

Myanmar NCDDP Social Inclusion Evaluation  
Pre-Analysis Plan  
January 21, 2020

## 1. Introduction

This pre-analysis plan outlines the research design and empirical approach for the Social Inclusion Evaluation (SIE) of the Myanmar National Community Driven Development Project (NCDDP). The stated Project Development Objective of NCDDP is to *enable poor rural communities to benefit from improved access to and use of basic infrastructure and services through a people-centered approach and to enhance the Recipient's capacity to respond promptly and effectively to an eligible crisis or emergency.*

The SIE aims to evaluate this objective by supplementing existing monitoring and evaluation data with new data on many of the indicators established in the Results Framework of the NCDDP Additional Financing Project Document. In addition to the Results Framework indicators, the SIE will also focus on outcomes relevant to the social inclusion goals of NCDDP. It is important to note that, because of challenges in obtaining a true counterfactual group,<sup>1</sup> the SIE is not designed to attribute any changes or variation in outcomes directly to NCDDP projects. However, the SIE will enable the government and stakeholders to gain new and timely information on access and use of services, levels of community participation and social cohesion, and participation and satisfaction with NCDDP. Data collected from this 2019 SIE can also serve as an important baseline to assess changes over time as NCDDP continues implementation.

## 2. NCDDP Project Overview

NCDDP was launched in 2013 in the early stages of Myanmar's reform process. It was the first World Bank financing in Myanmar in 25 years, the first donor program to operate through government systems, and the first government program that explicitly aimed to give communities a central role in planning and decision-making as part of the country's "people-centered development" transition. By trusting communities to lead their own development activities and partnering with national and local government actors and NGOs, the NCDDP broke new ground in the country's efforts to promote bottom-up planning and community participation and reverse five decades of centralized planning and governance.

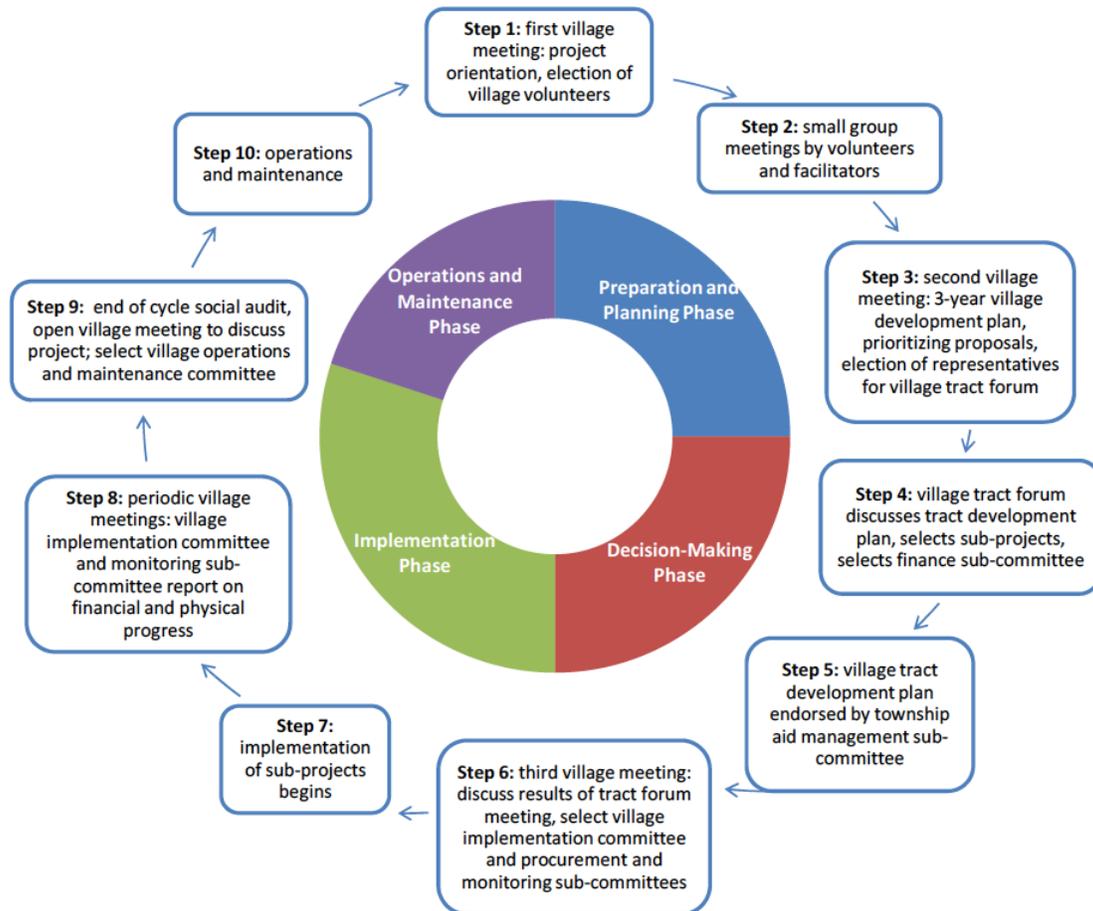
NCDDP is implemented by the Department of Rural Development (DRD) in the Ministry of Agriculture, Livestock and Irrigation. The Project provides technical support and annual grants to village tracts to enable communities to prioritize, design and implement community-level infrastructure improvements. Trained facilitators support communities in developing village plans and provide training on financial management and procurement, while communities elect

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<sup>1</sup> See Section 4 (Study Design) for more details.

representatives by secret ballot to serve on village and village tract committees. Figure 1 below summarizes the life cycle of a single project at the community/village level.

**Figure 1: Project Cycle at the Community Level**  
(source: NCDDP Project Paper 2012)



Targeting of NCDDP is non-random and is driven largely by equity considerations with a goal of covering every state and region in the country. At the beginning of the project, townships in each state/region were chosen based upon poverty rates (using administrative data and other available data such as food security, school enrollment and other available proxy indicators) and criteria such as the absence of similar projects in the area, willingness and capability of the township authorities to implement the project and a minimum level of peace and stability in the township to allow for safe implementation and supervision of the project. Within a selected Township, every village tract is targeted. At the village tract-level, block grant amounts are based on the i.) village tract population and ii.) number of villages within the village tract and are

allocated through a participatory planning process covering all villages within a village tract. The Project also engages ‘unregistered villages’, or villages that are not in the official General Administration Department (GAD) village listing. The annual block grant averages about US\$33,000 per village tract. The infrastructure financed includes small feeder roads, footpaths and bridges, water supply systems, rehabilitation of class rooms and health centers, and small-scale rural electrification.

### 3. Hypotheses and Outcomes

The stated Project Development Objective for NCDDP (Additional Financing) is *to enable poor rural communities to benefit from improved access to and use of basic infrastructure and services through a people-centered approach and to enhance the Recipient’s capacity to respond promptly and effectively to an eligible crisis or emergency*. This objective is achieved through: (i.) financing community-identified rural infrastructure investments; (ii.) strengthening the capacity of communities in partnership with local authorities to effectively identify, plan and implement their development priorities; and (iii.) facilitating the participation of the poor and vulnerable, both women and men, throughout the project cycle at the community level.

Although the SIE is not designed to test the causal effects of NCDDP, it is designed to provide critical insight on key indicators that are relevant to the government and other stakeholders. The SIE focuses on two main sets of outcomes.

First, the SIE measures several indicators from the Results Framework, including Project Development Objective level indicators and Intermediate Results indicators. These measures will supplement existing monitoring information systems data. Table 1 below lists Results Framework outcomes that are included in the SIE along with how they are measured and the corresponding question number in both the Household and Village Administrator instrument.

**Table 1: Hypotheses/Outcomes from Results Framework**

Hypothesis/Outcome	Indicators	HH <sup>2</sup>	VA <sup>3</sup>
1. NCDDP increases access to basic infrastructure/services (roads, water, schools, electricity, etc.)	i. access to protected water source in dry/rainy season ii. distance to water source in dry/rainy season iii. access to electricity iv. availability of main village access road v. access to school facility vi. access to community center vii. access/benefits from NCDDP projects viii. utilization of specific NCDDP projects ix. barriers to access/utilization of NCDDP projects	D2-3 D4-5 D9-11 D23 D29 D39-40 G15, G12 G18 G16, G18D	D2-4 D6-10 D12-16 D23a,f,g D26 G7h, G7j G7i,k
2. NCDDP involves at least 50% of households in the	i. participation in NCDDP planning and implementation ii. barriers to participation in NCDDP	H2a-g, H5-6 H7-8	H5a-g

<sup>2</sup> Values in the HH column represent question number(s) in the *Household* survey.

<sup>3</sup> Values in the VA column represent question number(s) in the *Village Administrator* survey.

planning, decision-making, and implementation of projects			
3. At least 80% of community members are satisfied with NCDDP projects	i. satisfaction with NCDDP project ii. satisfaction with NCDDP project infrastructure iii. reasons for dissatisfaction iv. reported problems with NCDDP	G24a G24b G25 I3	G7n,  G7q G7I, I3-4
4. At least 90% of NCDDP projects are considered a high priority by community	i. projects considered helpful for the village ii. households viewing NCDDP as overall helpful for village iii. reporting selected activities were not important	G19 I1  I2a	G7m I2  I3a
5. NCDDP provides government officials and community members with new skills	i. community members reporting acquisition of new skills ii. types of skills	H3  H4	H1  H2
6. NCDDP provides grievance mechanism and effectively responds to complaints	i. knowledge of NCDDP grievance tool ii. satisfied with response/resolution from grievance tool	I7 I7B	I5 I6

Second, the SIE also focuses on outcomes related to the Project’s emphasis on social inclusion. In particular, the SIE will measure general levels of community participation and social cohesion, perceptions about NCDDP’s effects on community participation and social cohesion, and perceptions about the inclusivity of NCDDP’s implementation and its effects. Finally, although the SIE cannot tie results directly to NCDDP, the instruments do include questions that attempt to measure whether respondents believe the quality of key services have improved within the time that NCDDP has been operating in the village. These social inclusion and perceived changes in service quality outcomes are listed in Table 2 below, along with their indicators and relevant questions numbers in the Household and Village Administrator instrument.

**Table 2: Additional Social Inclusion Hypotheses/Outcomes**

Hypothesis/Outcome	Indicators	HH	VA
7. NCDDP increases marginalized groups’ participation in community development activities	i. perceived influence of women, poor, elderly, disabled, religious/ethnic minorities on village decisions and NCDDP decisions specifically ii. participation in village meetings/activities	E6, H10  E8a-e	E7  H6-12
8. NCDDP projects are perceived as inclusive of all community members	i. perceived benefits of NCDDP projects for women, poor, elderly, disabled, religious/ethnic minorities ii. perceived influence over NCDDP decision making iii. percent reporting NCDDP projects did not benefit most marginalized iv. perceived benefits of NCDDP overall to marginalized groups	G20  H9 Ib-h  I4	G20-22    I3
9. NCDDP process is perceived as more inclusive	i. perceived inclusiveness of NCDDP planning and implementation	H12a-f	H14

than typical community development activities			
10. NCDDP increases levels of community engagement	i. perceived influence over village decisions ii. number of public village meetings iii. membership in community groups	E5 E7	E6, H3-4 E1a-c
11. NCDDP increases levels of social cohesion	i. perceived feelings of inclusion in village ii. perceptions of social out-groups iii. trust of family, friends, neighbors iv. NCDDP's perceived effect on differences in the community	F1 F2-8 F9-10 G23	F3 F1, H15
12. NCDDP increases satisfaction with and perceived quality of basic services (roads, water, schools, clinics)	i. satisfaction with quality of water system ii. satisfaction with quality of electricity system iii. satisfaction with quality of village roads iv. satisfaction with quality of education services/infrastructure v. satisfaction with quality of community center infrastructure vi. perceived quality improvements to roads, bridges, jetties vii. perceived quality improvements to education facilities viii. perceived quality improvements to community centers ix. perceived quality improvements to water systems x. perceived quality improvement to electricity access	D6 D12 D25-26 D33-36 D45 D48-53 D54-55 D56-57 D58-59 D60-61	D5 D11 D17-18 D24-25 D27 D28-33 D34-35 D36-37 D38-39 D40-41

#### 4. Study Design

The proposed 2019 Social Inclusion Evaluation is a cross-sectional observational study that will utilize both quantitative and qualitative data collection methods to measure the key outcome indicators listed in Tables 1 and 2 above. The data will supplement existing monitoring processes (e.g., MIS, supervision) and may also serve as a baseline in a panel study to track changes in key outcomes over time.

The team examined several experimental and quasi-experimental designs and determined that these research designs are not feasible. There are several factors contributing to this determination, including that the NCDDP project was not and could not be randomly targeted to treatment and control village tracts.<sup>4</sup>

Instead, the focus of the SIE is to provide descriptive data on key outcomes and to make limited comparisons between Townships that are nearing the end of NCDDP completion and Townships that are just starting the NCDDP process. Additional panels may be added in the future to track

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<sup>4</sup> For a fuller discussion of why experimental and quasi-experimental designs were not feasible, see “Myanmar NCDDP Evaluation Options Brief”, World Bank, October 2017.

changes over time. While the SIE will not be able to attribute changes in outcomes to the program directly – due to lack of control groups – it has the advantages of enabling the government and stakeholders to: have critical information in a timely manner; understand villagers’ access to and utilization of NCDDP infrastructure and services, and assess community social inclusion and participation with NCDDP specifically and in general.

#### 4.1 Target Population of Study

The target population for the Social Inclusion Evaluation is six Townships in four different regions of Myanmar. Table 3 lists the selected Townships. These townships were selected based on the following criteria:

- **‘Endline’** Townships: three townships that are close to completing all four project cycles and are therefore nearing NCDDP completion.
- **‘Baseline’** Townships: three townships that are only 1 to 1.5 years into NCDDP. These Townships may be resampled when they complete all four cycles to measure changes over time.
- Geographical diversity of states/regions. This is linked to several key factors including types of sub-projects that are relevant and the ethnic and religious makeup of the Township.
- Townships supported by specific NCDDP donors.

**Table 3: Selected Townships for SIE**

State/Region	District	Township	Survey Category	Est. Population	Geography
Rakhine State	Thandwe	Gwa	Baseline	49,714	Coastal
Rakhine State	Kyaukpyu	Ann	Endline	103,058	Coastal
Bago Region	Pyay	Thaegon	Baseline	103,424	Lowland
Bago Region	Thayawardy	Monyo	Endline	128,831	Lowland
Kayin	Kawkarat	Kawkareik	Baseline	193,600	Southeastern
Kayah	Loikaw	Hpruso	Endline	28,233	East

#### 4.2 Quantitative Sample

Our sampling approach aims to create a sample that is representative of each Township population while also considering the nature of different sub-projects across different village sizes and the budget and logistical constraints.

##### *Sampling Frame*

The sampling frame comes from the NCDDP MIS (management information system) data rather than from any official census data. This MIS data is a more accurate reflection of both the Township population and of NCDDP recipients because the MIS data includes several

'unregistered villages' that are not in the official administrative data. It is imperative that these unregistered villages are part of the sampling frame because i.) they were included in NCDDP, and ii.) they are typically smaller in size and therefore may systematically select a different set of NCDDP sub-projects than other larger villages. These small villages may also systematically differ from registered villages on key factors such as poverty. However, the disadvantage of using the MIS data is that it does not include any, or an accurate count of, key demographic data such as religion and ethnicity. The team discussed whether we should stratify on any data that is available in the MIS and ultimately decided that the demographic data is not reliable enough to justify stratifying the sample based on any characteristics in the MIS.

The team also discussed the need to conduct power analysis to determine the minimum detectable effect (MDE) of key outcomes. Although there is no randomized selection or assignment in the SIE, determining the MDE could be helpful if additional panels are added to track changes over time. However, there were several challenges to implementing a robust power analysis. Most importantly, there is no available data to determine a baseline mean or standard deviation for key outcomes at the Township level in Myanmar. The best available data is from a similar project in neighboring Laos, but the team was not confident that the data or outcomes of interest are comparable to the Myanmar context.

### *Sampling Steps*

Given these limitations, we focused on creating a sample that is representative of the Township population and distributed within the Township proportional to population size (PPS) of village tracts and villages. We followed these steps to create the sample:

1. **Set the minimum Township sample size** based on the standardized Township population (sum of population in every unique village tract). The Township sample size assumes a 95% confidence level with +/- 5% margin of error.
2. **Randomly select 50% of Village Tracts** in a Township. It is not feasible to sample every Village Tract. We use a random selection process given the emphasis on equity and the lack of demographic data on which to stratify.
3. **Allocate Township sample to the selected Village Tracts** based on the proportional population size (PPS) of each selected Village Tract.
4. **Select 3 Villages in each selected Village Tract.** It is not feasible to sample every Village in a Village Tract. We non-randomly select the largest village from each Village Tract. We then randomly select two additional villages from each Village Tract. We use this village selection process to ensure that the sample includes the main administrative Village in each Village Tract and to ensure that the sample reflects the nature of heterogenous project-types across different types of villages.

5. **Allocate the Village Tract sample to the selected Villages** based on the proportional population size of each selected Village.
  
6. **Randomly select households** within the selected villages. The field team supervisor obtains the household listing from the Village Administrator. The supervisor randomly selects the households using an interval approach. The interval used in each village is a function of the number of households in the village divided by the required sample in the village.

This sampling process yields a total minimum sample of 2,473 households, 110 village tracts, and 330 villages in six townships in four states/regions.

#### 4.3 Qualitative Sample

Within each Township, we also select two villages for the qualitative component of the SIE. This yields a total of 12 villages. These villages are selected from the list of villages included in the quantitative sample.

We follow a simple, purposive strategy. First, we non-randomly selected the largest village from each Township. Second, we select an additional village from the Township that i.) has a population of at least 300, and ii.) has a different set of NCDDP sub-projects than the already-selected largest village. We impose these rules so that the selected villages are large enough to recruit participants to the focus group discussions and so that we gather data on a variety of sub-projects. Table 4 below lists the selected villages for the qualitative component.

**Table 4: Sample for Qualitative Component**

Township	Village Tract	Village	Village Population	NCDDP Sub-Project(s)
Ann	Ru	withheld	4579	School facility, School facility, community center, school facility
Ann	Nwel Yon Taung	withheld	457	Water supply, road, road, road, community center
Gwa	Ya Haing Ku Toet	withheld	3281	Road
Gwa	Ma Kyay Ngu	withheld	1519	School Facility
Hpruso	Ho Yar	withheld	520	School Facility
Hpruso	Doe Lar Saw	withheld	467	Sanitation, community center
Kawkareik	Kawt Bein	withheld	12328	Road
Kawkareik	Kha Yit Kyauk Tan	withheld	507	School Facility
Monyo	Nyaung Waing	withheld	2795	Road, road, road, road
Monyo	Oe Bo Kyun	withheld	454	Electrification
Thaegon	Kyoet Pin Thar	withheld	1704	Water Supply
Thaegon	Sin Kyone	withheld	478	Road

## 5. Data

We test hypotheses with data from three instruments: a household survey, a village administrator survey, and focus group discussions. Data collection will occur during the dry season months of November 2019 to January 2020. Data collection will begin in baseline townships before moving to endline townships. The quantitative data collection will begin at least one week prior to the qualitative data collection.

### ***Household Questionnaire***

The household survey includes nine modules: 1) household roster/demographics; 2) mini-consumption/assets;<sup>5</sup> 3) access to services; 4) community participation; 5) social cohesion; 6) NCDDP sub-project utilization and benefits; 7) overall participation with NCDDP; 8) overall satisfaction with NCDDP; and 9) gender.<sup>6</sup>

The household survey will be conducted with 50% female and 50% male respondents. The gender of the respondent required for each survey is randomly assigned. In cases where the required gender of the respondent matches the gender of the household head, the respondent will be the household head. Otherwise, the respondent will be randomly selected from all adults in the household who identify with the gender required for the interview.

### ***Village Administrator Questionnaire***

The Village Administrator questionnaire includes ten modules: 1) administrative information; 2) village characteristics; 3) village access to services; 4) village community participation; 5) village social cohesion; 6) NCDDP sub-project impacts; 7) village participation in NCDDP planning and implementation; 8) village satisfaction with NCDDP; 9) non-NCDDP projects in the village; and 10) conflict.

The Village Administrator survey will be conducted with the official Village Administrator. In the rare case where a Village does not have a Village Administrator, the survey is conducted with an equivalent village leader such as the 10-Household Head.

### ***Focus Group Discussions***

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<sup>5</sup> The mini-consumption module was designed in collaboration with the World Bank's SWIFT (Survey of Well-being via Instant and Frequent Tracking) team and members of the Poverty Global Practice group in Myanmar. The questions are based on the 2017 MLCS survey in Myanmar and will be used to create household-level poverty estimates. See Yoshida et al. (2015) for more details on the SWIFT approach.

<sup>6</sup> This module will only be asked of the 50% of respondents who are female. Every effort will be made to ensure that the female respondent is alone when answering these questions. The gender module is designed to be similar to the DHS gender module.

The focus group discussion guide includes six sections: 1) village profile/livelihoods; 2) access and quality of services; 3) community participation and social cohesion; 4) NCDDP impacts; 5) NCDDP planning and implementation; and 6) satisfaction with NCDDP and recommendations.

Within each of the 12 villages that are selected for focus group discussions, there will be eight separate focus groups consisting of the following groups:

1. Women
2. Men
3. Poor women
4. Poor men
5. Villagers with disabilities including the elderly
6. Villagers who are an ethnic minority in the village
7. Group of 10-household heads
8. NCDDP Village Support Committee members

For each of these groups, every attempt will be made to recruit six discussants. The field team will also follow recruitment criteria to ensure members in each group represent diverse ages, are not neighbors, and do not work for NCDDP or the government (except for the NCDDP group).

## 6. Methodology

The SIE will employ three forms of analysis – descriptive, regression, and qualitative – to examine the hypotheses and outcomes listed in Tables 1 and 2 above.<sup>7</sup> The NCDDP implementation process (and therefore the SIE research design) limits our ability to make strong causal inferences about the effects of NCDDP with the data collected in this SIE. However, the data can be used to provide important descriptive findings and to make limited comparisons across Townships and demographic groups.

Each type of analysis will focus especially on the results i.) across all townships and ii.) between baseline and endline townships. We will also examine the results between male and female respondents, between the relatively poor and relatively non-poor, and between respondents who participate in project planning and those who do not.

### 6.1 Descriptive Analysis

Most of the SIE will focus on descriptive analysis to determine whether NCDDP is meeting goals outlined in the Results Framework and to determine variation across Townships in social inclusion outcomes. The descriptive analysis will include:

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<sup>7</sup> Because there is not a true comparison group and because the project did not involve random selection of Townships or random assignment of projects within Townships, we do not propose any experimental or quasi-experimental analysis.

- Distributions of indicators used to measure outcomes 1 to 12<sup>8</sup>
- Distributions of indicators by baseline and endline Townships
- Distributions of indicators by gender of respondent
- Distribution of indicators by poverty status of household
- Distribution of indicators by NCDDP participation level.<sup>9</sup>

We will also examine distributions of indicators across a number of other categories that are known to contribute to exclusion in Myanmar, including: language, religion, citizenship card status, and disability. However, because we were unable to stratify based on any of these categories, we will not claim that our sample represents the population for any of these groups.

## 6.2 Regression Analysis

In addition to descriptive findings, we use regression analysis to estimate the effect of living in an endline Township and the effects of gender and poverty on key outcomes.

First, to estimate the effect of living in an endline township, we specify the following equation:<sup>10</sup>

$$(1) Y_{iv} = \alpha + \beta_1 E_k + X_i + \varepsilon_{iv}$$

Where  $i$  indexes households,  $v$  villages,  $j$  village tracts, and  $k$  townships.  $Y$  is an indicator from Table 1 or Table 2 above.  $E$  is a binary variable coded as 1 for endline township and 0 for baseline township.<sup>11</sup>  $X$  is a matrix of control variables.  $\varepsilon$  is the error term. Standard errors will be clustered at the village level. Unless otherwise stated, all specifications will include controls for respondent gender, ethnicity,<sup>12</sup> and household poverty.

Because the baseline townships have already been ‘treated’ with one year of NCDDP at the time of the survey, the effect estimated in equation 1 is not the actual treatment effect of NCDDP. However, it is the estimated difference in outcomes between year one of NCDDP and year four or five of NCDDP (assuming that the equation effectively holds constant all other differences across Townships).

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<sup>8</sup> That is, we will provide the frequencies of relevant indicators for the entire sample without any disaggregation.

<sup>9</sup> To do this we will create a new variable coded as 1 if anyone in the household participated in any of the NCDDP village activities.

<sup>10</sup> This linear fixed-effects approach is useful when we are interested in the differences in average effects across units (i.e. townships) that may be correlated with the main covariate. This is because introducing random effects into a model where  $\alpha$  is correlated with  $X$ , as is true for endline status and townships, results in omitted variable bias (Wooldridge 2010). That being said, we may also estimate a multilevel model with varying intercepts for township and village tract (Gelman and Hill 2007).

<sup>11</sup> Note that we do not include fixed effects for Township or Village Tract in this model because those variables are collinear with  $E$ .

<sup>12</sup> We use a proxy variable, mother-tongue, to measure ethnicity.

Second, to estimate the effects of respondent gender, we use the same specification but replace  $E$  with a binary variable,  $G$ , coded as 1 for female respondents and 0 for male respondents. We also include fixed effects ( $\eta$ ) for township and village tract:

$$(2) Y_{iv} = \alpha + \beta_1 G_i + X_i + \eta_{jk} + \varepsilon_{iv}$$

Finally, to estimate the effects of household poverty, we again use the same specification but replace  $E$  with a continuous variable,  $P$ , representing the estimated<sup>13</sup> household poverty level. This model also includes the fixed effects for township and village tract:

$$(3) Y_{iv} = \alpha + \beta_1 P_i + X_i + \eta_{jk} + \varepsilon_{iv}$$

### 6.3 Qualitative Analysis

The qualitative analysis will provide a deeper understanding of the local village context and villagers' perspectives on social dynamics, general access to infrastructure and services, and specifically the NCDDP. The analysis will focus on the "hows" and "whys" of respondents' perspectives.

The consulting survey firm will hire an independent qualitative expert to conduct the primary qualitative analysis. This qualitative expert will have access to written English transcriptions of the 12 focus group discussions. The qualitative component is meant to supplement the quantitative component by providing firsthand accounts and quotations to inform findings from the quantitative analysis.

The qualitative analysis will probe for any thematic differences in outcomes among the eight FGD groups at three different levels of analysis:

1. Level One: Within a single village
2. Level Two: Between two villages within a single township
3. Level Three: Between all villages across all townships

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<sup>13</sup> The estimated household poverty level will be based on the SWIFT approach (Yoshida et al. 2015).

## References:

Gelman, Andrew and Jennifer Hill (2007). *Data Analysis Using Regression and Multilevel/Hierarchical Models*. New York: Cambridge University Press.

Wooldridge, Jeffrey M (2010). *Econometric Analysis of Cross Section and Panel Data*, 2<sup>nd</sup> edn. Cambridge, MA: MIT Press.

Yoshida, Nobuo, Ricardo Munoz, Alexander Skinner, Catherine Kyung-eun Lee, Mario Brataj, William Spencer, and D. Sharma (2015). "Survey of Well-Being via Instant and Frequent Tracking (SWIFT) Data Collection Guidelines," Washington, DC: World Bank.