

**Massachusetts Institute of Technology**  
**MIT – Development Laboratory**  
**MUSANZE District**  
**Rwanda**

**Facilitators:**

**CCHIPs Project**  
**Musanze District**

# **RWANDA**

- **Projects:**
  - **Environmental Friendly Charcoal**
  - **Improved Corn Shelling**
  - **Universal Education Access**
  - **Water Testing**
  - **Incinerator Pollution Training at Musanze Hospital**

# Environmentally Friendly Charcoal

- **Goals**

- Decrease the amount of toxic fumes emitted while cooking
- Address the deforestation resulting from wood based charcoal
- Create jobs



# Demonstrating the Concepts

- Mugali Cooperative at Mugali Cell Office
- Health animators group divided into two groups (Thursday and Friday)



# Measurable Outcomes

- Our charcoal:
  - **2.000RWF input** for agricultural waste
  - 4 bags of charcoal output
  - 20.000RWF gross profit (5.000/bag)
  - **18.000 net profit**
  - **1 day to produce**
- Current method:
  - **10.000RWF input** for two trees
  - 3 bags of charcoal output
  - 15.000RWF gross profit (5.000/bag)
  - **5.000 net profit**
  - **1 week to produce**



# Improved Corn Shelling

- **Goals**

- Decrease labor required to process corn
- Avoid unnecessary damage to corn kernels
- Protect the health of the workers that shell corn



# Demonstrating the Concepts

Mugali Stove making  
cooperative



# Measurable Outcomes

- **Cost**
  - 225RWF-300RWF per sheller (depending on labor)
  - One 1 square meter metal sheet (4.500RWF) can produce 18-20 shellers
- **Time**
  - Our Method: **17 minutes** for bag of 50 stalks (20 seconds each)
  - Alternative: **4 hours** for bag of 50
- **Health**
  - Minimal damage to hands
- **Quality**
  - No kernels broken



# Universal Education Access

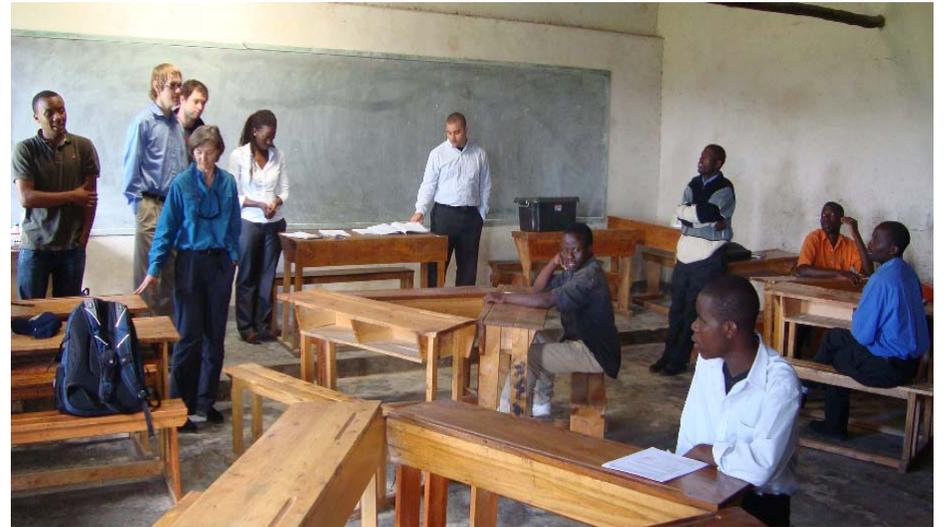


- **Goals**

- Create experiments for P4, P5, P6 *Introduction to Science and Technology* using locally available materials
- Stimulate the interest of students in science and technology
- Emphasize the relevance of science concepts in students everyday lives
- Ensure materials are within the financial means of the school

# Demonstrating the Concepts

- Lead workshop demonstrating scientific concepts at Shingiro Primary School
- Attended by 15 P4, P5, P6 teachers from four primary schools in the Shingiro Sector
- Experiments and instructions given corresponding to each unit in the curriculum



# Measurable Outcomes

- Detailed instructions for each of the 8 units in the *Introduction to Science and Technology*
- Experiments cost less than 4.000 francs combined
- Teachers inspired by how low cost apparatus could be used in science experiments

# Water Testing at Household Level

- **Goals**

- Educate the community on basic water safety and testing
- Demonstrate household water containers role in the spread of waterborne diseases



# Locations of Water Testing Activities

- Households in the neighborhood of Shingiro Primary School
- Shingiro Health Center
- Households in the neighborhood of Shingiro Health Center
- Neighborhood of Susa River (at bridge in Mugali Cell)



# Measurable Outcomes

- Increased water quality awareness at household level
- The water containers are unclean and contaminate fetched clean water
- The Electrogaz water supply system is safe
- Containers contribute to the spread of waterborne diseases



# Sustainability

- Musanze District will be the focal point for the following projects:
  - Environmental Friendly Charcoal
  - Improved Corn Shelling
  - Universal Education Access
- Musanze hospital will be the focal point for the following project:
  - Water testing and water quality training at household level
  - Training about incinerator pollution health risks
- Contact information of the trained groups were taken for continuous follow up through phone call communications
- Basic tools and instructions for Environmental Friendly Charcoal and Improved Corn Shelling projects were left to the trained groups for projects continuity

# Next Steps

- Detailed analysis (beyond our current approximations)
- Follow up with projects
  - Identify high potential projects
  - Address underperforming projects
- Maintain channels of communication

**MURAKOZE**

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