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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