

Assessing Impact Evaluation Options

WESTERN KENYA COMMUNITY DRIVEN DEVELOPMENT and FLOOD MANAGEMENT PROJECT

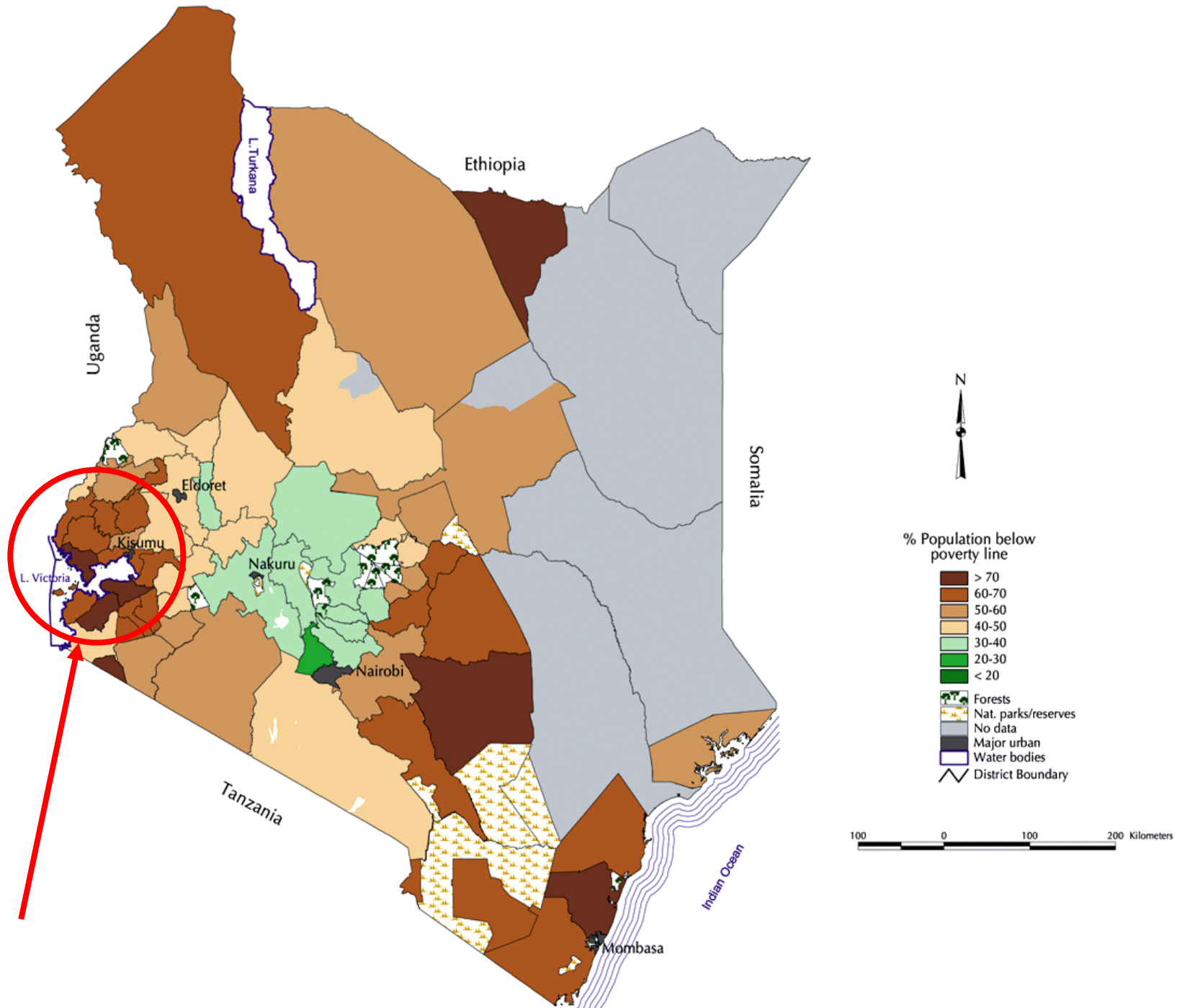
TTL: Nyambura Githagui

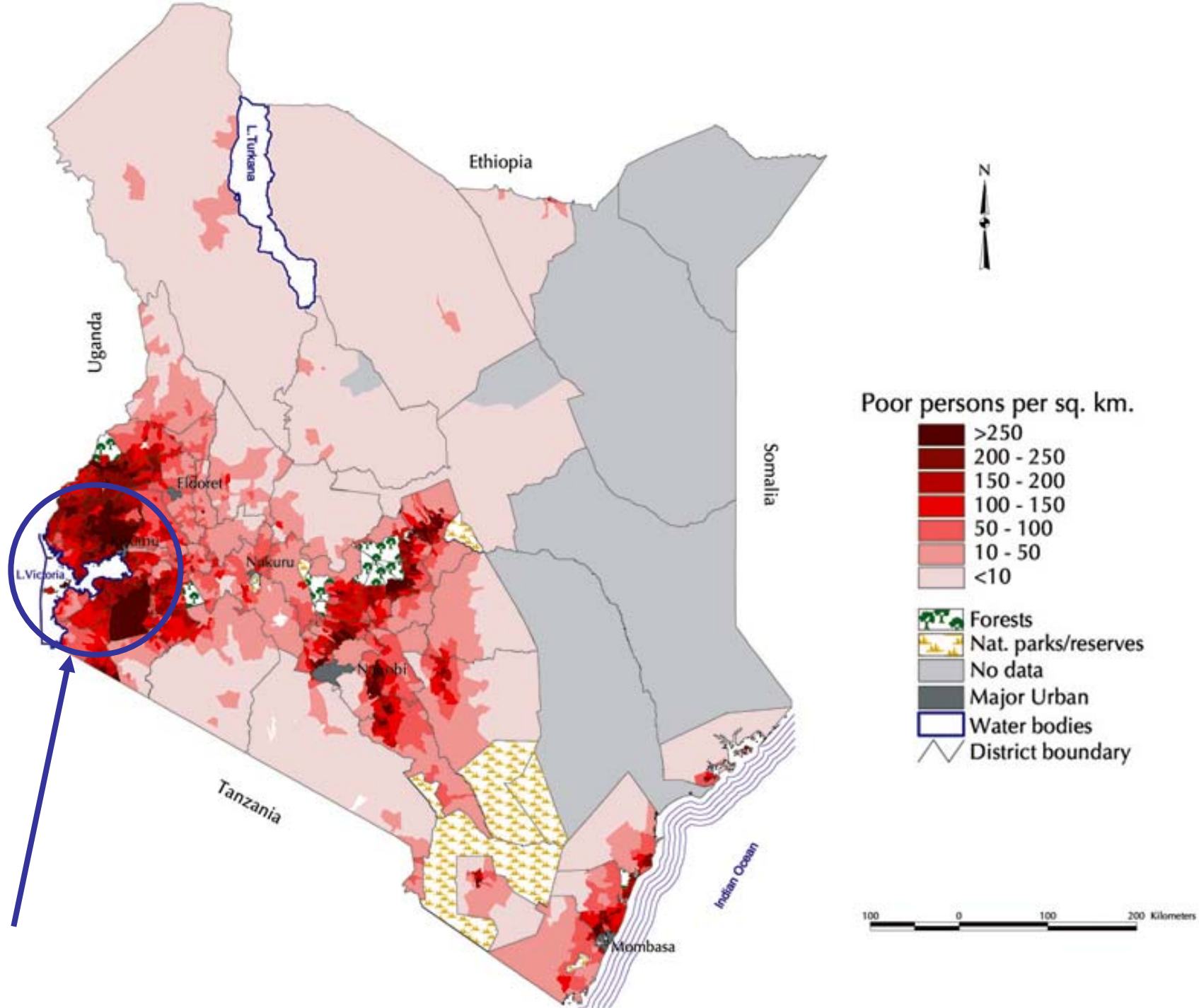
Objectives of the Project

- To reduce poverty and create wealth in targeted communities through CDD projects
- To reduce the frequency and costs of recurrent floods

Background

- The project targets communities in 12 Districts (8 in Western Province and 4 Nyanza Province)
- These Districts are amongst the poorest, most densely populated and flood prone in Kenya





Interventions to be Evaluated

- 1. Community Driven Development (US\$30m)**
to finance micro-projects identified and implemented by communities to impact their collective well-being through income generation, protection and generation of community assets and empowerment
- 2. Flood Management investments (US\$50m)**
to control flood damage through early warning systems and flood protection works

Ideas on Outcome Indicators

1. CDD

- Increases in consumption of goods and services in CDD-supported communities
- Improvements in educational outcomes in CDD-supported communities
- Decreases in morbidity in CDD-supported communities

2. FM

- Reduction in the costs of damage from floods in the catchments benefiting from the project
- Reduction in incidence of flood-related diseases

Data

Existing Data Sources

- ICRAF and ILRI geospatial databases (soil erosion, land use, forestation, and others)
- Health administrative data on flood-related disease incidence (and DHS data)
- Poverty Maps and 1999 Population Census
- WFP (and other) famine relief and food for work programs
- Education data (from EMIS in MoEST)
- Kemri Wellcome Trust.
- Costs of flood damage to infrastructure from parastatals, insurance companies, ministries etc.

Data

New Data Sources

- **Piggyback** on the Kenya Integrated Household budget Survey (KIHBS) – nationally and District level representative household level and community level information
- **Program-specific survey** designed as reduced form of the KIHBS (with additional modules and modifications as needed)
 - comprehensive baseline survey
 - with smaller follow-up surveys
 - Follow-up surveys per project cycle or every other cycle
 - continue surveys after project rollout
- **Scientific data** on soil samples, rainfall data and soil discharge

Beneficiary Selection

2 Types of Beneficiary Groups (with overlap)

- **CDD:** Population in villages receiving project
 - 2,000 out of 10,000 villages (400 per annum over 5 years) in 12 different Districts
 - Note: some potential positive spillovers
- **FM:** Population living within river catchments
 - Exact population to be determined using GIS data sources
 - Beneficiaries based on the flood management plan and geography
 - Note: might have some losers within catchments

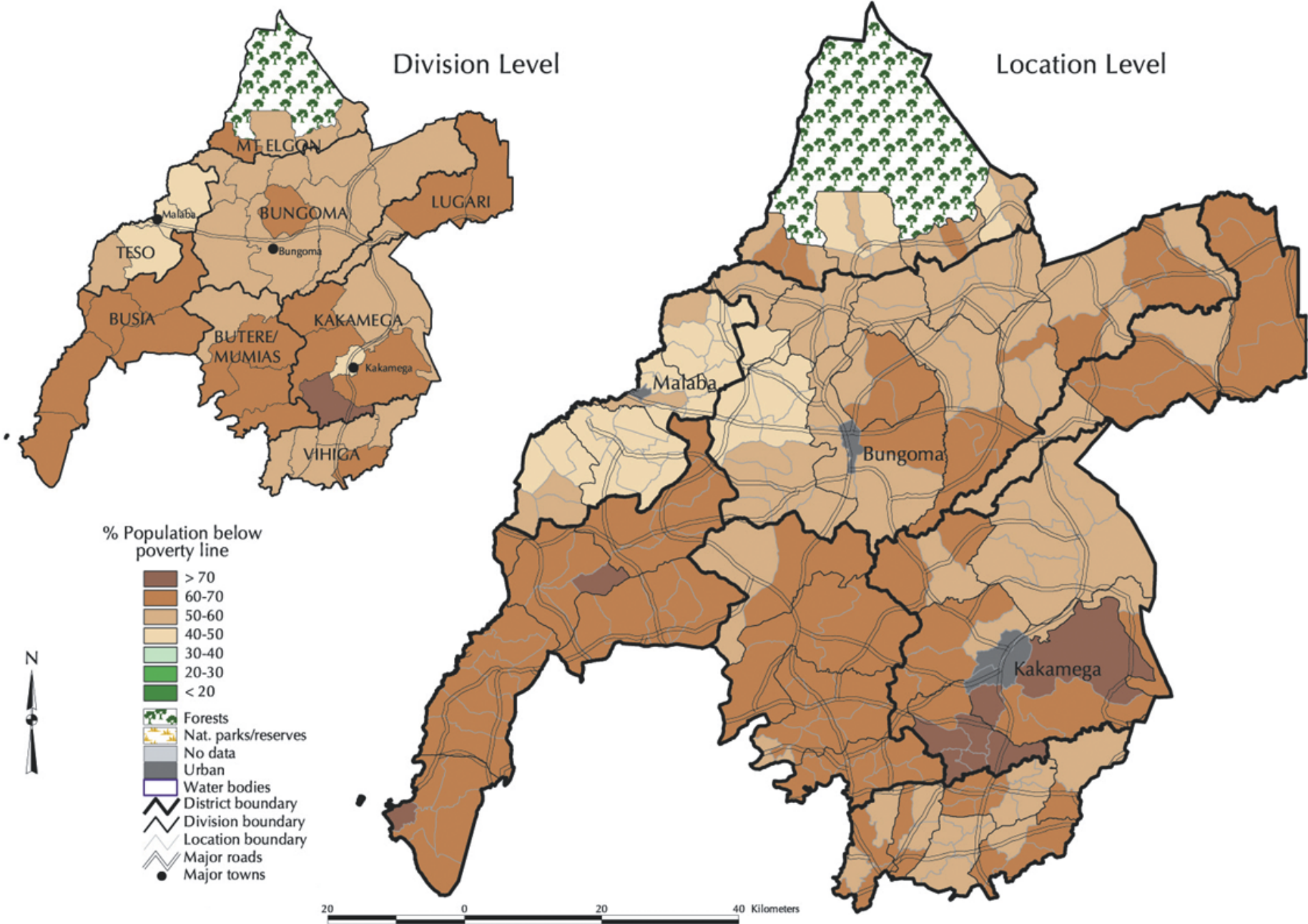
CDD Evaluation Options

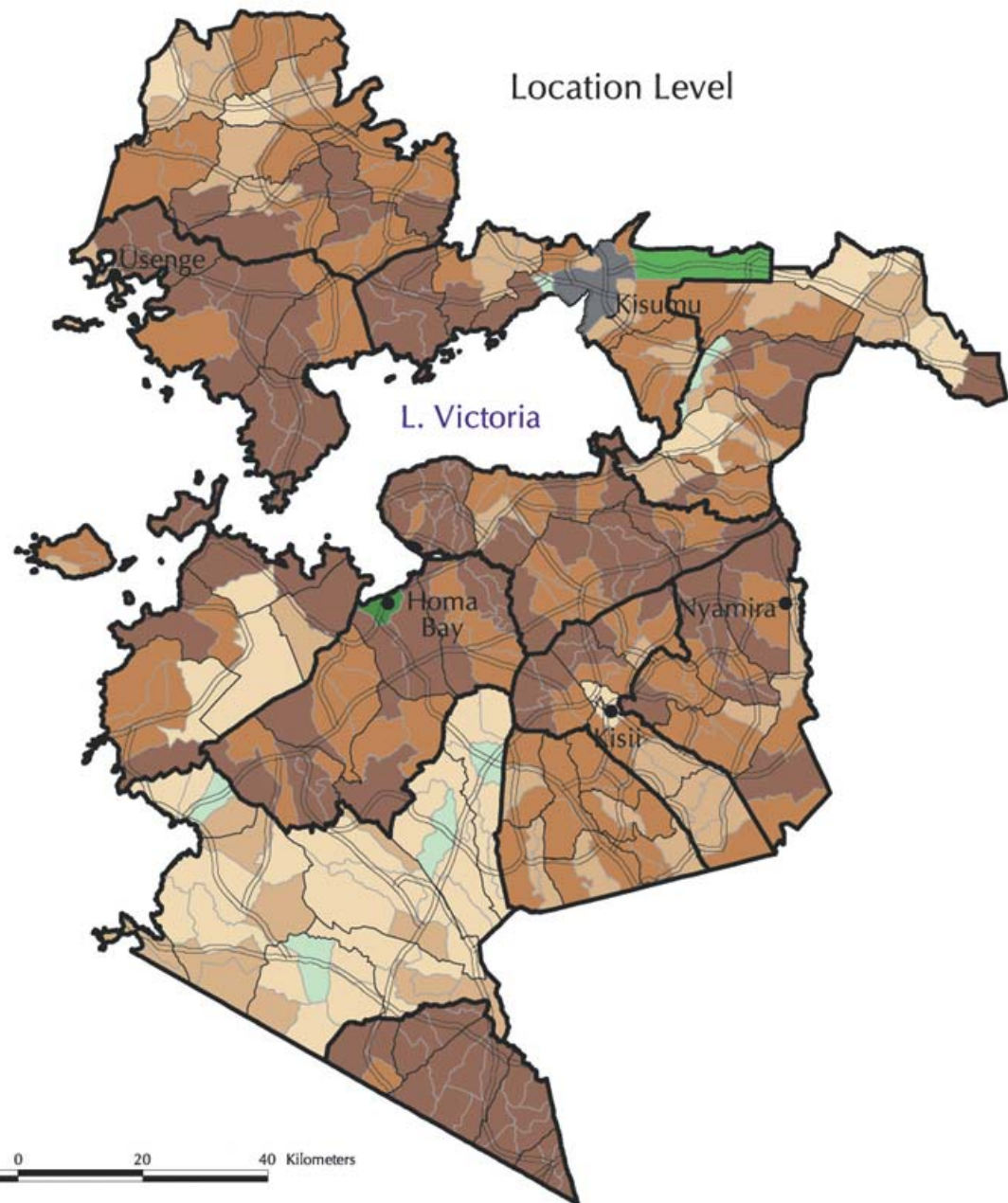
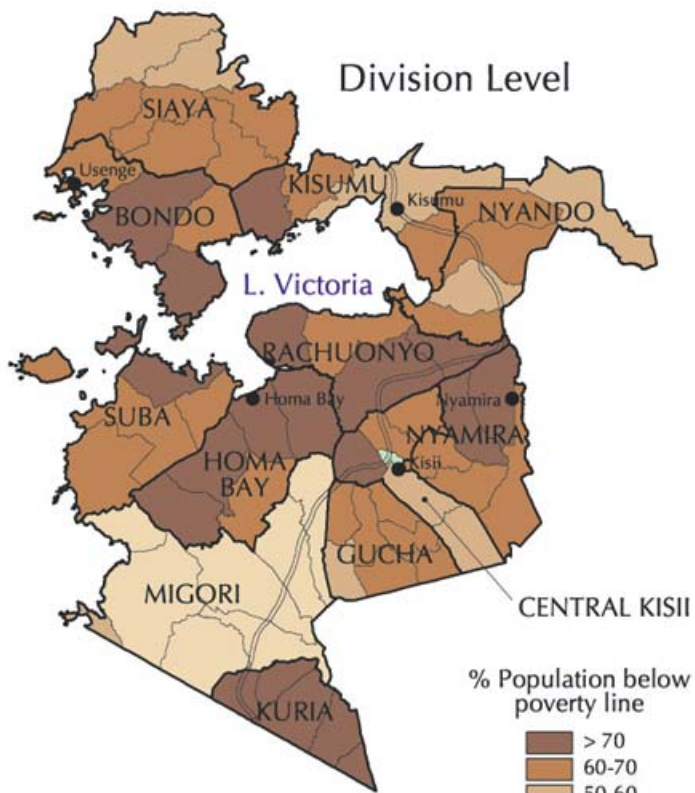
2 Stage Beneficiary Selection Approach

- Stage 1: Depoliticize Selection
 - In each of the 12 Districts, rank sub-locations according to poverty (and other) index
 - Establish eligibility threshold based on this index
 - **Randomly** select sub-locations for treatment out of eligible group
- Stage 2: CDD at Village Level
 - Mobile Advisory Teams (MAT) will work to build capacity and establish a CDD project in all villages within treatment sub-locations

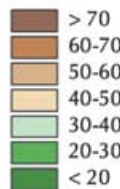
Division Level

Location Level





% Population below poverty line



- Forests
- Nat. parks/reserves
- No data
- Urban
- Water bodies
- District boundary
- Division boundary
- Location boundary
- Major roads
- Major towns



CDD Evaluation Options

Option 1: single difference comparisons based on the randomized assignment

- **Objective:**
Estimate whether WK CDD has an impact as measured through (ATE) outcome indicators at the community level
- **Not enough resources to reach all communities (only enough for about 2,000 out of 10,000 villages)**
- **Eligible communities are selected at the sub-location level using poverty criteria (narrow down to about 5,000 villages)**
- **2,000 Treatment communities are randomly selected and program rolled out over 5 years – 400 each year (all 5,000 eligible communities have the same chance of receiving the program)**

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CDD Evaluation Options

Option 2: double difference comparisons based on the randomized assignment

- **Objective:**
In addition to 1, estimate whether WK CDD has a heterogeneous impact at the household level and why
- **Whether: Unequal inequality levels in poor communities potential of local level elite capture**
- **Why: Lessons for scaling-up and design of follow-up projects**
- **Baseline and follow-up survey with information at the community and the household level**

CDD Evaluation Options

Option 3: double difference comparisons based on the randomized assignment and beneficiary eligibility criteria

- **Objective:**
Estimate whether criteria used to select group of eligible communities (e.g. poverty map) was good
- **Also need to collect baseline and follow-up survey data from a random sample of non-eligible excluded communities**
- **Double difference of non-eligible excluded vis-à-vis eligible excluded**

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WKFM Evaluation Ideas

- The construction of a credible counterfactual is difficult and standard evaluation methods may not apply here.
- Impact of flood management will be “catchment area wide
- Floods neither predictable nor uniform in timing and intensity across catchment areas

Preliminary ideas:

- **Structural Modeling** Estimating impact of flood control on communities directly impacted by floods (i.e. households in flood planes) might be feasible.
- **Exploit heterogeneity within catchment areas**
We can compare communities in high risk flood areas versus proximate communities in lower risk flood areas; e.g., a community in a 5 year flood plane might be adjacent to another (higher) community in a 20 year flood plane.
- **Collect retrospective data on outcome indicators**

Help needed from Martin et al.

- **CDD issues:**

- We came up with some preliminary ideas for the evaluation design for WK... but are these any good and exactly what and how much data do we need?
- Sample size, scope and frequency of survey

- **FM issues:**

- Flood Management project is a catchment-wide intervention
 - => All or nothing, and no (?) benefits if outside
- Floods neither predictable nor uniform in timing and intensity across catchment areas
 - => Difficult to compare catchment areas