

# AIDS, Agriculture, and Food Security: Challenges for the Next 25 Years

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## Major Research & Policy Question:

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- If Donors Provided an Additional \$10 billion to Combat AIDS, how should it be allocated?
  - To ARV treatment?
  - To improved nutrition programs?
  - To agricultural & rural development?
  - To investment in vaccines?
  - To community-driven development programs?

.....NO ONE REALLY KNOWS

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# Outline

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- PART I:
  - context
  - what do we know about how households respond to prime-age death
- PART II:
  - what are the major economic and social challenges for addressing HIV/AIDS in Africa

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# Overview of Main Points

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- HIV/AIDS and poverty are mutually reinforcing
  - AIDS exacerbates poverty
  - factors associated with poverty worsen the spread of AIDS
- Therefore, the most effective programmatic responses will be two-pronged:
  - i. Health-oriented programs for treatment / prevention
  - ii. strategies that promote rural economic growth
    - Will be kick-started by broad-based agricultural development

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## Characteristics of MSU household surveys

Country	Sample size	Year(s) of surveys	Panel or cross-sectional
Kenya	n=1266	1997, 2000, 2002, 2004	Panel
Malawi	n=420 n=372	1990, 2002	Panel
Mozambique	n=4908	2002	Cross-section
Rwanda	n=1395	2002	Cross-section
Zambia	n=6922	2001, 2004	Panel

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## Finding #1

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### Afflicted households/individuals are not random

- Early 1990s: positively correlated with
  - income
  - wealth
  - education
  - mobility
- Some argue now increasingly concentrated among the poor (e.g., Malawi, South Africa)
  - Limited evidence of this

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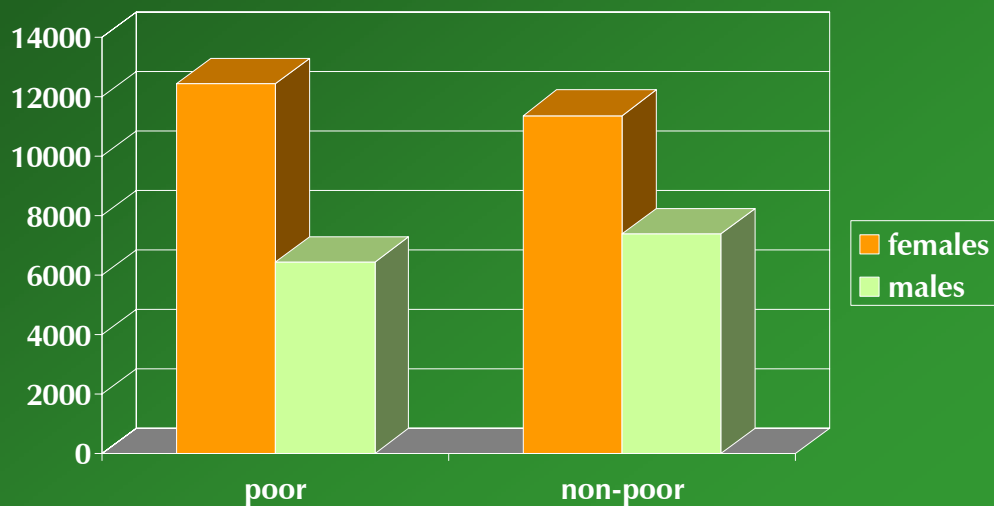
## Income Status (2000) of Households Incurring a Prime-age Death between 2000-2003, Rural Zambia

	Deceased prime-age males	Deceased prime-age females
Poorest 25%	17.0	22.7
2 <sup>nd</sup> quartile	20.9	20.4
3 <sup>rd</sup> quartile	32.2	29.6
Wealthiest 25%	29.9	27.3

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## Finding #2: 60% of PA mortality is women

Prevalence of PA mortality, by sex and income, Zambia, 2001-2004



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### Finding #3: HIV Prevalence Rates generally lower than what we thought they were 10 years ago:

	2001 estimates	2004 estimates
Zimbabwe	33.9	24.6
Zambia	21.6	16.5
Kenya	15.1	6.7

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### Finding #4

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- Magnitude of impacts depend on:
  - Initial level of household vulnerability (assets, wealth)
  - Sex of the deceased
  - Position in household of deceased
  - Ability of household to attract new members
  - Community characteristics:
    - Population density
    - Levels of wealth

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## Gender Effects of Mortality on Crop Cultivation

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- In Kenya:
  - Death of male head → - 0.9 acre to cash crops (e.g., sugarcane, horticulture)
  - Death of female head → - 1.8 acre to cereals, tubers

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## Finding #5: What are we learning about “community effects”:

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- What determines community “resilience”?
  - Currently very few local institutions to help
  - The load is almost fully borne by households themselves
- Local institutions/traditions influence resilience
  - Rules governing women’s rights and access to resources
    - e.g. can widows retain land and other productive assets after husband’s death?

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## Finding #6

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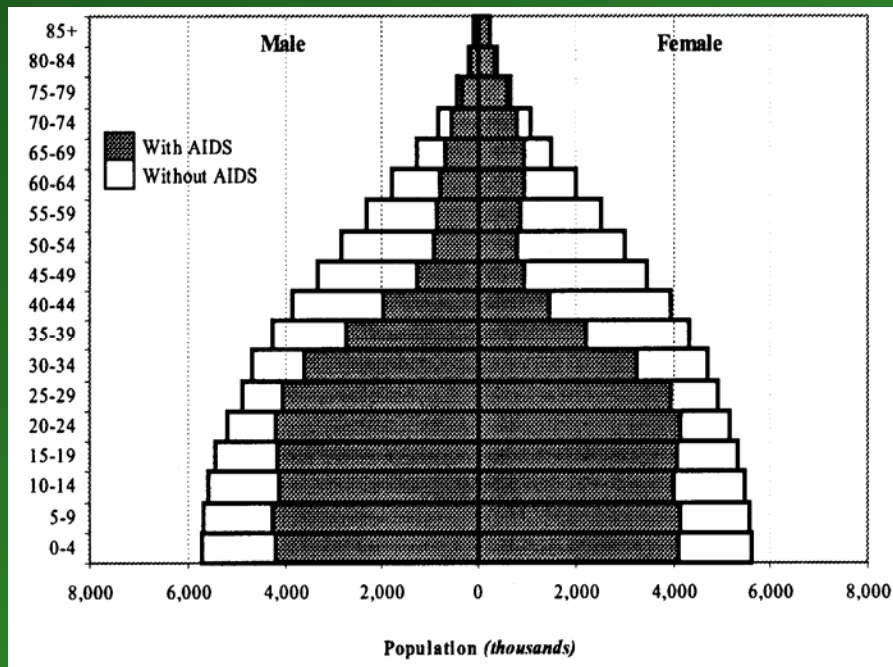
- Effects on agric. production and non-farm income most severe among the poor

## Finding #7

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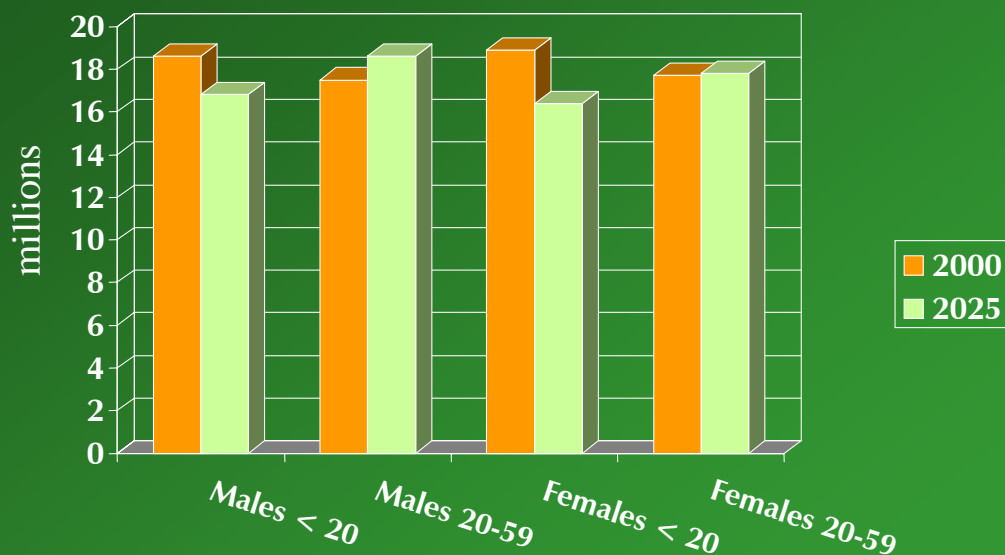
- Among afflicted households, cash constraints often become the limiting factor in agric. production
  - Drawing non-resident members back to the farm can sever off-farm income sources
  - Kenya: death of head or spouse associated with \$120 and \$260 per year reduction in off-farm income

## Projected Population in the 7 Most Highly Affected Countries, "With AIDS" vs. No-AIDS Scenario, by Sex and Age Group, 2025.



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## Population Size, 2000 vs. 2025 (projected) Seven Most Highly Afflicted Countries

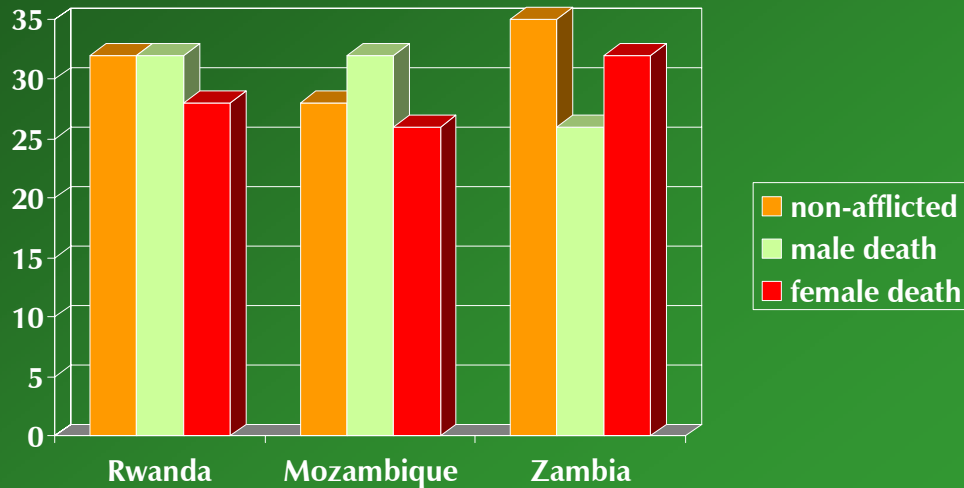


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## *Is the Cassava Boom Related to AIDS-related Labor Shortages?*

% of area cultivated



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## Finding #8

- Spread of AIDS is co-factored with:
  - STDs: elevates risk of contraction 5-10x
  - Nutritional status
  - Parasite load and other diseases that degrade human immune response
  - quality of basic health services
  - Male violence, alcoholism
- All associated with poverty

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# Implications - I

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- Agricultural production and income growth in Southern Africa will be adversely affected
  - Smaller effects in West Africa
- Increased vulnerability in the region
  - increased likelihood of rural food crises
- Less purchasing power, slower economic growth
- ARV treatment challenges
  - only 15% of HIV+ people in Southern Africa will have access even after PEPFAR is in full swing
  - Need much more resources devoted to expanding **reliable** drug supply chains
  - Likelihood of mutation

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# Implications - II

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- Reduce the potential for drug resistance:
- This depends on “adherence”
  - Avoid disruptions in supply chain
  - Traditional supply chain challenges: financing, reliable distributors, matching supply with need
  - Expiration of “old drugs”
  - very little “adherence” monitoring
- Most areas are not equipped for second-line drugs

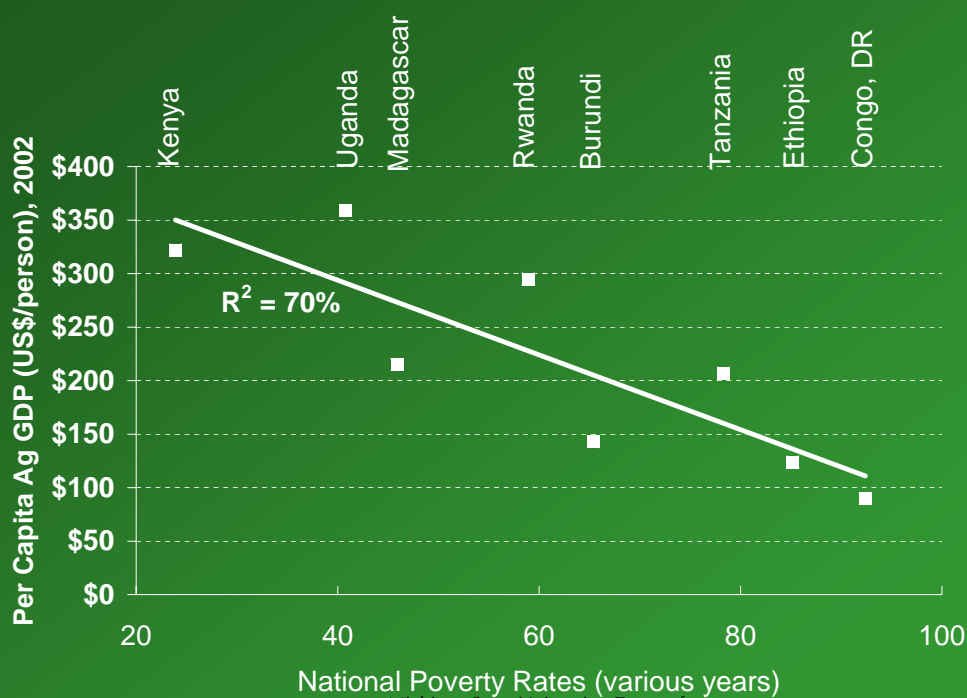
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# Where from Here? Major Challenges

- ARV therapy – how to deal with probable breakthroughs?
- Aggressively combat STDs
- Sexual risk behavior education
- Condoms
- Access to basic health care
- Basic education
- Broad-based agricultural development

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## LOW AGRICULTURAL INCOMES ARE GENERALLY CORRELATED WITH HIGH POVERTY RATES



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Source: O. Badiane

# Where from Here? Major Challenges

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1. Given the link between poverty and AIDS transmission and severity of impacts, improving livelihoods is crucial
2. Agricultural development is pre-condition for sustained and rapid growth in living standards
3. So, focus public resources on investments that catalyze agricultural development (pro-poor)

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## Major Challenges (continued)

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- Focus Public Resources on:
  - Crop science
  - Viable extension programs
  - Investment in rural infrastructure
  - Irrigation, where potential exists
  - Access to land
- Policy Environment
  - Marketing and trade policies to catalyze smallholder productivity growth
  - WTO and food aid issues

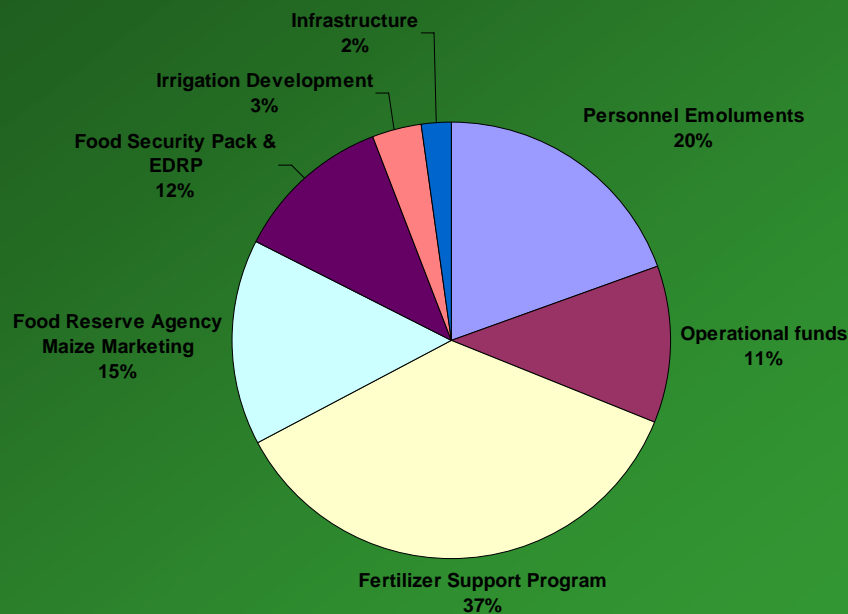
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## Major Challenges (continued)

- Lobby forcefully for more level playing field in international trade
  - OECD dev. assistance for Africa: \$50 bill./yr
  - OECD ag. subsidies: \$350 bill./yr
  - Reassess developed country policy of dumping free food in Africa under guise of “food for development”

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## Budget allocation to Agricultural Sector in Zambia:



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## Where from Here? Specific Proposals

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1. Massive increase in crop science
2. Rehabilitation of farm extension systems
3. Rural infrastructure
4. Improved “enabling environment” for smallholder productivity growth
  - Reliable input, output marketing systems
  - Viable credit arrangements

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## Where from Here? Specific Proposals

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5. Assist in creation of *capital assets* in agricultural production
  - Loss of cash will be major threat to improving agricultural productivity
  - Contracts with private agents to provide veterinary, dipping, insemination services, and draft equipment to farmers in smallholder areas

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## Where from Here? Specific Proposals

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6. Modify rules governing women's rights and access to resources
  - e.g. work with communities to recognize that it is in the communities' interest for widows to retain access to land after husband's death
  - Will require shifts in consciousness
  - Recognition that communities' resilience to AIDS will require more equality for vulnerable groups.

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## Counsel of Three "Wise Men"

- "You can make a difference"
- "Globalization is making all of us inter-dependent on each other"
- "Compassion"

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Thank you

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- Slides for potential questions and background

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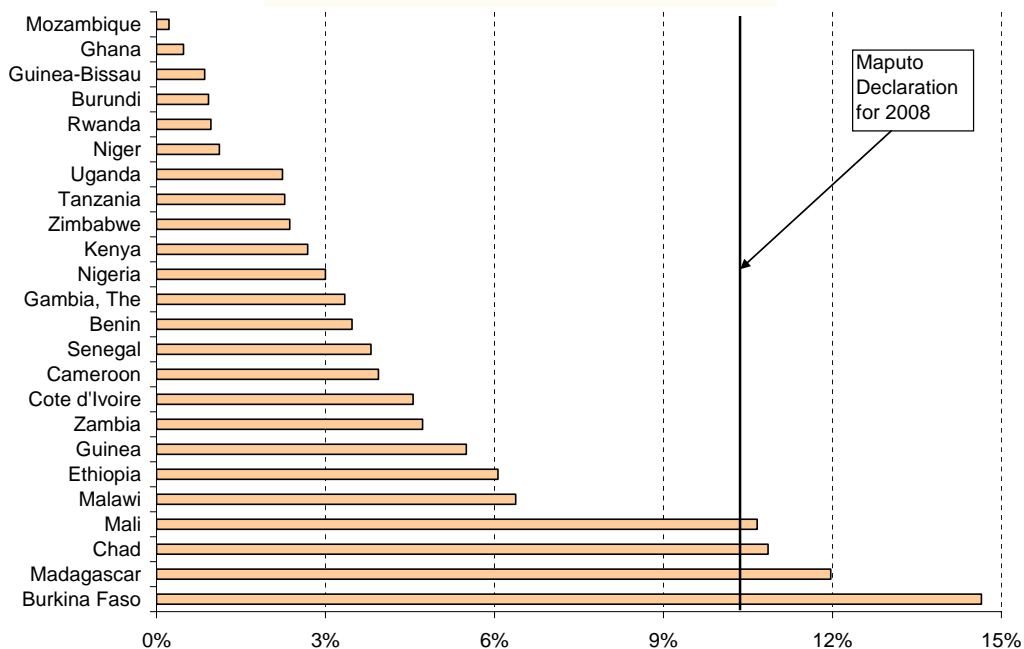


## Need for appropriate balance between:

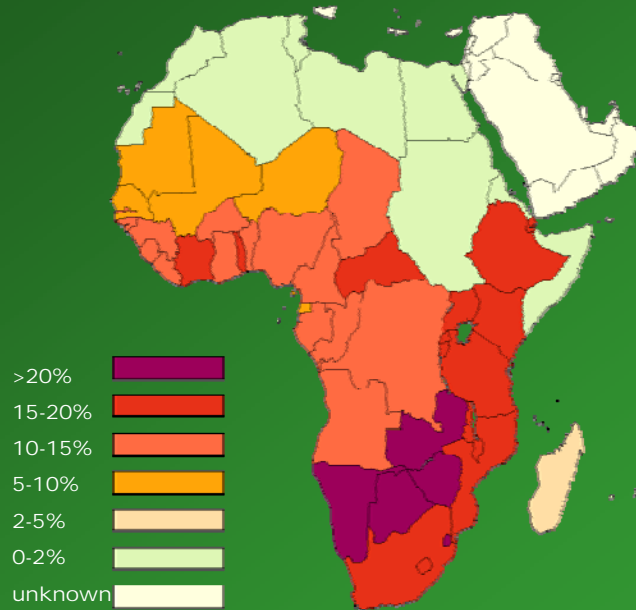
- Investing in long-term productivity growth (education, infrastructure, markets, agricultural productivity, health)
- VS
- Targeted assistance to affected HHs
  - Poverty and HIV/AIDS are mutually reinforcing → hence pro-poor productivity growth is crucial
  - Resources are scarce: which investments provide greatest benefits?

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### REVERSING THE CURRENT TRENDS REQUIRES THE IMPLEMENTATION OF THE MAPUTO COMMITMENT AGRICULTURE EXPENDITURE SHARES



# HIV Prevalence Rates – 2001 estimates



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