

## **SURVEY RESPONSE AND DATA QUALITY ISSUES IN THE EVALUATION OF THE RWANDA THRESHOLD PROGRAM**

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### **A. Introduction**

The Millennium Challenge Corporation (MCC) is sponsoring a threshold program in Rwanda aimed at strengthening a variety of democracy and governance indicators.<sup>1</sup> The MCC board of directors announced Rwanda as a threshold country in November 2006. In October 2008, MCC signed a \$24.7 million threshold program agreement with the government of Rwanda. The three-year program supports the Rwandan government's efforts to strengthen civic participation, promote civil liberties and rights, and improve the judicial system. The program provides training, technical support, and grants to local and national civil society organizations (CSOs) and expands citizen engagement by supporting independent community radio stations. In addition, the program is designed to reinforce Rwanda's efforts to improve the capacity of its judiciary and enact legislative reforms that will strengthen civil liberties, human rights, and civic participation. Finally, the program provides training and technical assistance to journalists and the Rwandan National Police (RNP) in an effort to further transparency and professionalism. Mathematica Policy Research is designing a rigorous evaluation of these components to determine their ultimate impact on intermediate and long-term outcomes.

This paper provides a brief background on the intervention components, our proposed research design, and survey data collection methods. We focus on survey implementation and data quality issues arising from the difficulty of measuring Rwandan citizens' perceptions of their civil liberties, political rights, and voice and accountability against a backdrop of political repression, a cultural norm of obedience to authority, and the lasting impact of the 1994 genocide.

### **B. Background and Context**

Since gaining independence from Belgium in 1962, Rwanda has experienced political and civil turmoil over power and access to opportunities. The country still bears deep scars as a result of the 1994 genocide and civil war that claimed the lives of up to one million Rwandans. The 1994 genocide underscored the severity of tensions between the Hutu and Tutsi ethnic groups. The effects of the genocide continue to reverberate today, and remembrance of the violent events of 1994 plays a major role in Rwanda's national identity as the Government of Rwanda (GOR) continues to prosecute perpetrators of the genocide.

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<sup>1</sup> The MCC is a U.S. government agency that partners with developing countries that have demonstrated commitment to good governance, economic freedom, and investments in their citizens. There are two primary types of MCC grants: compacts and threshold programs. Compacts are large, five-year grants for countries that pass MCC's eligibility criteria, while threshold programs are smaller grants awarded to countries that come close to passing these criteria and appear to be committed to improving their policy performance.

Since 1994, Rwanda's political progress has been halting and uneven. The GOR has largely succeeded in providing for national and internal security, a necessary precondition for political and economic development. In 2003, Rwanda held national and legislative elections, establishing Rwanda as a nominal democracy. However, many of the gains that have been realized over the past 14 years have been offset by persistent criticism from international nongovernmental organizations (NGOs), human rights groups, and media organizations that the GOR is a de facto one-party state that stifles public dissent. Freedom House has classified Rwanda as "not free" and quotes some analysts who believe that Rwanda has become more repressive since the 2003 elections, in part due to the ruling Rwandan Patriotic Front (RPF) party's increased strength across government branches. Recently, the GOR has responded to this criticism by relaxing restrictions on political organization at local levels, but the consolidation of Rwanda's democratic institutions remains incomplete.

More controversially, the GOR has erected legally murky prohibitions against "genocide ideology" that have successfully prevented social strife but at the same time have also provided opportunities for government repression of legitimate political expression. For instance, fearing another violent release of ethnic tensions, the GOR severely limited freedom of expression for political parties, the media, and civil society (United States Agency for International Development 2005). Although a 2002 media law guaranteed freedom of the press, independent news coverage is minimal due to government intimidation and heavy reliance on government advertising (Committee to Protect Journalists 2009). Police harassment and intimidation have infringed upon the civil liberties of Rwandan citizens. The government has used laws against "divisionism" and "genocidal ideology" to persecute dissenters; these laws are vague and criminalize the freedom of speech and expression protected by international conventions (Amnesty International 2010). In addition, the GOR faces a backlog of thousands of court cases related to the 1994 genocide, hampering the country's justice system. In fact, in a 2007 democracy and governance survey of nine sub-Saharan African countries, Rwanda scored below most others in the areas of accountability, public voice, rule of law, and civil liberties (Freedom House 2007). Most recently, the 2010 presidential elections were marred by attacks on politicians and journalists critical of the ruling Rwandan Patriotic Front (Amnesty International 2010). The upcoming parliamentary and local government elections in early 2011 will be a further test of Rwanda's civil liberties and political institutions.

Attention to good governance is essential for a strong economy because it provides the setting for the equitable distribution of benefits from growth (United Nations 2009). Furthermore, decentralized accountability provides a regulatory framework that enables economic activities and growth (International Monetary Fund 2008). The GOR has been taking steps to address the country's civil liberties, political rights, and government accountability issues. For example, in the Economic Development and Poverty Reduction Strategy adopted by the GOR in September 2007, one of the key programs seeks to strengthen political and economic governance by building state capacity, public sector institutions, and regulatory and administrative frameworks for the country (World Bank 2009).

### **C. Overview of MCC Investments in Rwanda**

The Rwanda Threshold Program (RTP) has three broad components: (1) strengthening the judicial structure, (2) strengthening civic participation, and (3) promoting civil rights and liberties. The ultimate goals of these efforts are to strengthen the rule of law, civil liberties, and political rights, and to promote good governance and increased civic participation and policy making. In particular, the RTP seeks to improve the country's judicial and legislative capacity; deliver training and technical assistance to the RNP to enhance transparency and professionalism; train Rwanda's journalists and members of the media to enhance their professionalism and skills; and provide

training, technical support, and grants to CSOs at both the local and national levels to expand civic engagement.

Five core sets of activities contribute to these long-term outcomes, focusing on strengthening (1) the RNP Inspectorate Services, (2) the rule of law for policy reform, (3) the media, (4) civic participation, and (5) civil society. Figure 1 on the following page summarizes the key components of the five interventions and their intended intermediate and long-term outcomes.

## D. Overview of Evaluation Design

Following a review of each component, its implementation, various feasible design options, available data, and discussions with implementers, Mathematica and MCC determined that three of the five RTP programs could be feasibly evaluated in a rigorous manner: (1) Strengthening the RNP Inspectorate Services, (2) Media Strengthening, and (3) Strengthening Civic Participation. Table 1 shows the RTP components, targeted activities, and evaluation design.<sup>2</sup> In the following sections, we discuss the activities and the proposed evaluation designs in greater detail.

**Table 1. Evaluation Designs for Targeted RTP Activities**

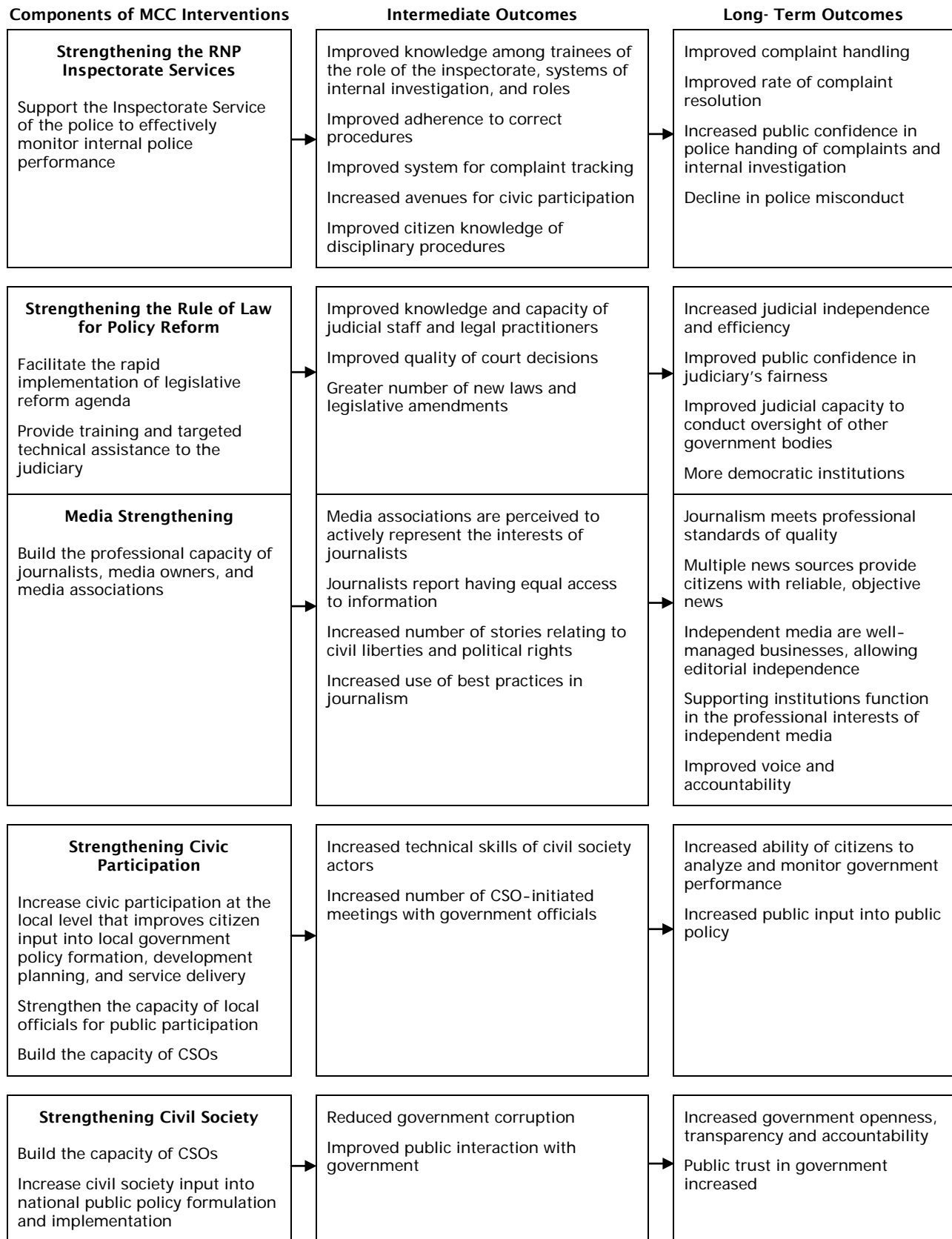
RTP	Targeted Activity	Evaluation Design
Strengthening RNP Inspectorate Services	Collecting citizen complaints	Comparison group design
Media Strengthening	Supporting community radio	Pre-post design
Strengthening Civic Participation	Training district and sector government officials and CSOs	Pairwise random assignment

### 1. Strengthening RNP Inspectorate Services

The RNP-strengthening program, known as “Every Voice Counts,” is a two-year initiative implemented by the U.S. Department of Justice’s International Criminal Investigative Training Assistance Program (ICITAP). The program focuses primarily on establishing a public system, through the Office of Inspectorate Services, for collecting and resolving citizens’ complaints about police conduct. The program also provides training to RNP staff on internal investigation and internal audit methods and supports several public outreach activities of the RNP.

<sup>2</sup> Our assessment was that it would be very difficult to conduct any type of experimental or quasi-experimental assessment of the Strengthening the Rule of Law component or the Strengthening Civil Society component (or any of the activities within these components). This is largely driven by the nature of the intervention or how it is being rolled out (typically the issue is that very small numbers of participants/organizations are treated, and usually they all will be offered the intervention at the same time).

Figure 1. Conceptual Framework



Every Voice Counts began in August 2009. One of the key activities under this program is the creation of “blue boxes,” wherein local residents can lodge complaints or commendations. Currently, there are about 230 blue boxes in 25 districts. The program will eventually distribute a total of about 250 boxes across all 30 districts in Rwanda.<sup>3</sup> Each box is posted in a public space (for example, local government administrative buildings, universities, or medical facilities). A box is typically introduced to local residents by a community leader, either during the installation of the box (if an audience is present) or during a local administrative meeting. Each box is prominently labeled with filing instructions, and includes forms that solicit complaints or commendations about the police.

We determined that random assignment was not feasible, given that the program had already rolled out in most districts by the time the evaluation planning started. Thus, we plan to use a comparison group design to assess the effects of the system on citizens’ use and knowledge of RNP disciplinary procedures and confidence in how the RNP handles complaints. In this comparison group design, we surveyed households that live near the posted boxes as our “treatment” sample. The comparison group is made up of either (1) citizens living in sectors (political subdivisions within a district) that do not have boxes or (2) citizens who have boxes in their sectors but live in other cells or villages than the one in which the box has been placed. One concern with this design is that, because the system has already been partially implemented, it was not possible to collect true baseline data for the program. However, we plan to conduct a second phase of the survey such that the first phase occurred while the program is still in place and the second phase will occur a year later in early 2012, after the program has ended. This may provide useful descriptive evidence of changes in outcomes over time.<sup>4</sup>

## **2. Media Strengthening**

The Media-Strengthening Program, a two-year initiative implemented by the International Research and Exchanges Board (IREX), focuses primarily on building professional journalism skills. The program includes a number of secondary activities, such as providing information technology (IT) instruction and equipment to educational centers, conducting business and marketing workshops for media organizations, establishing two new community radio stations, promoting youth media activities, and supporting organizational capacity building for Rwanda’s four media associations. A secondary activity is to establish two community radio stations to support the dissemination of news from nongovernmental sources.

Given the nature of the interventions, the most feasible design for this component is a pre-post design. The evaluation will be based on surveys of citizens living in the broadcast regions of the two RTP-supported radio stations (we will also explore the feasibility of developing a comparison group of people who do not receive radio broadcasts; however, we suspect this will be challenging). Conducting data collection at two points in time would permit a “pre” and a “post” comparison—

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<sup>3</sup> Rwanda is organized into five provinces and subdivided into 30 districts. The 30 districts consist of 416 sectors. These sectors are further subdivided into 2,148 cells, which are further divided into villages (for a total of 15,000 villages).

<sup>4</sup> In addition, we are exploring the feasibility of accessing RNP administrative data on complaint filings and disciplinary actions. If these data become available, it might be possible to supplement the findings from our survey with a descriptive analysis of trends in the number and types of citizen complaint filings, the RNP’s actions in response to filings, and the resolution of complaints.

we conducted a baseline survey before station operations became operational and will complete a follow-up survey one year later in early 2012 (after programming begins). The survey focuses on citizens' awareness of community radio programming, local current affairs, and perceptions of access to reliable, objective local news.

### **3. Strengthening Civic Participation**

The local civic participation program, implemented by the Urban Institute (UI), is a three-year initiative with two focus areas: (1) supporting the efforts of CSOs to advocate for local issues and (2) training local government officials to increase responsiveness to the concerns and priorities of citizens. To implement the program, UI first conducted a baseline diagnostic assessment of needs within each district. This diagnostic helped program staff assess the capacity of the government and CSOs to participate in civic activities at the district level and also within a subset of two or three sectors within each district (on average, each district has 15 sectors). The results of the diagnostic were used to develop district-specific work plans for training activities targeting civil society and local government officials. In addition to activities targeting the district and sector needs identified by the diagnostic, UI will provide every district with support related to participatory budgeting, citizen report cards, and community scorecards. The participatory budgeting activities will initially focus on simplifying national-level budget information provided by the Ministry of Planning and providing synthesized information, translated into Kinyarwanda, for local government staff and CSOs.

The program will eventually reach all 30 districts in Rwanda and is being implemented in two phases: 15 districts will receive the program in Year 1 and the remaining 15 districts will receive the program in Year 2. Phase I districts will also receive input on the fiscal year (FY) 2011–2012 district development plans, which will be used in the budget planning process slated to begin in January 2011. UI implemented a pairwise random selection process, assigning districts to Phase I and Phase II. This process divided each province's districts evenly between the two phases, stratifying the random selection process within each province to ensure the best possible match between the two phases on the following characteristics:

- Population change between 2002 and 2006
- Population density
- Common Development Fund (CDF) appropriation amounts for FY 2008 (as a proxy for poverty levels)
- Share of district spending obtained through local revenues in FY 2008
- District expenditure per capita on good governance and social affairs

Within each province, UI matched districts in pairs or groups of three, seeking the best possible matches across the five characteristics. UI then used a public lottery selection procedure to assign districts within each pairing to either Phase I or Phase II. This nationwide selection process was completed in June 2010.<sup>5</sup> The district assignments are shown in Table 2.

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<sup>5</sup> We analyzed the data and did not find statistically significant differences between the Phase I and Phase II districts on any of the characteristics used in the pairwise matching process, suggesting that the random assignment

**Table 2. Evaluation Outcomes of Interest**

Program	Outcomes of Interest
Strengthening RNP Inspectorate Services	<ul style="list-style-type: none"> <li>• Understanding among citizens regarding disciplinary procedures</li> <li>• Confidence in how the police handle complaints</li> <li>• Perceptions of improved police conduct</li> </ul>
Media Strengthening	<ul style="list-style-type: none"> <li>• Awareness of community radio station broadcasts and programming</li> <li>• Knowledge of local current affairs</li> <li>• Access to reliable and objective news sources</li> </ul>
Strengthening Civic Participation	<ul style="list-style-type: none"> <li>• Ability of citizens to analyze and monitor government performance</li> <li>• Knowledge of mechanisms and opportunities for citizen participation</li> <li>• Public input into local policymaking and governance</li> <li>• Satisfaction with government service provision</li> </ul>

We conducted a baseline survey in early 2011 before program activities began, which will be followed by an outcome survey before Phase II activities begin a year later. This process will enable us to compare a treatment group of districts and a control group of districts to determine the program's impacts on how citizens analyze, monitor, and provide input on local policymaking decisions.

## E. Survey Implementation

We conducted a baseline nationwide citizen survey in early 2011 that covered all three programs. The primary outcomes of interest for the RTP that we attempted to measure in the survey are found in Table 2 (we described other intermediate and longer-term outcomes measures in the conceptual framework in Table 1).

### 1. Household and Respondent Sampling Methods

The baseline survey had a target sample size of 10,000 respondents overall. To ensure that the sample was representative and widely distributed across the country, sample targets were calculated at the sector level. Using the most recent national census, we calculated the proportion of the national population within each sector. We then determined the number of individuals to survey in each sector by applying that proportion to our targeted sample size of 10,000.

Ideally, a list of all households from which a sample household for the baseline survey can be drawn would serve as the sampling frame. Because the most recent census of people in Rwanda was conducted in 2002 and enumeration was prohibitively time-consuming and expensive, we determined that a household list could not serve as the basis for a sampling frame. As a result, we used a random walk method. The random walk method includes two separate steps: (1) choosing a

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*(continued)*

process successfully established treatment and control groups of districts with baseline equivalence on each of the characteristics for which data is available.



starting point and (2) selecting households from that point onward. Because maps of villages or households in rural areas were not available, we used the EPI random walk method of spatial sampling used by the World Health Organization in low-income countries and named after the Expanded Programme of Immunization (Bostoen and Chalabi 2006). In the EPI method, a location near the center of each selected community is first identified, such as the city hall or church. Then a random direction is chosen (often done in the field by spinning a bottle or pen). Households are then chosen according to a predetermined random selection process. For example, interviewers select a number at random and count households until they reach that number. Interviewers then repeat this process to select each subsequent household.

To operationalize the EPI method for this survey, a central location in each sector was identified. Most commonly this was the sector government office. Then interviewers placed their back to the door and selected a number from one to six from a bag. If the number was even, interviewers turned right and proceeded to walk. If the number was odd, interviewers turned left and proceeded to walk. Interviewers counted the number of households they passed until they reached the number they had selected from the bag. They then selected a person to interview in that household, using the process described below. Once the interview was complete, they repeated the process, picking a new number from the bag and continuing in the same direction, until the target number of completed interviews was achieved.

To ensure the sample contained an appropriate distribution of gender, age, and other characteristics, an adult respondent age 16 years or older was selected at random within each selected household. First, the interviewer spoke with an informant in the household to establish a list of all adults age 16 or older living in the household during the past month. Then the interviewer picked a number from one to six from the bag and counted through the list of adults to select the primary respondent. If the number selected was greater than the number of potential respondents in a given household, the interviewer simply counted through the end of the list and then started at the top again. If the selected respondent was available, the interviewer proceeded to interview that person. If an informant or the selected respondent was not available or refused, the interviewer marked the questionnaire as spoiled and proceeded to select the next household. Interviewers were instructed not to replace an absent respondent with another adult in the household.

## **2. Questionnaire Design**

The baseline survey questionnaire focused on activities implemented under three different programs of the RTP: (1) Media Strengthening, (2) Strengthening Civic Participation, and (3) Strengthening the Rwanda National Police (RNP) Inspectorate Services. Within each of these programs, the questionnaire was developed to gather specific information on program activities (that is, inputs) and potential program outcomes (presented in Table 3). Each of the 10 outcomes of interest was targeted directly by a set of questions in the questionnaire. The questionnaire included the following modules:

- **Demographic Information.** This module included questions about the respondent's name, age, gender, relation to the head of household, level of education, and the household residency status of each person associated with the household. After collecting this information, the selected respondent answered questions about preferred and primary languages spoken, household density in the area, his/her profession, and economic indicators, such as having eaten meat during the past two weeks and ownership of assets like radios and mattresses.



- **Media/Radio (Services and Programming).** This module asked about the radio stations that respondents listen to, where they find local, national, and international news, and the types of programming they enjoy.
- **Local Media/Radio (Services of MCC-Funded Radio Stations).** This module was only administered to respondents who lived in districts that will receive MCC-funded radio station signals (scheduled to begin broadcasting in mid-2011). The module contained questions about if and how often a respondent listened to the local station, its level of broadcasting in the respondent's desired language, and its coverage of international, national, and local events, including government elections. Because these stations have not yet started broadcasting, this series of questions provided an indicator of a respondent's propensity to respond to these questions accurately.
- **Civic Participation (Activities).** This module asked respondents about their participation in government elections as well as their involvement in local civic meetings such as District Development Plan reviews and Accountability Days. Respondents were asked to estimate how many people attended these meetings, the nature of citizen input, and the perceived impact of this input on government officials. Finally, respondents were asked about specific requests or complaints that they have made to government officials, as well as the response they received to those communications.
- **Civic Participation (Opinions and Perceptions).** This module asked more broadly about government transparency and trustworthiness, including the respondent's access to information about local government finances.
- **Government Services.** This module asked about respondents' experiences with government responsiveness regarding requests related to water services, local road conditions, waste collection, public schools, and health clinics. This section also asked respondents to identify their general level of satisfaction with these services.
- **Rwandan National Police (Complaint/Commendation Procedures).** This module asked questions about respondents' knowledge of the RNP complaint/commendation system (also known as "blue boxes"), the accessibility of blue boxes, and respondents' past use of the boxes. This section also asked if respondents believed that police officers read and/or responded to the complaints and commendations in the blue boxes.
- **Rwandan National Police (Confidence in Police).** This module asked respondents to assess if and how the blue boxes have impacted police behavior and corruption, including the ability and willingness of police to respond to specific complaints and crimes.

The questionnaire was written in English and translated into Kinyarwanda by independent translators in Kigali, Rwanda. The questionnaire was reviewed by staff at USAID and Government of Rwanda (GOR) officials to ensure that the translation accurately reflected the intended meaning in the local context. The final English version of the questionnaire can be seen in Appendix A.

### **3. Pilot Study**

The questionnaire was tested in a pilot study of 100 respondents across three districts: Kamonyi, Muhanga, and Ruhango. Each district was visited by one team of six interviewers; there were 18 interviewers in total. Four observers also participated in the pretest—one from the Rwandan National Institute of Statistics, one from USAID Rwanda, and two senior supervisors. The

purpose of the pilot study was to test (1) the clarity of the survey questions, (2) the sampling procedure, and (3) the ability of interviewers to meet production goals.

Based on respondent feedback to the pretest, several small translation revisions were made and a short introduction was added to the civic participation module to address respondent concerns regarding questions that many could not answer. Additionally, at the suggestion of the observers, questions were changed from Likert Scale queries to a “yes/no” format followed by questions regarding the degree of respondent opinion. The observers suggested this change as a way to facilitate the interview by adhering more naturally to the thought process most respondents appeared to take. This modification did not alter question content but did shorten the interviews.

Small problems with the sampling procedure were identified as well. The main problem concerned the informants; almost all interviewers encountered households where domestic employees were the only people at home. These employees were often unable to answer questions about members of the household. They were also reluctant to respond to the survey if they were selected. This issue was resolved by clarifying to interviewers that the primary respondent should be selected from a full list of household members, including the household employee if he/she lived in the household during the past month. If the employee was unable or unwilling to list the members of the household, this should be noted and the interviewer should proceed to select the next household.

#### **4. Data Collection**

To carry out the data collection activities, Mathematica selected a local data collection firm, which was responsible for the following:

- Translating and pretesting the questionnaires
- Writing Terms of Reference and contracts for the field interviewers and controllers
- Hiring and training field interviewers and supervisors
- Ensuring proper dispatch of the field interviewers and supervisors to the survey sites
- Undertaking field supervision during the data collection to identify and correct problems
- Maintaining regular communication with the Mathematica team by sending biweekly progress reports and rapidly communicating any problems encountered

Before the start of data collection, the data collector trained 72 interviewers. The training addressed the study’s objective and structure, the random selection process for households and respondents, basic interviewing procedures, and a review of each question to ensure that interviewers understood its intent. Interviewers practiced administering the interview and then shared potential issues and feedback. During training, interviewers were split into 12 groups of six, with one interviewer acting as each group’s coordinator and liaison to the supervisors. Each group had its own vehicle and traveled independently based on a schedule. Three supervisors coordinated this process through consistent contact with interview team leaders.

Baseline data collection took place between January 15 and February 8, 2011, progressing from the Northern Province to the Eastern Province, Southern Province, Western Province, and finally to the greater Kigali area. Mathematica observed interviews during the first three days of data collection to confirm that all interview protocols were being followed appropriately, including random

selection of both households and respondents. Effective communication between coordinators, supervisors, and Mathematica staff during this time ensured that questions and issues were resolved immediately.

## 5. Response Rate

The response rate for the survey was 96.3 percent. This rate was calculated by dividing the number of completed surveys (9,619) by the total number of sampled households (9,990). The final number of completed interviews was 10 fewer than the goal of 10,000 due to timing constraints over the course of data collection. Because of the need to travel between sectors on a tight schedule, in a few instances supervisors directed individual interviewer teams to proceed to the next sector without finishing the anticipated number of completed questionnaires.

## F. Challenges

Collecting data from individuals on sensitive outcomes is challenging in any context, let alone in a developing country. It is unclear whether well-used methods for asking sensitive questions—such as placement, demonstrating relevance to the research purpose, reassuring respondents of confidentiality, and diplomatic wording—had the desired effect and prompted open and honest disclosure in this context. Conditions in Rwanda that could limit respondents’ willingness to respond truthfully to questions about the rule of law, media, and civic participation include a repressive government, a culture of deference to authority, and the lasting effects of the genocide and ethnic tension. Combined, these might result in respondents who are reluctant to be seen as critical of the government and who are fearful of expressing negative opinions. In Table 3, we offer an outline of the data quality issues we encountered in this context. Below, we discuss further how this context affected data quality issues related to questionnaire development and survey implementation.

**Table 3. Data Quality Challenges**

Study Phase	Data Quality Challenge
Questionnaire Design	Lack of existing previous governance and civic participation survey questionnaires Rwandan government control over data collection efforts
Survey Implementation	Decision to use paper questionnaires Household and respondent random assignment procedures Rwandan cultural norms/practices

### 1. Questionnaire Development

There are two main issues that may affect data quality in this study: the lack of existing survey questionnaires focusing on governance and civic participation, and Rwandan government control over data collection efforts.

The first issue is a general lack of existing surveys focusing on governance and civic participation issues in developing countries; we were able to find none that had been implemented in Rwanda. Further, the existing surveys we were able to identify provided few examples of questions related to key outcomes of interest in this study, such as the quality of citizen participation, and citizens’ perceptions of agency relative to the government. We were able to incorporate items from some recent questionnaires used in governance surveys in developing countries, including the Afrobarometer Round 4 Democracy and Governance in Uganda Survey (Afrobarometer 2008), the

South African Social Attitudes Survey: Role of Government IV (Human Sciences Research Council 2006), the Social Audit of Local Governance Household Survey 2006 (Prism Research 2006), and the Social Cohesion in Rwanda Opinion Survey (National Unity and Reconciliation Commission 2007). Using items from these surveys did enhance our confidence in the face validity of our questionnaire. However, many items had to be newly developed and were not tested for reliability or validity.

The questionnaire design process was also impacted by the political climate of Rwanda; a key requirement was that the National Institute of Statistics must approve the research and sampling plan, as well as questionnaires in both English and Kinyarwanda. While this process is intended to ensure proper methodological oversight of any data collection in Rwanda, the institute has broad authority to approve, reject, or require changes to survey designs. As a result, we were particularly focused on how the survey questionnaire might generate political concerns, given questions about political freedoms and government performance. With the help of the local data collector, USAID, and the implementing partners, we maintained an open dialogue with the institute and other key government stakeholders and were able to obtain approval with minimal changes. However, this requirement did cause us to carefully consider each question we wanted to pose on the survey questionnaire, and led us to discard some that we felt were too politically sensitive.

## **2. Survey Implementation**

Several factors related to survey implementation may affect data quality. These include using paper questionnaires, household and respondent random selection procedures, and specific Rwandan cultural norms and practices.

The survey was conducted using hard copy, paper questionnaires rather than using a computer assisted personal interviewing (CAPI) system such as a PDA or laptop. Hard-copy questionnaires were significantly less expensive in that no hardware or programming was necessary. However, hard-copy versions also allowed for unclear markings, skip pattern errors, and handwriting and spelling problems. Text variables presented a particular challenge for data cleaning procedures, and it was necessary to review each open-ended item for common spelling variations, as well as to scan neighboring variables for interviewer errors such as the reversal of village and sector name. While these efforts have been successful, ongoing examination of text variables may continue to improve data quality further.

An additional challenge was the protocol for household and respondent random assignment. Interviewers found that in many households few or no adults were present during the day, leading to difficulties or confusion for interviewers trying to implement random respondent selection. During the data collection period, we addressed this problem by establishing procedures for interviewers to follow in the case of absent respondents. If the respondent was not home at the time of the interview, interviewers were instructed to move to the next randomly selected house and repeat the household roster and respondent selection process there. The case of the absent respondent was marked spoiled. To assess potential nonresponse bias, we compared demographic variables in the data set to demographic data on Rwanda available from the World Health Organization and World Bank (see Table 4, below). We found that respondents' demographic information matched closely to national demographic data.

**Table 4. Survey Sample Demographics, Compared to Alternate Data Sources**

	Survey Sample	Alternate Data Source
Population over 60	.06	.04 <sup>a</sup>
Population over 65	.04	.02 <sup>b</sup>
Female	.55	.52 <sup>b</sup>
Survey nonresponse rate	.04	

Note: Alternate data sources represent proportions of the total population in Rwanda, regardless of age. The survey sample did not include respondents under the age of 16, so the survey proportions are not perfectly comparable to those found in alternate data sources.

<sup>a</sup>World Health Organization Statistics 2008. Data from the World Health Organization represent a proportion of the total Rwandan population in 2008.

<sup>b</sup>World Development Indicators Online, World Bank Group, 2010. Data from the World Development Indicators represent proportions of the total population as of 2009.

This simple cross-check confirmed that the survey sample is broadly consistent with Rwandan demographics for age and gender, as reported by the World Health Organization and the World Bank’s World Development Indicator surveys. There may have been some slight undersampling of men in our survey, but even if that is the case, the magnitude of the undersampling is not very large and may be entirely accounted for in the survey’s nonresponse rate.

Further analysis is necessary to estimate potential bias, however. Despite these encouraging results, it is possible that this method may have yielded a pool of respondents who do not reflect Rwandan society on unobservable or unmeasured characteristics.

Finally, and perhaps most importantly, we encountered implementation challenges related to cultural norms and practices. Many of these challenges were related to a culture of deference to authority. During the pretest, for example, interviewers reported that some respondents were uncomfortable or upset at being asked questions that they felt they were not educated enough to answer, including questions about elections and government responsiveness. We addressed these concerns by adding an introductory statement to be made by interviewers explaining that we were interested in everyone’s opinion, regardless of background or knowledge. We also emphasized confidentiality of results and the usefulness of the data. Analysis of acquiescence or nondifferentiation may help estimate the impact of this problem.

A related issue is the sensitive nature of the questions paired with the authoritarian nature of the Rwandan government. Collecting data from individuals on sensitive outcomes is challenging in any context. In addition to cultural deference to authority, a repressive government, the lasting effects of the genocide, and ethnic tensions may also have contributed to respondent reticence. There are examples of successful data collection efforts on sensitive topics in Rwanda; however, most of these focus specifically on the genocide and its impact. Respondents might be more willing to provide information about this topic given the government’s and other institutions’ extensive programs aimed at discussion of this event and reconciliation. In the context of our survey, we feared that many of the methods typically used for asking sensitive questions—such as demonstrating the relevance of the research, reassuring respondents of confidentiality, and wording questions diplomatically—would not be as helpful as they might be elsewhere. Instead, we found that norming statements, hypothetical questions, and basic government knowledge questions (such as the names of local officials) allowed respondents to answer truthfully while providing insight into their level of civic engagement. Ultimately, though sensitive questions such as those regarding police behavior or

government corruption exhibited low response variability, the measures noted above are a first step in addressing cultural and political issues of respondent reticence.

## **G. Discussion**

This effort may yield some useful insights into survey methods, both in the Rwandan context as well as in efforts to measure democracy and governance concepts generally. Three key conclusions arise from our experience: the adaptability of proven methods for evaluating sensitive concepts, the need to triangulate difficult-to-measure concepts, and the importance of assessing the development of measures in this area.

Throughout the survey design and implementation, we turned to existing methods as a basis for solving problems. We considered how sensitive questions, such as those that relate to sexuality or drug use, are posed in other contexts, and attempted to adapt those approaches to this study. For example, norming statements, or statements which preface a question indicating that no one view is correct or right or that many people may or may not engage in a behavior, proved to be useful in questions about views of police corruption or government officials' responsiveness. In other situations, existing methods, such as the random walk method, could be implemented without much difficulty in this context (although, given the hilly terrain in Rwanda, it had to be adapted in some ways). As a result, we conclude that it may be possible to build on existing methods to develop survey questions and procedures that promote more honest, less biased responses to such question in this context. However, close attention to local culture and local context is necessary, as is an understanding that what works elsewhere may not work in Rwanda. As such, the importance of careful pretesting and qualitative work in questionnaire and survey procedures development is essential. Similarly, key informant interviews might help to refine survey questions and procedures, and interpret survey results

We also feel that this study reinforces the idea that triangulation could be an effective method to determine if responses are biased. For example, direct observation of participation in government meetings may prove to be a useful lens through which to interpret the survey results. Similarly, reviewing RNP administrative data on complaints and their resolution may be a helpful foil in assessing the degree to which the program resulted in an effective means of dealing with police corruption.

Most importantly, we think that it is rare to evaluate these types of programs using survey data collection focusing on citizen perceptions—particularly in this context. This is both a new concept and a new context for survey research. As such, it is clear that more work needs to be done and that survey practitioners should evaluate and share best practices.

## REFERENCES

- Afrobarometer. "Afrobarometer Round 4: The Quality of Democracy and Governance in Uganda." Questionnaire. Legon-Accra, Ghana: Afrobarometer, 2008. Available at [[http://www.afrobarometer.org/index.php?option=com\\_content&view=article&id=106&Itemid=33](http://www.afrobarometer.org/index.php?option=com_content&view=article&id=106&Itemid=33)]. Accessed October 13, 2010.
- Amnesty International. "Pre-Election Attacks on Rwandan Politicians and Journalists Condemned." London, UK: Amnesty International, 2010.
- Bostoen, Kristof, and Zaid Chalabi. "Optimization of Household Survey Sampling Without Sample Frames." *International Journal of Epidemiology*, vol. 35, no. 3, June 2006, pp. 751–755.
- Committee to Protect Journalists. "Report 2009 on Press Freedom: Rwanda." New York: Committee to Protect Journalists, 2009.
- Freedom House. "Countries at the Crossroads 2007." Washington, DC: Freedom House, 2007.
- Human Sciences Research Council. "South African Social Attitudes Survey." Questionnaire, International Social Survey Program—Role of Government IV. Pretoria, South Africa: HSRC, 2006. Available at [<http://www.hsrc.ac.za/Publication-Keyword-45.phtml>]. Accessed October 15, 2010.
- International Monetary Fund. "Rwanda: Poverty Reduction Strategy Paper." Washington, DC: International Monetary Fund, 2008.
- National Unity and Reconciliation Commission. "Social Cohesion in Rwanda." Kigali, Rwanda: National Unity and Recon, 2007. Available at [[http://www.nurc.gov.rw/index.php?option=com\\_content&view=article&id=65:social-cohesion-in-rwanda&catid=35:reseaches&Itemid=40](http://www.nurc.gov.rw/index.php?option=com_content&view=article&id=65:social-cohesion-in-rwanda&catid=35:reseaches&Itemid=40)]. Accessed October 14, 2010.
- Prism Research. "Social Audit of Local Governance." Questionnaire. 2006. Available at [[http://siteresources.worldbank.org/INTSOCACCEMSEGOV/Resources/Prism\\_Social\\_AuditinBiH\\_SurveyQuestionnaire\\_final.pdf](http://siteresources.worldbank.org/INTSOCACCEMSEGOV/Resources/Prism_Social_AuditinBiH_SurveyQuestionnaire_final.pdf)]. Accessed October 14, 2010.
- United Nations. "Global Issues: Governance." New York: United Nations, 2009.
- United States Agency for International Development. "Democracy and Governance in Rwanda." Washington, DC: USAID, 2005.
- World Bank. "Country Brief: Rwanda." Washington, DC: World Bank, 2009.