

Vulnerability and Resilience of Social-Ecological Systems: Perspectives from Studies Underway in Zambia of Urban/Rural Food Marketing Systems

Presented To
RIHN's (Vulnerability and Resilience of Social-Ecological Systems) - First Lusaka Workshop

Prepared by M.T. Weber
MACO/ACF/FSRP/MATEP
Research/Outreach Team
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FSRP/MATEP

Discussion Overview

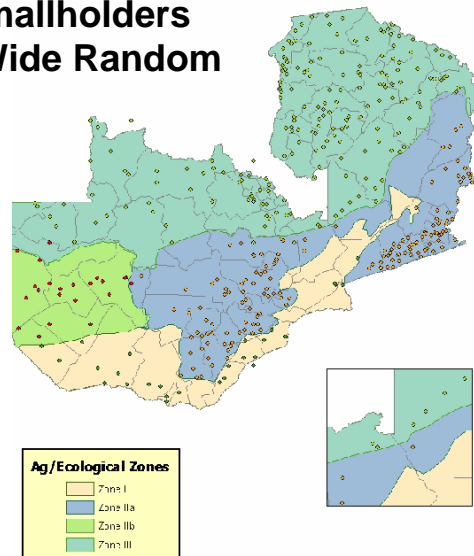
- I. Smallholder Focus of FSRP Work
- II. Why Also Study Urban Food System?
- III. Basic UFCS Information
- IV. Preliminary Impressions from Fieldwork

Empirical Results To Date

- Many studies of smallholders (small & emergent farmers cultivating less than 20 ha, mostly operating under customary land access system – MACO/CSO PHS definition)
- Few studies yet to sort out more carefully the definition and number of small and medium “commercial” farmers – most probably have leasehold title deed to their land?
- Large “commercial” farmers are well known

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Empirical Data on Smallholders in Zambia – Nation Wide Random Surveys



Map of Central Statistical Office Statistical Enumeration Areas (SEAs) Sampled in the CSO/MACO/FSRP Post Harvest and Supplemental Surveys in 2001 and 2004 by Zambia's Agro-Ecological Zones

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Table 2. Farm Production Patterns of Small- and Medium-Scale Agricultural Households in Zambia.

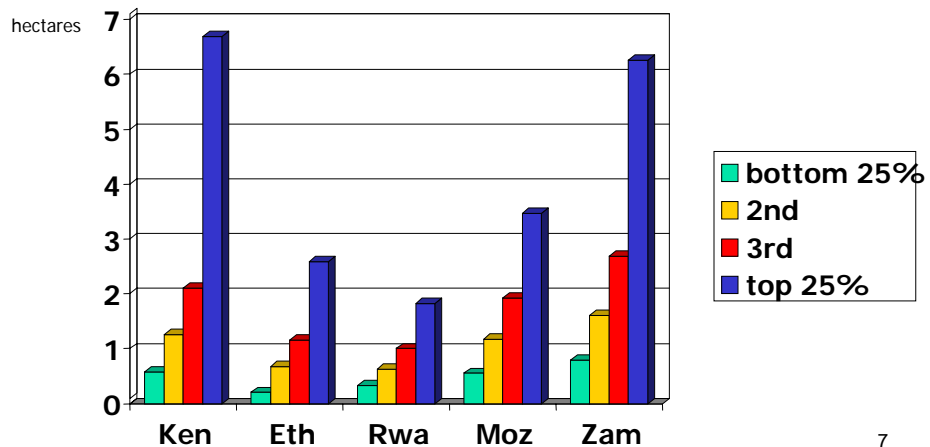
Crop / Livestock Enterprise		% of HHs Producing	Total Production (MT)	Gross Value of Production (000 US\$)	% of HHs Selling	Total Sales (MT)	Gross Value of Sales (000 US\$)	Sales as % of Production – Mean Across Households	Sales as % of Production – national	% of Gross Farm Sales Revenue – national	Consumed on Farm (MT)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Maize	2000/2001	77.9	1,260,123	102,531	25.5	272,950	23,647	12.2	23.1	10.3	987,173
	2003/2004	79.9	1,365,103	140,575	28.4	370,332	38,955	13.5	27.7	10.2	994,771
Sorghum	2000/2001	12.4	41,976	4,653	1.9	3,614	398	6.1	6.6	.2	38,363
	2003/2004	10.3	40,887	4,574	2.0	5,378	602	7.7	13.2	.2	35,508
Sweet potato	2000/2001	27.6	178,883	8,496	9.8	37,889	1,711	18.4	20.2	.7	140,994
	2003/2004	18.9	139,227	5,127	7.7	51,561	1,918	24.6	37.4	.5	86,646
Cassava	2000/2001	37.7	794,824	19,383	12.7	87,776	2,117	10.6	10.9	.9	707,049
	2003/2004	38.8	836,057	50,905	11.1	70,491	4,339	9.2	8.5	1.1	755,566
Cotton	2000/2001	5.7	49,369	10,491	5.5	41,938	10,147	96.6	96.7	4.4	1,421
	2003/2004	10.5	123,085	31,259	10.3	119,461	30,087	96.5	96.2	7.9	4,824
Tobacco	2000/2001	1.1	5,679	3,735	1.1	5,283	3,486	94.3	92.8	1.5	416
	2003/2004	1.4	13,005	11,725	1.4	12,678	11,418	97.8	97.4	3.0	327
Mixed & ground beans	2000/2001	13.0	27,297	7,735	6.7	10,782	3,088	29.7	39.9	1.4	16,516
	2003/2004	17.2	35,460	9,423	9.5	15,704	4,177	30.3	44.3	1.1	19,756
Groundnuts	2000/2001	35.8	56,586	17,089	13.8	14,672	4,475	19.2	28.2	2.0	41,914
	2003/2004	42.1	89,100	26,871	20.1	24,409	7,345	23.0	27.3	1.9	64,691
Vegetables and Fruits	2000/2001	---	---	---	20.8	---	25,699	---	---	11.2	---
	2003/2004	---	---	---	16.3	---	35,427	---	---	9.3	---
Livestock products	2000/2001	---	---	---	32.3	---	13,058	---	---	5.7	---
	2003/2004	---	---	---	44.5	---	33,206	---	---	9.7	---

Source: Supplemental Survey to the 1999/2000 Post Harvest Survey, Central Statistical Office, 2000/2001 & 2003/2004 Marketing Season.
 Notes: 2000/2001 marketing year refers to April 2000 to March 2001; 2003/2004 marketing year refers to April 2003 to March 2004.
 Horticultural (fruit and vegetable production was not collected but sales were. Column 9 figures are computed as the weighted mean across all households level, i.e., (sales/production)*100. Column 10 figures aggregate total weighted sales and production across all farmers, then takes the mean of this, i.e. (total sales/total production)*100

Key Patterns of Smallholder Maize Production and Marketing)00 & 04 mkt years

- Some 80 % of smallholders produce maize
- Only 25-28 % of smallholders sell any maize
- Sales % of national production range 23/27 %
- Vast majority of maize produced is stored and eaten on the farm – traditional on-farm storage needs help
- Production and sales are highly correlated with area cropped to maize – improved marketing requires information on best time of season to sell & best market buyers
- 35 % of smallholders are net buyers (grain & meal)
- 37 % not in the market as seller nor buyers

Marketing Starts with Production Capacity - Not All Smallholders in Zambia Are the Same: Farm Size (cultivated) Distribution



FSRP Empirical Results/Policy Dialogue

- Handout of All Items Downloadable
- CD containing all Items on Website

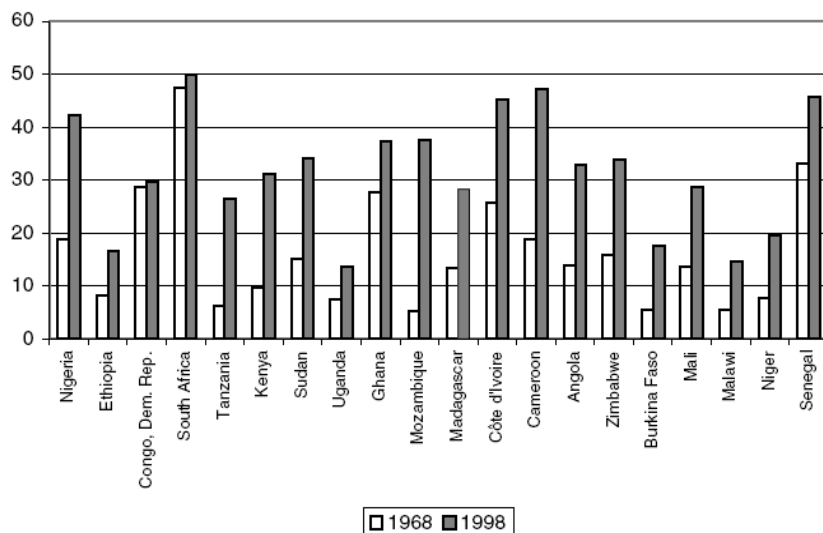
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Why Also Study Urban Food System

- More than 50% of Africa's population will be urban by 2015.
 - 2000: 10 farm households feed 7 non-farm households
 - 2020: 10 farm households feed 16 non-farm households
- Upshot: urban demand for food is rising rapidly

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Share of African Urban population in total population, 1968 and 1998



**Diversification - Role of Maize in Farm Cash
Income is Declining (share of gross sales
revenue) & Need to Understand Changing
Market Demands**

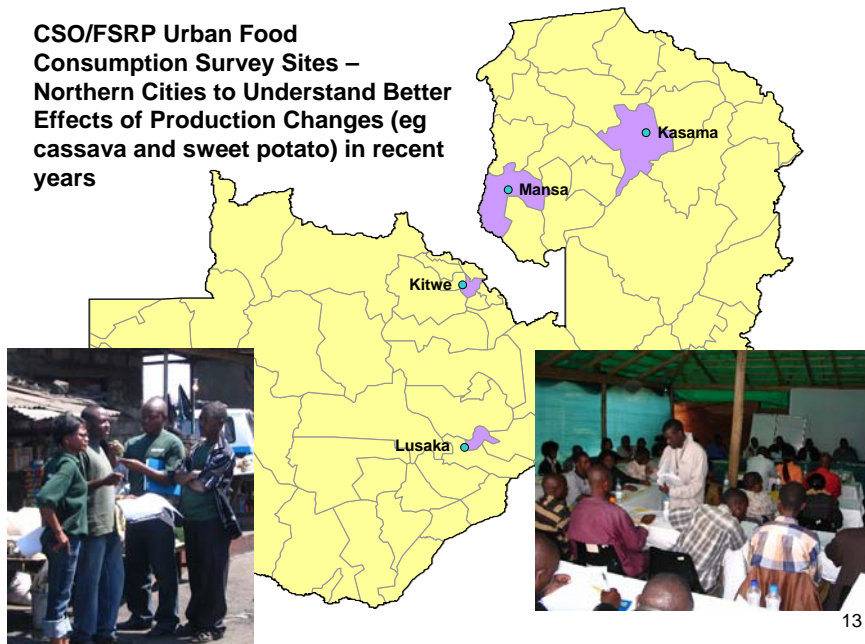
	Maize	Other grains/ beans/ oilseeds	Non-food cash crops	Fruits - veges	Animal products
Kenya	13.3	7.9	34.0	14.7	26.7
Malawi	32.3	11.8	44.9	na	na
Mozam	13.8	9.3	16.9	30.4	23.4
Zambia	28.2	7.7	16.7	27.5	14.7 ₁₁

Basic UFCS Information

- Handout – Summary of Organization, Objectives and Key Concepts
- 4 Cities of Zambia (Lusaka, Kitwe, Mansa & Kasama)
- Some 2000 hhs, to be visited twice Aug/2007 and Feb 2008 to measure seasonality in consumption
- Measure also urban food prices by location, outlet type and unit of sale

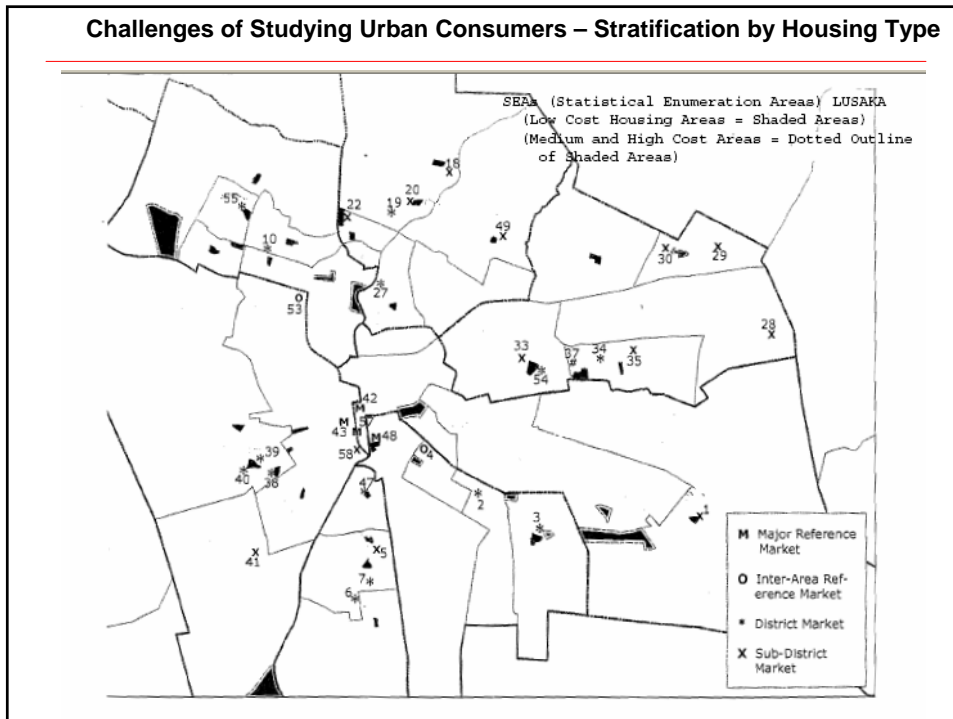
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CSO/FSRP Urban Food Consumption Survey Sites – Northern Cities to Understand Better Effects of Production Changes (eg cassava and sweet potato) in recent years



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Challenges of Studying Urban Consumers – Stratification by Housing Type



Impressions from Fieldwork

- Many Small & Medium Size Retail Marketing Agents Supplying Neighborhoods - Notwithstanding Supermarket Growth
- Urban Poverty Driving Frequent Purchase, Location and Small Units of Trade
- Urban Agriculture Helpful in Some Places
- Vast Quantities of Charcoal Sold – For Cooking

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How to Improve the Traditional Marketing Sector –It Is Close to Consumers?



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Purchase Location & Units



Urban Agriculture –Crops/Livestock



Charcoal – A Necessary Evil With Significant Long-Run Implications?



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Zikomo Kwambili,
Natotela sana,
L'i tumezi ahulu,
Twalumba kapati,

**Thank you to Zambian smallholders,
traders, consumers and to policy makers
for opportunities to obtain/share
information and ideas – we welcome
questions and comments**