How does this work fit with community based efforts?

• Spatial aspects: where are adult illness and deaths likely to have the greatest impact?
• Case studies, observations from projects and community based organizations: ground truthing and then evaluation of ability to extrapolate experience
• Ideally, combination of research methods and outreach, working with NGOs, communities, etc.
• Leverage to seek further funding, attract policy makers attention
Objectives

1. To estimate the number of affected rural households and their characteristics
2. To determine the strategies used by households to respond to illness/death
3. To identify implications for design of agricultural programs and policies

Methods

• Based on ongoing large-sample agricultural surveys, add demographic and mortality component
  – 5,000 households, nationally representative
• Ask all hhs about individuals who died over past 3 years and about those who are currently ill
  – Compare affected households with those that have not had an adult chronic illness or death
• Ideally, revisit the same households in a few years (Kenya work, for example)
Basic Information - Mozambique

Table 1. Key Mozambique Demographic Characteristics With and Without AIDS - 2002

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Without AIDS</th>
<th>With AIDS</th>
<th>Net Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Growth Rate</td>
<td>1.8</td>
<td>1.0</td>
<td>- 0.8</td>
</tr>
<tr>
<td>Life Expectancy</td>
<td>40.0</td>
<td>32.1</td>
<td>- 7.9</td>
</tr>
<tr>
<td>Crude Death Rate</td>
<td>21.9</td>
<td>29.3</td>
<td>7.4</td>
</tr>
</tbody>
</table>

Source: The AIDS Pandemic In the 21st Century, International Programs Center, US Census

Provincial Prevalence Rates

<table>
<thead>
<tr>
<th>Province</th>
<th>PA Adult Death Due to Illness in Rural Areas (1)</th>
<th>HIV Incidence in Urban and Rural Areas 2000 (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% adults within Province</td>
<td>% adults within Province</td>
</tr>
<tr>
<td>Niassa</td>
<td>2.0</td>
<td>6.8</td>
</tr>
<tr>
<td>Cabo Delgado</td>
<td>2.1</td>
<td>6.4</td>
</tr>
<tr>
<td>Nampula</td>
<td>1.2</td>
<td>5.2</td>
</tr>
<tr>
<td>Zambezia</td>
<td>1.8</td>
<td>12.7</td>
</tr>
<tr>
<td>Tete</td>
<td>1.9</td>
<td>19.8</td>
</tr>
<tr>
<td>Manica</td>
<td>2.7</td>
<td>21.1</td>
</tr>
<tr>
<td>Sofala</td>
<td>1.8</td>
<td>18.7</td>
</tr>
<tr>
<td>Inhambane</td>
<td>1.3</td>
<td>9.6</td>
</tr>
<tr>
<td>Gaza</td>
<td>2.7</td>
<td>16.0</td>
</tr>
<tr>
<td>Maputo</td>
<td>2.0</td>
<td>14.1</td>
</tr>
<tr>
<td>National</td>
<td>1.8</td>
<td>12.2</td>
</tr>
</tbody>
</table>

Source (1) TIA 2002 Rural Survey  (2) 20 urban & rural health posts: Min Health 2002
HIV/AIDS Prevalence Rates among Adults (15-49) at Provincial Regional and National Levels, 2000


Households affected by death due to illness (comparison with non-affected households)

- **North:**
  - Unlikely to be in highest income quartile or in highest landowning quartile

- **Center:**
  - HHs with male death more likely to be in poorest income quartile & lower two land owning quartile
  - HHS with female death more likely to be in lowest two land owning quartiles

- **South:**
  - Miners
  - Higher income with off-farm sources and remittances (probably miners), low agricultural earnings, lower cultivated land areas per household (per AE)
Household members and changes from 1999 – 2002

• Caregivers:
  – 60% are female;
  – 74% are either spouse or parent of the person ill
  – Few new arrivals for care

• Net change in members
  – HH with male death: -0.84 members
  – HH with female death: -1.19 members

Dependency Ratios

• Changes in Adjusted Dependency Rates (ADR)
  ADR= number of children, elderly and ill per active adult
  HHs with adult deaths:
    If women dies, increase ADR 0.41 persons
    If man dies, increase ADR 0.70 persons
  HHs with chronic adult illness:
    Increase ADR slightly (0.19 male; 0.11 female)

• Thus: HHs with a male illness or death have a more difficult job due to higher ADR
Strategies for Agriculture

- Ask household members about 3 (maximum) strategies pursued to deal with stress on ag prod. due to illness or death (open-ended question)

Strategy Groups

- Replace labor
- Reduce land area or labor used
- Reduce assets
- Reduce consumption
- Child-related strategies
- No strategy
Strategies chosen by households with a chronically ill adult, male and female

Currently Ill Adults

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace Labor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce Area used</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce Assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce consumption</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child-related</td>
<td></td>
<td></td>
</tr>
<tr>
<td>strategies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Strategy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Strategies chosen by households with adult death due to illness, male and female

Death from Any Illness

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace Labor</td>
<td></td>
<td></td>
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<tr>
<td>Reduce Area used</td>
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<td>No Strategy</td>
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</tr>
</tbody>
</table>

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Implications of demographic changes and strategies

• Less labor available, esp. hhs with a male death
• Increased dependency ratios
• Lower land area cultivated, and possibly lower land productivity (less weeding, fewer inputs)
• Reduction in cash crops? Possibly
• Problematic future as children are removed from school and sent away
• Nutrition and ARVs to keep people active as long as possible

Implications for Interventions

• Lower income hhs likely to sell assets during illness, whereas higher income tend to wait until after death, so intervene early (esp. with male illness and death)
• Households with a female death seem to be able to replace labor and retain assets better than those with a male death
  – Focus on households with a male illness or death?
Implications for Interventions (cont.)

- Income generating activities important, linked with improved household consumption-
  - Chickens and other small animal livestock
  - Storage and processing technologies
  - New crops that are income generating
- Labor saving, especially for women, would help
  - Between caregiving and loss of adults, need to reduce labor in hh for water, fuel
  - But not clear that hhs are seeking labor saving technology in agriculture
    - HHs reduce land, few change to labor saving crops

MADER Activities

- Assessment of impact of HIV/AIDS on MADER human resources
- Multisectoral approach on Vulnerability, including SETSAN, Early Warning, and others, with nutrition, food security, and various threats
- Agricultural research programs: conservation technologies, small scale processing for income generation, sweet potato development
- Provincial programs on crops for improving nutrition, community training programs, etc.
Thank you

Obrigado

For more information, visit WWW.AEC.MSU.EDU/Agecon/fs2

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