being used; and views on how project activities could be sustained by the local community and government institutions after project funding ends (Appendix B).

In general, interviewees appeared to be honest and open to answering direct questions. Interviewees also often deviated off the general themes of the interview guide. The interviewer allowed this to occur and explored relevant issues brought up by the interviewees, ensuring that all of the basic questions were covered before concluding the interviews. The relatively large number of interviews of project staff permitted the exploration of new topics as they arose. Repeated interviews with staff and local government officials quickly revealed that most had a common perception of the state of social relationships between the community, the PCU, and the Kirehe District government. Individuals also had many similar opinions on the effectiveness of Community-Based Planning and the role local government will have to play to sustain project activities after the projects end.

The eight focus groups had a mean average composition of six farmers each, with the largest involving 15 members and the smallest consisting of two farmers. The target size of each focus group was around six individuals, with the intent that focus group discussion would tease out issues of community relationships that would not be revealed in individual interviews (Kvale et al 2009:150). Focus group participants were selected by the PCU, and were prone to a degree of bias as described in the above section on sampling. Focus group

discussions were semi-structured and used the same general interview guide as the key informant interviews. Overall, the focus groups were successful in generating free-flowing and honest conversation between all participants, and initial fears of selection bias resulting in participants reluctant to criticize the project did not materialize. Like the individual interviews, the repeated focus groups also revealed that farmers shared the same general perception of social relationships between the various stakeholders in Kirehe District.

Interviews and focus groups were conducted with two to three interviewers who took turns asking questions from the interview guide, taking notes, and listening to participants in order to think of follow-on questions for interviewees who ventured off topics on the interview guide. Before each interview and focus group, the interviewers discussed the goal of the particular interview and reviewed the interview guide to ensure they had a shared understanding of how they wanted the interview or focus group to proceed. Using a team method for interviewing was extremely helpful, as it allowed more active listening by the interviewers which enabled them to ask better follow-up questions to the interviewee. The team approach also produced higher-quality notes of the interviews and focus groups while mitigating interviewer fatigue.

### **3.2.3. Document Review**

Both the Rwandan government and the IFAD (the primary donor for PAPSTA and KWAMP) are extremely focused on accountability, results, and reporting. Because of this, the PAPSTA/KWAMP PCU has taken extensive records relating to the quantitative results of both projects. In regular project reporting, the PCU has tracked the progress of interventions such as the number of livestock distributed to the poorest farmers, the increase in various crop yields due to the distribution of higher yield seeds and instruction on more efficient farming methods, and the number of hectares of farmland protected from erosion through the projects' terracing and tree-planting efforts. In Kirehe District where KWAMP is operational, the district government has also integrated quantitative project results into its yearly reporting to the central government. Because of this, a wealth of quantitative data on project results is available from both the PCU and the local government. This data was incorporated into the data analysis to complement qualitative data collected during interviews, although the fact that correlation does not equal causation was always kept in mind. For example, while qualitative data from farmer interviews stated that increased relationships between the community and the local government sped up community efforts to terrace shared land, data

analysis acknowledged that there can be no concrete causative link made between this qualitative data and quantitative data showing that terracing was indeed accomplished ahead of schedule in the same watershed that the farmers are from. Because of this, the research relied primarily on qualitative data, with quantitative data used to highlight certain points when clear links can be made.

### **3.3 Transcription and Analysis of Interviews**

The results-based culture and hierarchical structure of the Rwandan government is not always conducive to open and critical discussion, especially discussion which may reflect poorly on the performance of superiors or oneself. With this in mind, not all key informant interviews were recorded, for fear that the presence of an audio recorder would further intimidate interviewees and discourage them from open and honest discussion. Consent was obtained from interviewees whenever the discussion was recorded. For all interviews, summary notes were taken, with verbatim quotations recorded when particularly important. The team approach ensured that one interviewer was always assigned to take notes while another member of the team could lead the interview or moderate the focus group.

A larger proportion of focus group discussions were recorded, as it was the opinion of the researcher that an audio recorder was far less intimidating to participants in larger groups. Additionally, these groups consisted of farmers who were not held to the same degrees of accountability as project staff or local government officials, and thus felt less restricted in speaking honestly about the projects. The interview team took notes during all focus groups, and only referred back to the recordings to identify areas missed in the notes.

Transcribing interviews always presents a degree of difficulty, and interpreting between two languages introduces a further loss in meaning (ibid:166). For this research, verbatim transcription was not as important as the general feelings and ideas communicated by participants. The PCU provided the researcher with staff fluent in English, French, and Kinyarwanda when needed to facilitate interviews and focus groups. While most interviews with project staff were conducted in English (with a few in French, which is not fluently spoken by the researcher), all of the focus groups required interpretation between Kinyarwanda and English. Good interpretation preserved the general meaning of communication, but made verbatim transcription impossible from a practical standpoint.



Because of these factors, all interviews and focus groups were transcribed in summary notes, with verbatim quotes included only when possible and particularly helpful.

### **3.4 Data Quality**

The overall quality of the data was good enough to support the initial research design, enabling the researcher to conduct useful analysis and draw general conclusions. While there were some issues with sample bias, steps were taken to mitigate this and the sample size was large enough to cover the target groups. There were no obvious issues with reliability and validity, as repeated interviews yielded similar data.

#### **3.4.1 Reliability & Validity**

The quality of research data depends on its reliability and validity (Bryman 2004:376). The internal reliability of the qualitative research is acceptable, as interviews were conducted by teams of two to three, with the lead researcher always present. In total, four separate individuals assisted the lead researcher at different times, and several different interpreters were involved in the study. All of the interviewers were in agreement as to the general findings of the interviews and focus groups. Additionally, document reviews of external assessments from donors to the projects highlighted similar issues relating to the various aspects of social relationships between the community, project staff, and local government institutions. This tends to speak well of the external reliability of the research method as well, as separate teams using different methods reached similar conclusions. Looking at the internal validity of the qualitative data, most of the interviewees and focus groups brought up similar issues relating to positive and negative aspects of social capital relationships within the PAPSTA/KWAMP projects in Kirehe District. As with many qualitative case studies, the external validity of this case study is unclear without further comparisons across cases (ibid).

While there were no significant issues with the way the research was conducted, there are a few areas that could have been improved to increase the overall quality of the study. While cluster sampling by geographic area was used to get a representative sample of those involved in the project, the PCU ultimately chose all farmers to interview. Taking greater steps to randomize the selection of farmers in focus groups would help mitigate this bias. Additionally, the research only involved farmers, project staff, and government officials who are directly involved in PAPSTA/KWAMP. While the main goal of the research was to explore the social relationships between the community and local government in the context

of integrated rural development projects, the study is missing a useful population for comparison – Kirehe District farmers who are not participating in any development projects. Interviewing non-project farmers about their relationships within their own communities and with local Kirehe District institutions would have been a useful contrast to the interviews with PAPSTA and KWAMP project beneficiaries.

### **3.4.2 Limitations**

There were two primary limitations to the study, both relating to constraints in time. The first limitation was lack of time and access to farmers in Kirehe District who were not involved in PAPSTA/KWAMP. Interviewing farmers from this population would have given a more complete picture of social capital relationships in Kirehe District. The second limitation was lack of time to conduct time-phased interviews with the PAPSTA/KWAMP farmers, PCU staff, and local government officials that made up the sample for the study. There was sufficient time to interview these individuals to gain an understanding of the current state of social capital relationships at roughly the mid-point of the PAPSTA/KWAMP lifecycle. However, there was a lack of time to perform interviews with the same individuals before, during, and after the completion of PAPSTA/KWAMP projects, which would have provided helpful data to examine if the social capital aspects of the projects were actually building capacity over time as intended.

### **3.5 Ethical Considerations**

The ethical considerations of the research did not have to address any significant issues. All of the participants in the research were willing project farmers, project staff, or government officials. All participants volunteered to participate in the interviews and focus groups without compensation, and the intent of the interviewers was always made clear. Many of the interviewees were happy to discuss their social relationships with other stakeholders in the watershed, as they felt that research and group discussions could identify problem areas and ultimately improve the impact and sustainability of the project activities. Verbatim quotes were not attributed to specific individuals to avoid negative consequences of openly discussing problems involved with the projects.

## **4. Previous Research**

Previous research on social capital relationships in Rwanda has highlighted its effects on development projects both before and after the 1994 Rwandan Genocide. Schneider's 1988 study on Rwandan farmer groups showed that increased yields and profits were intertwined with development efforts to create social change in communities. The introduction of new agricultural innovations occurred faster and was better sustained in communities where learning occurred in farmer groups rather than on an individual basis. The study demonstrated the effectiveness of increasing bonding through group training, which is similar to the approach PAPSTA/KWAMP is taking by using the PR/RV system of contact farmers to spread knowledge of technology and innovations through their own communities. In another pre-genocide study, a World Bank report catalogued more than 3,000 formally registered cooperatives, with estimates that there were over 30,000 informal groups within the country (1989). These figures hint at the existence of strong social capital relationships at both the community and network levels.

Pinchotti and Verwimp also found high levels of bonding social capital within Hutu and Tutsi groups before the genocide, as well as positive bridging capital between Hutu communities and local institutions supported by the Hutu-led government (2007). The degradation of bridging capital between Tutsi communities and institutions, as well as the perversion of strong relationships between institutions and Hutu communities by local government leaders supporting the genocide were key factors in the violence (ibid). The study indicates that relationships between institutions and communities that are less hierarchical and more decentralized, as well as increased horizontal bridging networks between ethnic groups, will be key in post conflict development (ibid).

Colletta and Cullen's study of social capital in Rwanda examined opinions on social cohesion after the genocide through household surveys (2000). Their data demonstrated that although bridging capital between Hutus and Tutsis weakened to the point that the country erupted into civil war and genocide, bonding social capital remained strong within both groups both before and after the conflict (ibid:14). The results are similar to Pinchotti and Verwimp, showing that the strong relationship between the Hutu communities and government institutions allowed the government to harness the influence of perverse social capital to compel Hutu citizens to commit violence against Tutsi neighbors (ibid). The overall results indicate that there has been no loss in overall social capital due to the genocide, but that social relationships have transformed due to reconciliation efforts. Future development work

in Rwanda must take these factors into account, attempting to strengthen social capital at the community, network, and institutional level, as well as increasing the links between them.

At a higher level of analysis, Isham and Kaufmann’s research of more than 1,200 development projects in 61 developing nations demonstrated the importance of relationships between government institutions and local communities in project impact and sustainability (1999). In their study, governments that had positive social relationships with communities through low corruption, good rule of law, and effective contracts created better community life and had better returns from development projects when compared to governments that had hostile or ineffective relationships with communities (ibid). This research shows that while understanding the implications of social capital relationships on development are particularly appropriate in post conflict Rwanda, the synthesis view of social capital that examines the effectiveness of social linkages between communities, networks, and the institutions that serve them has relevance in a wide variety of cases.

## 5. Analytical Models

The analytical models for this study draw on Woolcock and Narayan’s paper entitled “Social Capital: Implications for Development Theory, Research, and Policy” (2000). The models described in their paper attempt to provide a framework for combining the lessons learned from the wealth of research on social capital and development over the last several decades. The models attempt to describe levels of social capital from communitarian, networks, institution, and synthesis views, and provide qualitative theoretical frameworks to guide research and policy. This section explains the theoretical logic behind the models. In the following Data Analysis section, data from interviews and document reviews will be combined with these models to describe the current state of social capital relationships in Kirehe District.

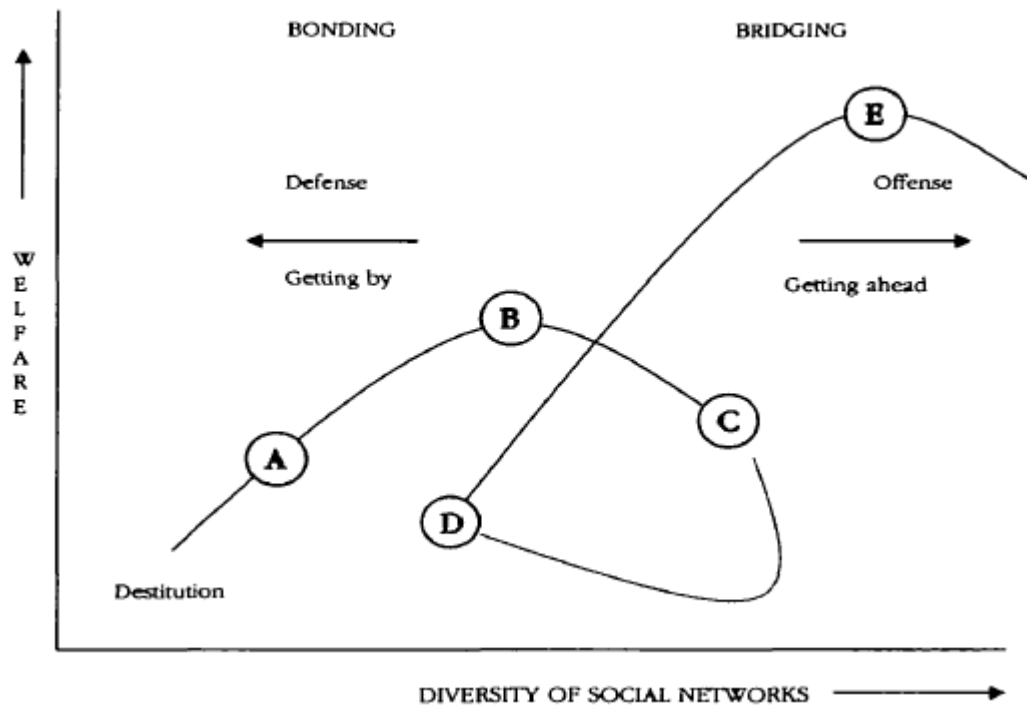
<b>Table 2: Dimensions of Social Capital at the Community Level</b>		
<b>Extracommunity networks (bridging)</b>	<b>Intracommunity ties (bonding)</b>	
	<i>Low</i>	<i>High</i>
<i>Low</i>	Outcasts	Poor villagers
<i>High</i>	Recent rural-to-urban migrants	Successful members of microfinance programs

Source: Woolcock and Narayan (2000:231)

Table 2 presents a communitarian view model to categorize communities based on the interaction between existing levels of bonding and bridging capital. As the table shows, if a community has high levels of intracommunity bonding, where neighbors know and trust each other, as well as high levels of extracommunity bridging, with strong relationships with outside markets, the community is in a strong position to benefit from programs such as microfinance. As traditional microfinance programs often involve group loans, they require strong bonding to provide enough community trust to borrow together, and to provide enough social pressure to ensure all members pay on time. Strong extracommunity bridging is also needed for microfinance participants to exploit their newfound capital by tapping outside markets. It is interesting to note that many microfinance programs in Rwanda have failed to achieve desired results, with evaluations often pointing out the inappropriateness of traditional microfinance models in post conflict communities that lack both bonding and bridging social capital (Wilson 2003).

On the other extreme, in communities where there are weak intracommunity bonds and weak ties to outside communities, the lack of social capital results in poorly defined communities of outcasts. Urban planner Jane Jacobs wrote about this phenomenon as early as 1961 in her classic study of the social aspects behind the creation of urban slums. In outcast communities, increasing both bonding and bridging social capital will be required to improve conditions for residents. The model also demonstrates that high levels of social capital in only one area are beneficial, but leave room for improvement. For example, communities with high levels of intracommunity bonding but little bridging capital usually consist of poor farmers who can use family and neighborhood safety nets to “get by” but have trouble accessing outside capital to “get ahead” (Holzmann and Jorgensen 1999; Kozel and Parker 2000). Using this communitarian view model, researchers and policy makers can gain a better understanding of the relationship between bonding and bridging capital in the community, what the implications are for residents in the community, and what types of relationships need to be developed to improve conditions for the community. For this study, the determination of what was considered “high” or “low” levels of social capital was based on the extent to which opinions expressed in interview responses and document reviews lined up with the categories in the model. Since the goal of the research was to reach generalizations based on holistic qualitative analysis, there was no attempt to quantify levels of social capital in each model.

**Figure 1: Social Capital and Poverty Transitions**



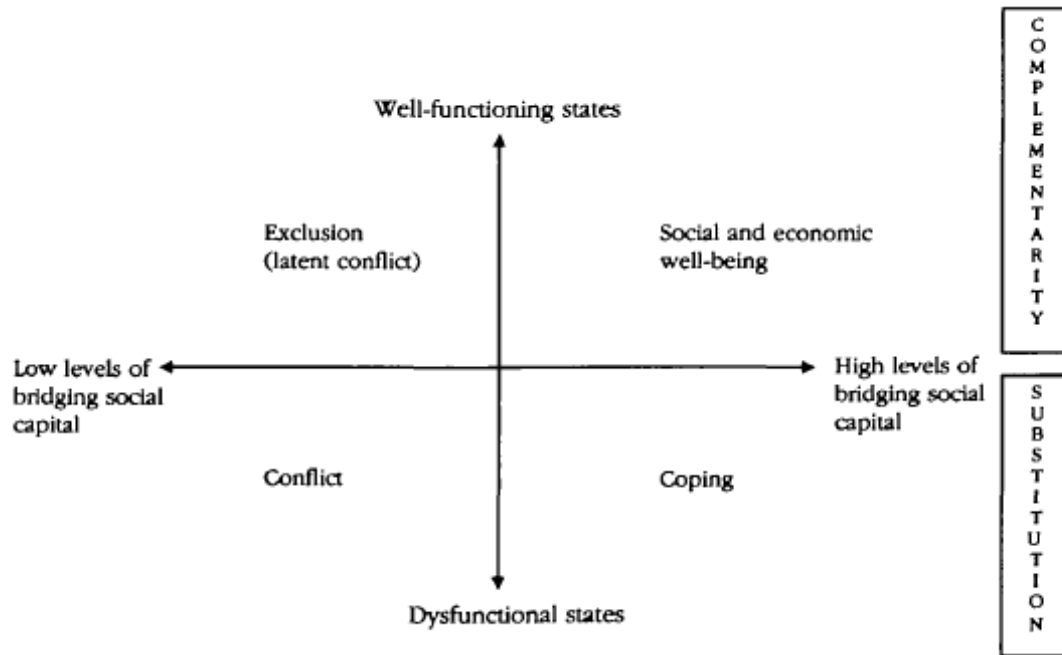
Source: Woolcock (2000)

Figure 1 presents a model for understanding social capital relationships from a networks view. For a poor individual with low bonding and low bridging capital (Point A), such as a returning refugee resettling in Kirehe District, building bonding capital with neighbors in the community is essential in improving welfare (Point B). However, as time goes on, building strong bonding capital also brings negative benefits, such as increased social and financial obligations to others in the community (Point C). As discussed in the previous model in Table 2, the individual is now trapped in the “poor villagers” state (Point D) unless bridging bonds are made to access social, financial, and human capital outside the community to continue to “get ahead” (Point E). Like the previous model, this model can also be used to guide data analysis, helping to determine at which point in poverty transition the majority of individuals in a community are. This can then assist policy decisions by identifying community needs for increased bonding or bridging capital to transition out of poverty.

From the institutional viewpoint of social capital, this study investigated issues such as corruption, bureaucratic trust, ethnic tensions, and civil liberties through interviews and document reviews (Woolcock and Narayan 2000:235). Numerous scholars have written about the importance of strong institutions, mostly in a macroeconomic sense (ibid). Few studies

using the institutional viewpoint have yielded useful microeconomic models that would be useful for this study, so interviews focused on gaining a general understanding of how well farmers perceived local government to be performing (ibid).

**Figure 2: Relationship Between Bridging Social Capital and Governance**



Source: Narayan (1999)

The model outlined in Figure 2 examines social capital from the synthesis view. A benefit of the synthesis view is that it examines the social relationships between communities, networks, and institutions to provide a holistic picture of not only the state of social capital within each unit of analysis, but also the overall state of social capital based on the strength of relationships between them (Evans 1996; Rose 1998; Narayan 1999). Evans introduced the concepts of *complementarity* and *embeddedness* (1996). Complementarity addresses mutually beneficial legal and organizational relationships between communities and public institutions. Embeddedness is the extent to which public officials feel indebted to the communities they serve. The Narayan model shown here introduces the further concept of *substitution* (1999). Substitution is “the replacement by informal organizations (families, networks, and so on) of services ordinarily provided by governments and institutions” (Woolcock and Narayan 2000:237). Development projects in post conflict areas such as PAPSTA/KWAMP often act in this area of substitution, but to have long term impact and sustainability, projects must

build enough local capacity in communities, networks, and institutions to move out of substitution by fostering complementary social relationships.

Examining the four quadrants of the model, this study argues that Rwanda was in the area of “Exclusion (Latent Conflict)” before the civil war and genocide, with a government that did not provide for both ethnic groups equally. Rwanda then moved into the “Conflict” quadrant during the civil war and genocide. With Rwanda still undergoing a reconciliation and reconstruction period, the data collected in this study examined the current level of bridging capital between communities, the state of local institutions, and the nature of the relationships between communities and institutions. Using this data with the model, a general statement can be made of where Kirehe District is in terms of shifting from a substitution relationship to a complementarity relationship between communities and institutions as Kirehe attempts to move from the post conflict “Coping” quadrant to “Social and Economic Well-Being.”

## **6. Data Analysis**

This section presents the data collected through interviews and document reviews.

### **6.1 Social Capital at the Community Level in Kirehe District**

Interviews with local farmers, cooperative members, the PCU staff, and local government resulted in fairly consistent opinions of the current state of bonding and bridging capital within the villages that make up Kirehe District. The district experienced tremendous social upheaval during the genocide, with violence between Hutu and Tutsi neighbors, and massive population movements of both Tutsis fleeing violence and Hutus fearing reprisal once fighting stopped. After the war, some refugees returned back home to Kirehe. The new government also made Kirehe District a resettlement area, building new communities to house refugees who could not or did not want to return to homes in other parts of the country. The government also instituted a national policy of reconciliation between ethnic groups, and while tensions remain due to the recent history of the genocide, the policy has been embraced by most residents and is viewed by them as being largely successful in contributing to the current stability in the country.

Most farmers interviewed said bonds between neighbors within their communities were constantly strengthening, which is promising as many of the residents had only recently moved to the district. Bridging relationships between different communities were reported



with much less frequency. Farmers did not report strong social ties to neighboring villages or to markets in urban areas.

Farmers view the PR/RV system established by PAPSTA/KWAMP as largely successful in both quickly disseminating project innovations as well as assisting in strengthening social bonding at the community level. The farmers in each watershed elected their own PRs and RVs, which PCU staff and residents reported were usually already the most successful farmers and natural leaders within communities. The PRs and RVs attend training sessions with PCU staff on project innovations and new technologies, then employ the knowledge on their own farms while conducting group training sessions with their own neighbors. The PRs and RVs said they are volunteers with no salary from the PCU, but happily perform their roles due to a sense of responsibility to help others in the community. They also report that PR/RV training activities have also increased social interaction within the community outside of project activities by allowing them to make new friends in the community.

The “Pass on the Gift” (POG) policy that requires recipients of free cows from PAPSTA/KWAMP to pass on the first born calf from the cow to a needy neighbor is also reportedly building bonding relationships among farmers. Because the CLGS and PCU ensures newborn calves always go to the neediest villagers, the POG policy is helping to build mutually-supportive community bonds among neighbors who may not even know each other. The interviewed farmers found this to be a particularly helpful aspect of the project for their communities, as it was strengthening bonds between neighbors regardless of ethnicity or origin.

The Community Centers of Innovation (CCIs) are intended to increase both bonding and bridging capital through hosting group training sessions and providing community meeting places. Since each CCI serves three sectors, the facilities have potential to create bridging networks between villages that normally would not interact. However, the physical facilities have only been recently constructed, and only one of the four CCIs was operational when the study was conducted. Farmers, PCU staff, and local government officials have spoken positively about the operational CCI in Gatore, stating that the training sessions and meetings have increased community bonding within villages. Bridging at the CCI has been more limited, as meetings have focused on farmers from the same village, with few meetings bringing together farmers from different communities or introducing farmers to businessmen from distant urban areas.

Overall, many farmers, PCU staff, and local officials reported that community bonding in Kirehe is high, although bridging between communities and external markets is low. This data seems to fit well with the communitarian model explained earlier, as the majority of interviewed farmers fit the “poor farmer” profile of individuals with enough local bonding social capital to “get by” but little bridging capital to “get ahead.” Very few respondents reported other types of social capital relationships that would fit the “outcast”, “recent rural-to-urban migrant”, or “successful member of micro-finance” profiles. As Kirehe is still recovering from the massive social upheaval caused by the genocide, it is interesting to note that community bonding relationships have already recovered and continue to strengthen.

<b>Extracommunity networks (bridging)</b>	<b>Intracommunity ties (bonding)</b>	
	<i>Low</i>	<i>High</i>
<i>Low</i>	Few Respondents	Many Respondents
<i>High</i>	Few Respondents	Few Respondents

Adapted from: Woolcock and Narayan (2000:231)

## **6.2 Social Networks and Poverty Transitions in Kirehe District**

The data also yielded interesting results when applied to the networks model of social capital and poverty transitions. As mentioned above, interviews revealed that strong community bonding is present and continues to increase in Kirehe. Bridging relationships still remain weak, but there is some progress in this area. Interviews and time-series quantitative data from the 2000, 2005, and 2010 Rwanda Integrated Household Living Conditions Surveys report that food security has improved and poverty rates have steadily decreased in Kirehe over the last ten years (NIS 2011). Farmers and PCU staff report that these improvements have occurred due to a combination of factors including improved knowledge of farming techniques, the formalization of land titles, and increased social bonding in communities.

From a network view, the types of organizations and relationships required for individuals in Kirehe to continue to climb out of poverty are still developing. Many of the cooperatives in the district have only been in existence for the last few years, and the social and economic benefits to membership for most remain unclear. Of the two focus groups with cooperatives operating in Kirehe, one was still in the formative stage and did not have a clear purpose or defined activities. The other cooperative was formed due to government regulations requiring farmers to be part of registered cooperatives in order to gain access to government-owned

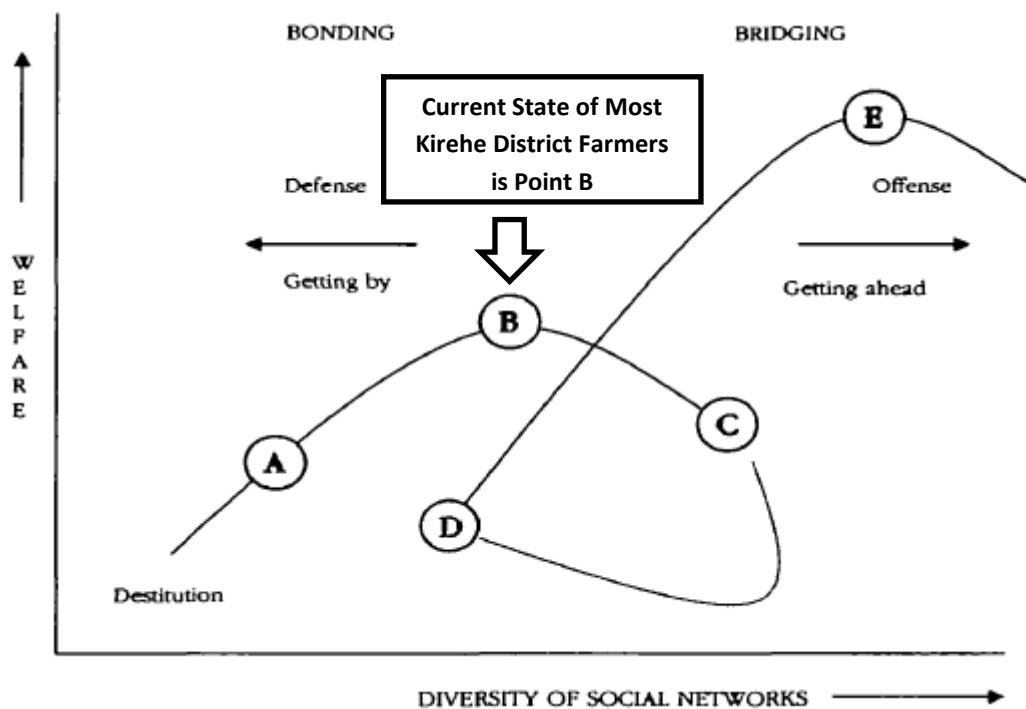
land in rehabilitated marshlands. This cooperative was formed so local farmers could plant rice in the rehabilitated marshlands, and while the cooperative did facilitate group training and irrigation management, all plots were planted and managed on an individual basis, and members individually sold their own harvests. While the cooperative did help farmers gain access to land they could not access on their own, the organization did not do much to improve market access through taking advantage of group bargaining with buyers or collective transport to markets.

Creating stronger bridging bonds from rural farming communities to urban markets seems like the logical next step for Kirehe from a network perspective. Unfortunately, Kirehe remains largely rural, with most residents working in the primary sector. With neither a strong secondary agricultural processing and industrial sector nor a tertiary service sector, Kirehe farmers face extreme difficulty in building bridging relationships with outside markets and financial services. Kigali, the capital city and primary outside market for agricultural products from Kirehe, is at least two hours away for most farmers in the district. The PAPSTA/KWAMP projects are taking steps to improve the strength of cooperatives in Kirehe through advising them to invest in value-adding processing infrastructure, such as Milk Collection Centers to collect and refrigerate milk from individual farmers to sell in bulk to urban markets, and fruit drying centers to dry highly perishable crops like mango or passion fruit to prevent them from spoiling before reaching market. Many of these activities are still in the early stages, and it was too early to see how effective they are, though the demand from the farmers for more of these types of activities demonstrates a need to strengthen links with outside markets and create stronger relationships with buyers in urban areas.

Applying the model for the network viewpoint introduced earlier to the interview and document analysis data, it appears that most community members in Kirehe District are at “Point B” in Figure 3. Bonding capital has strengthened along with implementation of better farming practices since the genocide, allowing individuals in post conflict communities to pull themselves out of destitution and increasingly provide social safety nets to others. None of the respondents reported negative consequences of strong community bond, such as excessive financial obligations to others or society pressure to not outperform others or seek opportunities outside the group. Therefore, despite a lack of strong bridging capital, data does not indicate any individuals at “Point C” or “Point D”, where excessively strong bonding without the presence of bridging relationships results in negative results. It is possible that

respondents were hesitant to report negative consequences even though they were actually experiencing them, although triangulation through multiple sources and other external reviews of PAPSTA/KWAMP also do not indicate this is an issue. As PAPSTA/KWAMP continues to work with the community and local government to increase bridging relationships, it is also possible for individuals to skip “Point C” and “Point D” entirely, moving directly from “Point B” to “Point E” as positive bonding relationships are slowly complemented with bridging capital.

**Figure 3: Social Capital and Poverty Transitions in Kirehe District**



Adapted from: Woolcock (2000)

### 6.3 Institutions and Their Impact on Social Capital in Kirehe District

According to the Rwanda national government’s own analysis of their decentralization policy, governance capacity and institutions at the local level remain weak (Rwanda 2007). Interviews and document reviews relating to the ability of the local government to provide agricultural services to local farmers similarly indicate a lack of local institutional capacity. Agricultural development in the Kirehe District Government falls under the supervision of the Deputy Mayor in Charge of Economic Affairs, who has oversight over the Economic Development and Planning Unit. The planning unit is in turn managed by a director who provides daily oversight for the government veterinarians and agronomists assigned to each

sector. These veterinarians and agronomists work with the sector offices to provide technical assistance to farmers on a local level. Farmers, the PCU staff, and local government officials report that while government staff is in place to provide technical assistance, they lack the resources to carry out the types of large-scale efforts farmers are demanding to improve their economic well-being. From a financial as well as a practical standpoint, the PAPSTA/KWAMP projects are the main providers of agricultural development assistance in the district, not the Kirehe District government. The PCU is also trying to build capacity in the local government by coordinating with the sector-level veterinarians and agronomists during project planning and execution.

The PR/RV system set up by PAPSTA/KWAMP was meant to serve as a way to increase social bonding and bridging while facilitating widespread knowledge transfer of agricultural innovations, as well as providing a network to receive bottom-up input for project planning. Additionally, the district government has begun to co-opt the PR/RV system to assist in local governance. For instance, the PR/RVs and local officials interviewed stated that the district has started to use the system as a top-down way of communicating public health information and political campaign messages to entire communities, and also as a bottom-up way of gaining input from communities on local issues. Staff from the PCU also state that the federal government has expressed interest in making the PR/RV system an official government policy, and replicating the practice throughout the entire country. The PR/RVs in Kirehe are volunteers who were elected in 2006 and 2009 as part of PAPSTA/KWAMP. If the PR/RV system does become an official government institution, it remains to be seen what the sustainment plan will be for PR/RVs in terms of compensation or re-election cycles.

The CLGSs have also been effective in allowing bottom-up input into project planning, helping to determine what types of interventions would be most helpful in each watershed. While government officials have expressed interest in continuing the CLGS after PAPSTA/KWAMP end, the PCU staff and farmers have more mixed opinions. Most concerns about the sustainability of the CLGS relate to the fact that they are centered on implementing the wide variety of activities in PAPSTA/KWAMP, and would not have a purpose after the influx of project money ends in 2016. While useful for the projects, the viability of the CLGSs as long-term institutions is uncertain.

Kirehe District has already started to integrate PAPSTA/KWAMP agricultural development and institutional capacity-building activities into its own annual Performance Contract and its

long-term 2008-2012 District Development Plan (Kirehe District 2007; Kirehe District 2011). The annual Performance Contract document is the method the federal government uses to evaluate the progress of all districts, and with the results-based atmosphere the federal government has created in recent years, pressure on local officials to meet contract goals is high. The fact that Kirehe District is incorporating the projects' institutional capacity-building concepts into its own District Development Plan is a positive sign that current initiatives will be sustained in the long-term.

Interviewed farmers perceived corruption at the local level to be low and bureaucratic trust to be high, with ethnic background no longer effecting service delivery as it did before the genocide. While many farmers did not actively participate in local government, opportunities for the community to access officials were good and transparency in decision-making was high. Although institutional capacity for service delivery was low, conditions for continued strengthening of these institutions with community involvement were promising in the long-term.

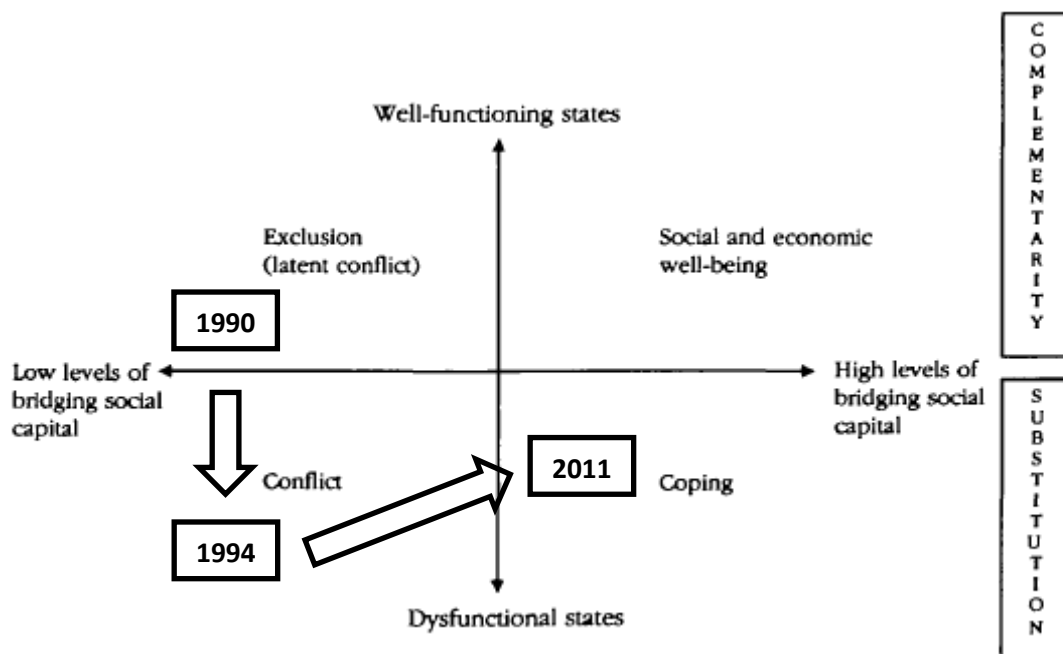
#### **6.4 Synergy Analysis – Community, Network, and Institutional Relationships**

In this final section of analysis, the data was applied to the synergy model to gain a holistic understanding of social capital relationships in Kirehe District in relation to the integrated rural development efforts of PAPSTA/KWAMP. To summarize findings using the previous social capital view, community bonding within Kirehe District is adequate enough to provide social safety nets for poor farmers. From a network view, farmers still lack bridging bonds to connect with different communities that could provide access to useful social and economic capital. Institutionally, Kirehe District is fostering positive attributes of low corruption, trust, transparency, and accountability, although the capacity to deliver agricultural development services without PAPSTA/KWAMP assistance is low.

Looking at the synergy model in Figure 4, the situation in Kirehe was in the “Exclusion” quadrant, with a functioning state, but with ethnic tensions contributing to low levels of bridging between diverse groups. Taking a synthesis view of the quality of the social relationships between communities and institutions, it is interesting to note that before the conflict there were high levels of bonding at community levels and a state with functioning institutions. However, the quality of the social relationships linking Tutsi communities and

the Hutu-dominated institutions was poor, leading to latent conflict despite high levels of social capital at both community and institutional levels. During the civil war and genocide, Kirehe fell into the “Conflict” quadrant as the state fell into dysfunction. Based on the data collected during the research study, Kirehe is now moving in a positive direction through the “Coping” quadrant towards “Social and economic well-being.” Bridging relationships remain weak after the conflict, but are slowly strengthening due to efforts like community-driven initiatives to organize farmer cooperatives and PAPSTA/KWAMP integrated rural development efforts.

**Figure 4: Relationship between Bridging Social Capital and Governance in Kirehe District**



Adapted from: Narayan (1999)

Currently, communities cannot rely on local Kirehe District institutions to provide all the agricultural development support they need, and the district relies heavily on service “substitution” through PAPSTA/KWAMP. While local institutions do not yet have the capacity to provide needed services independently of PAPSTA/KWAMP, they have taken steps to facilitate positive relationships with the communities of Kirehe, fostering open communication with residents and incorporating bottom-up input into their governance model. Additionally, the PCU is trying to transition from “substitution” by assisting local institutions in building enough capacity to establish “complementarity” with local

communities once project funding ends. The PCU is doing this in several ways, such as co-locating PCU staff with their government counterparts at the Kirehe District Office to assist in coordination and knowledge transfer, slowly transitioning project staff and facilities over to the district payroll and budget as the projects near completion, and building institutions such as the PR/RV system and the CLGS that may be sustained by the local government.

Compared to the pre conflict environment, Kirehe District institutions are taking greater steps to improve the quality of their relationships with communities. By improving both the ability for communities to provide bottom-up input on development activities as well as striving to improve institutional top-down service delivery, the Kirehe District government is trying to achieve “complementarity” with the communities it serves in an attempt to support Rwanda’s overall transition back to being a well-functioning state. While conditions are there to improve the quality of community relationships with institutions, real capacity still remains low. Thus, Kirehe District is still in the “Coping” stage, relying on external support from PAPSTA/KWAMP despite developing positive relationships with local communities.

The most promising findings from the research are that from a synergy perspective, the PCU and the local government have a collaborative relationship and are taking active steps to transfer project services and institutions over to government control. If successful, this will provide a sustainable means for local institutions to continue to perform PAPSTA/KWAMP services after funding ends. Additionally, even though local institutional capacity remains low, changes have been made post conflict that have dramatically changed the way local communities interact with institutions. Compared to pre conflict institutions, the current Kirehe District government is increasing transparency, participation, accountability, and willingness for bottom-up input from the community, which are necessary steps to avoid slipping back into an “Exclusion” or “Conflict” relationship with communities. If real institutional services delivered continue to increase over time, this positive relationship will allow communities to continue to move from “Coping” towards “Social and economic well-being.”

## **7. Conclusions**

Overall findings from the research study yielded several informative results regarding social capital relationships and their effects on integrated rural development efforts in Kirehe District. Community bonding was high before the conflict, but was perversely exploited to



stir violence between the Tutsi and Hutu ethnic groups. During the conflict, communities were shattered, negatively impacting bonding relationships due to population migration from refugees. The eventual resettlement of communities was followed by a quick return of bonding capital, and current residents interviewed report that positive community bonding is occurring with resulting increases in the ability to “get by” with a social safety net. The PAPSTA/KWAMP projects are also implementing many activities that seek to build bonding capacity within communities, and seem to be having some positive impacts.

Bridging networks still remain weak, which is something that will continue to hinder poverty reduction efforts in Kirehe Communities. From a social capital standpoint, communities are still isolated from other groups that could add value to their produce, such as buyers or investors in urban areas. Contributing to this problem is the lack of a secondary processing and industrial sector in Kirehe District, and the fact that Kigali is the closest city with a developed tertiary service sector that could provide capital inputs into Kirehe District, which is still over two hours away for most residents. Due in part to the lack of bridging networks, farmers in Kirehe are forming cooperatives on their own, and the PCU and local government are providing them support and technical assistance. Still, for these cooperatives to fill these gaps in bridging capital, they need to be able to organize membership, provide real benefits to members, and begin to form beneficial and positive social relationships to outside groups that can provide local communities with the external sources of capital they need to “get ahead.”

Local institutional capacity to provide agricultural assistance to communities is still limited, but steadily improving. The PAPSTA/KWAMP projects are currently providing the bulk of needed services to communities instead. However, the Kirehe District government is fostering an atmosphere of low corruption, accountability, trust, and participation with residents, which is markedly different from the pre genocide government, and provides an ideal environment for long-term improvement in service delivery.

From a synergy view, the current social relationships within Kirehe District have several positive aspects in relation to integrated rural development efforts. Communities feel that they are increasingly having a bottom-up impact on government institutions in Kirehe, which they did not have before the conflict. The local government has a positive relationship with the communities it serves, even if real services delivered remain low. Overall, the relationships between the community, the PCU, and local government are collaborative in nature, which is resulting in continued cooperation and positive synergy between groups. The

PCU is also taking steps to build local institutional capacity by working closely with the government and communities. This approach is slowly transferring project services from PAPSTA/KWAMP over to government institutions over the lifecycle of the projects, which should aid in the sustained impact of integrated rural development efforts in Kirehe District.

In terms of what policies PAPSTA/KWAMP can take to improve project impact and sustainability, it was difficult to draw specific conclusions from the data. However, the data demonstrated that the community development and capacity-building approaches of the projects are having some positive impacts on social capital relationships at all levels. While there is room for improving social capital levels and relationships across the communitarian, networks, institutions, and synergy viewpoints, the execution of the PAPSTA/KWAMP projects is taking these factors into account by closely collaborating with communities and government institutions in planning and execution. With PAPSTA/KWAMP ending soon in 2013 and 2016, the real question shifts to what policies should the Kirehe District government take to sustain the gains made in poverty reduction through the integrated rural development efforts of PAPSTA/KWAMP. In various ways, the data demonstrated that the Kirehe District government and the communities within it have shared understandings of how perverse social capital contributed to the genocide, and are realizing how building positive social capital relationships between communities and institutions can help Kirehe District recover. Though local institutional capacity to support communities in agricultural development is low, the collaborative social relationship emerging between communities and the Kirehe government is a key differentiator from pre conflict Rwanda. As local institutions in Kirehe continue to strengthen through their own efforts as well as through cooperative capacity-building assistance from projects like PAPSTA/KWAMP, this positive social relationship between communities and institutions will be a key facilitator to creating a well-functioning state that can actively respond to the needs of its citizens.

Examining social capital and using the synergy framework in this research case study was useful in understanding how integrated rural development projects in Kirehe District are helping a post conflict community transition from poverty to social and economic well-being. The findings demonstrated that building positive social capital relationships and governance capacity in institutions are intertwined with more obvious efforts to reduce rural poverty, such as agricultural intensification and environmental protection activities. While it is difficult to draw generalized conclusions from this limited case study, applying social capital models from the communitarian, networks, and institution views was useful in guiding

interviews. By switching between different views with each interviewee, research was able to draw out social issues impacting development efforts on various levels. The synergy model was also useful in gaining a holistic understanding of the social capital relationships between all actors. This approach could also be applicable to other case studies seeking to understand the variety of social capital relationships in a given area, and examining the aggregate results of numerous similar studies could help in validating or suggesting modifications to the social capital models used in this research.

## **8. Future Research Directions**

There is potential for further useful research in both this specific case and in a more general sense with social capital in post conflict areas. In terms of further research in Kirehe District, research could be expanded in terms of sample size and timescale. It would be interesting to do conduct further data collection with samples from outside the population of PAPSTA/KWAMP beneficiary farmers. Because PAPSTA/KWAMP is not active in every single sector throughout Kirehe District, talking to farmers who received no support from the project would provide a useful and different viewpoint in understanding the relationship between all communities in Kirehe, the PCU, and the local institutions. It is possible that farmers not participating in PAPSTA/KWAMP could feel less connected to local government, due to the fact that the projects have done much to foster bridging between the government and the communities where they are active. Conducting research over a longer timescale could also yield interesting data. As research was conducted at just a single point in time, looking at how perceptions of social capital relationships change over time could lead to useful conclusions. There is also room to examine social capital relationships in other post conflict areas. Rwanda is a notable case in how generally successful the post conflict government has been in restoring trust in accountable and transparent institutions. Conducting research in other successful post conflict nations, as well as in post conflict nations that have failed to recover, would contribute to a greater understanding of the various complex roles social capital relationships can have in the success or failure of development efforts in post conflict areas.

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## APPENDIX A: Interview and Focus Group Participants

### Individual Interviews

Aimable Shingiro (PAPSTA)

Amine (Farmer & KWAMP Beneficiary, Kanogo Village)

Didier Uhoraningog (PAPSTA)

Emile Rurangwa (PAPSTA)

Emmanuel Muhire (Kirehe District Government, Executive Secretary, Cyunuzi Cell)

Fautine Kamugisha (PAPSTA)

Janvier Gasasira (PAPSTA/KWAMP Project Coordinator)

Jean Leon Muhutu (PAPSTA)

Jean-Marie Vianney Sentaru (PAPSTA)

Jean Paul Habimana (KWAMP Rural Development Assistant, Kamombo & Ibanjamakera Watersheds)

Joseph (KWAMP Watershed Management Technician)

Jost Uwase (PAPSTA CCI Manager Gatore)

Judith (Kirehe District Government, Social Affairs Executive Secretary, Mubuga Cell)

Narcisse Rubayiza (PAPSTA)

Pacifique Kabanyana (KWAMP CCI Manager)

Pascaline Mutumwa (KWAMP CCI Manager)

Patrick Habiyaremye (PAPSTA)

Ramadhan (Farmer & KWAMP Beneficiary, Gatore Sector)

Raymond Kamwe (KWAMP Monitoring & Evaluation Assistant)

Rucibiraro Teresphore (Farmer & PAPSTA Beneficiary, Gakenke District)

Sebastian (Farmer & KWAMP Beneficiary, Gatore Sector)



Venuste Kayiranga (PAPSTA)

Verediane Twizerimana (KWAMP Natural Resources Officer/District Community Development Officer)

Vestine Nubuhoro (KWAMP Service Provider, Alupua Project Manager)

Viateur Karangwa (PAPSTA/KWAMP Monitoring & Evaluation Coordinator)

### Group Interviews

Duhuzimbaraga Cooperative (KWAMP, Nine representatives from Gatore Sector)

Gahezi & Kagogo Watershed Planning Committee Members (KWAMP, Four representatives)

Gahezi & Kagogo Watershed Farmers (KWAMP, Four farmers)

Gakenke Sector Farmers (KWAMP, Two farmers)

Gashonge & Kinnyogo Watershed Planning Committee Members (KWAMP, Four representatives)

Gashonge & Kinnyogo Watershead Farmers (KWAMP, Three farmers)

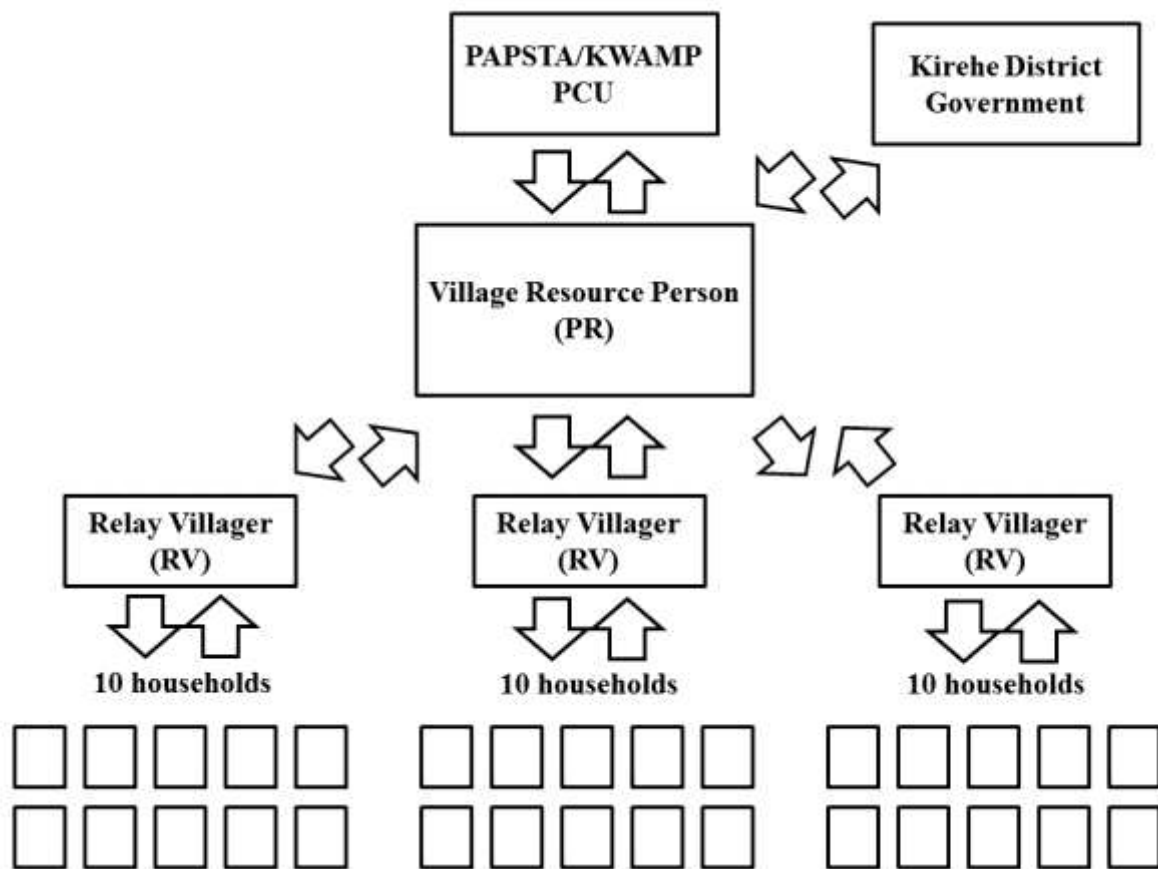
Kinoni & Mwoga Watershed Farmers (KWAMP, Six farmers)

Unnamed Gahezi Watershed Cooperative (KWAMP, Nine representatives from Musaza Sector)

## APPENDIX B: Interview Guide

- What is your name and relationship with the PAPSTA/KWAMP projects?
- Describe the long-term goals of the PAPSTA/KWAMP projects
- Briefly describe the structure of the PAPSTA/KWAMP PCU
- What is your job and what training have you had to perform it?
- Describe the activities and results of the PAPSTA/KWAMP projects
- Describe the relationship you have with others in your community
- Describe the relationship you have with the PAPSTA/KWAMP PCU
- Describe the relationship you have with the Kirehe District government
- In what areas could relationships improve?
- Do you feel you have an impact on how project activities are planned and executed?
- What do you think will happen to PAPSTA/KWAMP activities once the projects end? Do you think the local government will continue project activities on their own?

APPENDIX C: The PR/RV System of Top-Down and Bottom-Up Communication



This system was implemented as a top-down way for PAPSTA/KWAMP to disseminate information quickly and completely to each village while also strengthening community bonding and bridging. It was also intended to provide a system for bottom-up feedback from the lowest level. The Kirehe District government is currently co-opting this network to assist in local governance, and is considering formalizing the system as an official government institution.