

DIVERSE PROGRAMME RESPONSES FOR DIVERSE RURAL
HOUSEHOLDS: INSIGHTS FROM THE QUANTITATIVE
LIVELIHOOD PROFILING STUDY IN ZAMBIA

Mitelo Subakanya, Munguzwe Hichaambwa and Antony Chapoto

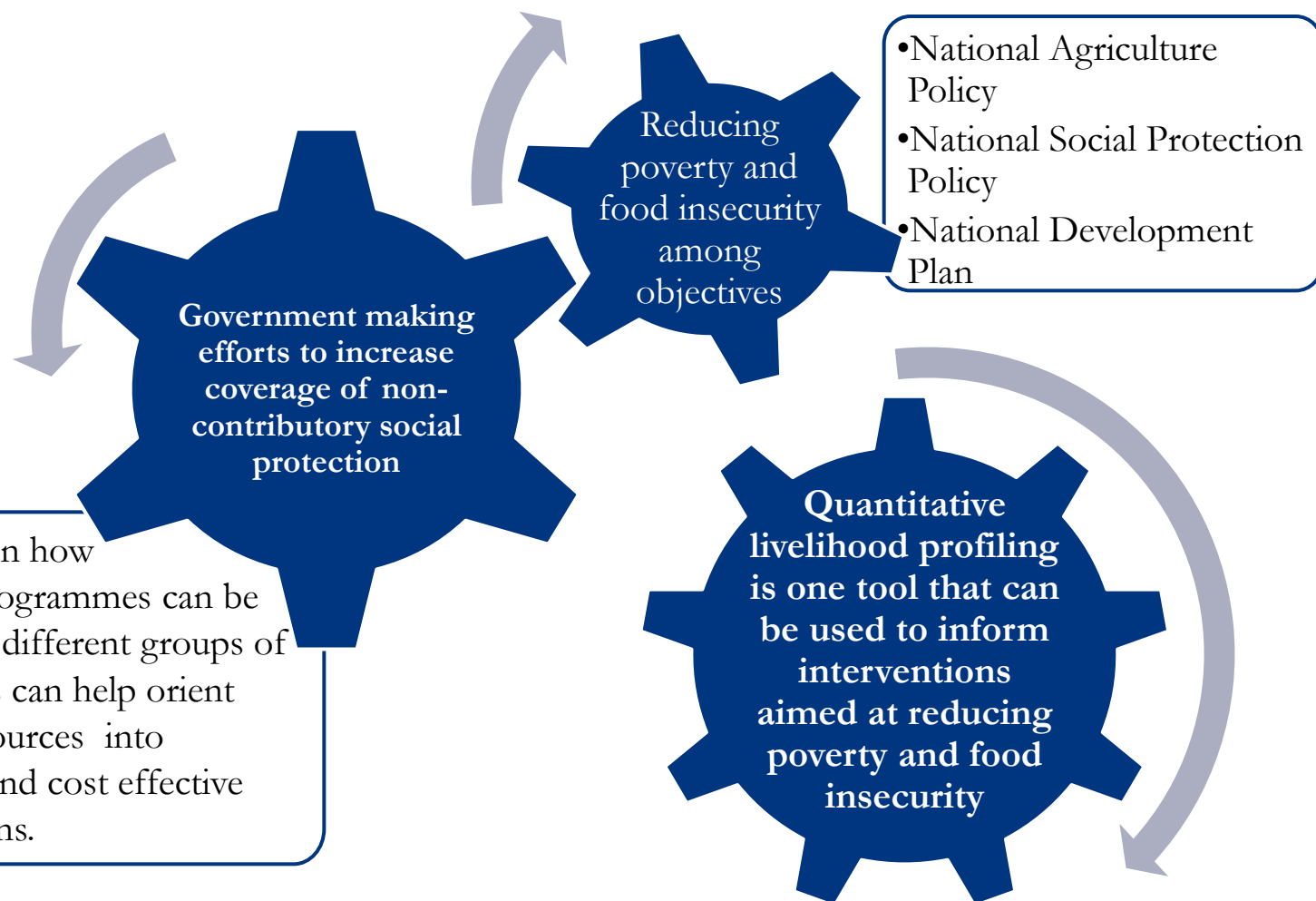
2017 Social Protection Week: Inclusive Sustainable Social
Protection-Leaving No One Behind

Lusaka, Zambia

28th November, 2017

Rationale/problem

1



About Livelihood Profiling

2



Livelihood profiling is the categorisation of households based on their similarity with respect to a number of variables



It provides a more nuanced picture than simple classifications based on only **one or two dimensions** such as income or the size of land holdings



Food and Agriculture Organization
of the United Nations

Indaba Agricultural Policy Research Institute



Roadmap

3

Data and
Methods

Conclusions and
recommendations



Key Findings



Food and Agriculture Organization
of the United Nations

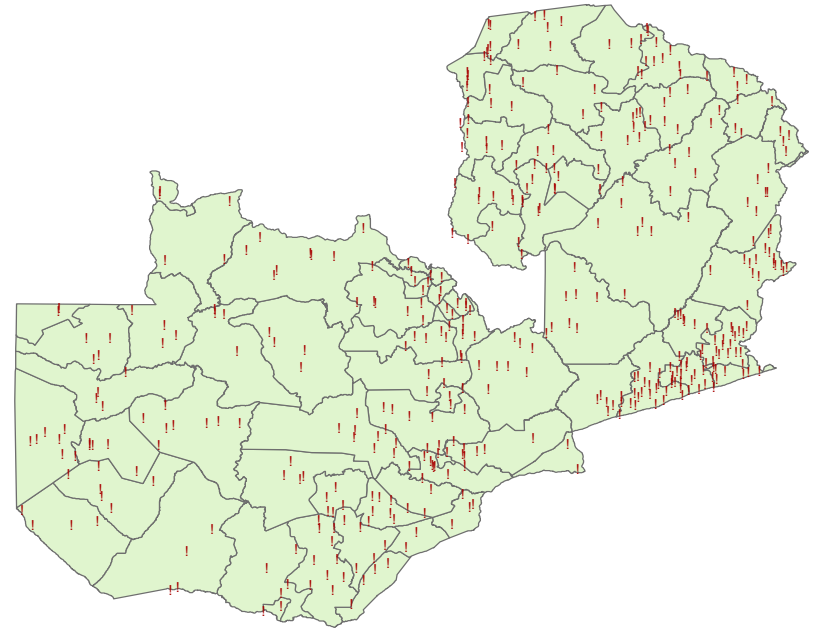
Indaba Agricultural Policy Research Institute



Data and methods

4

- The study uses the Rural Agricultural Livelihoods Survey (RALs) data of 2015 to generate livelihood clusters
- Interviews with key stakeholders were done to ensure that study responded to information needs



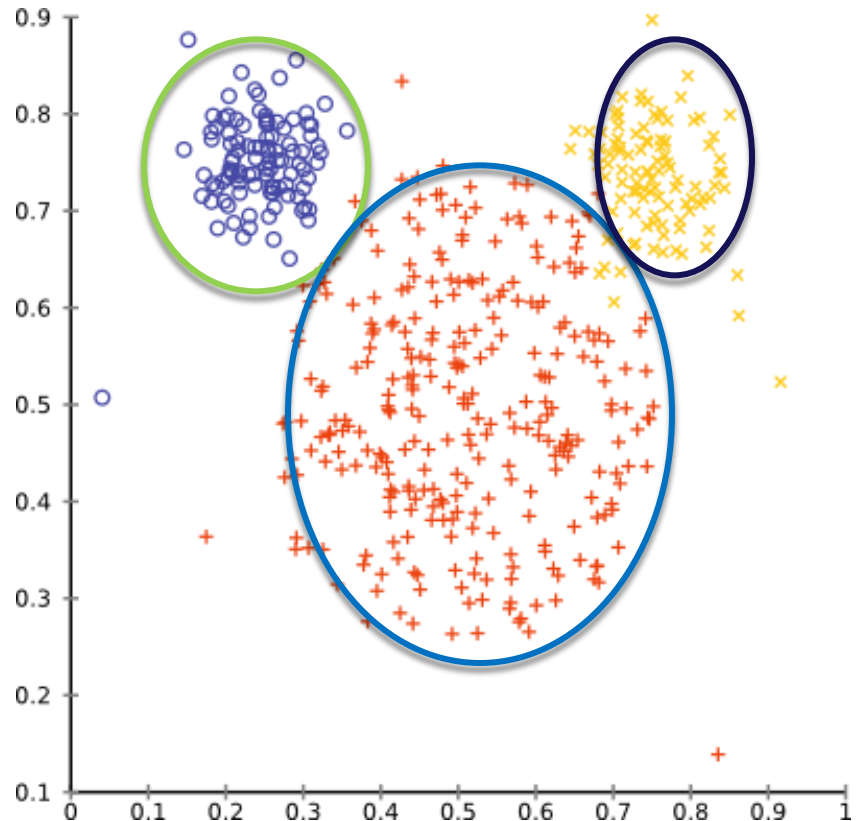
Source: Chapoto and Zulu-Mbata 2015

Data and methods.....

5

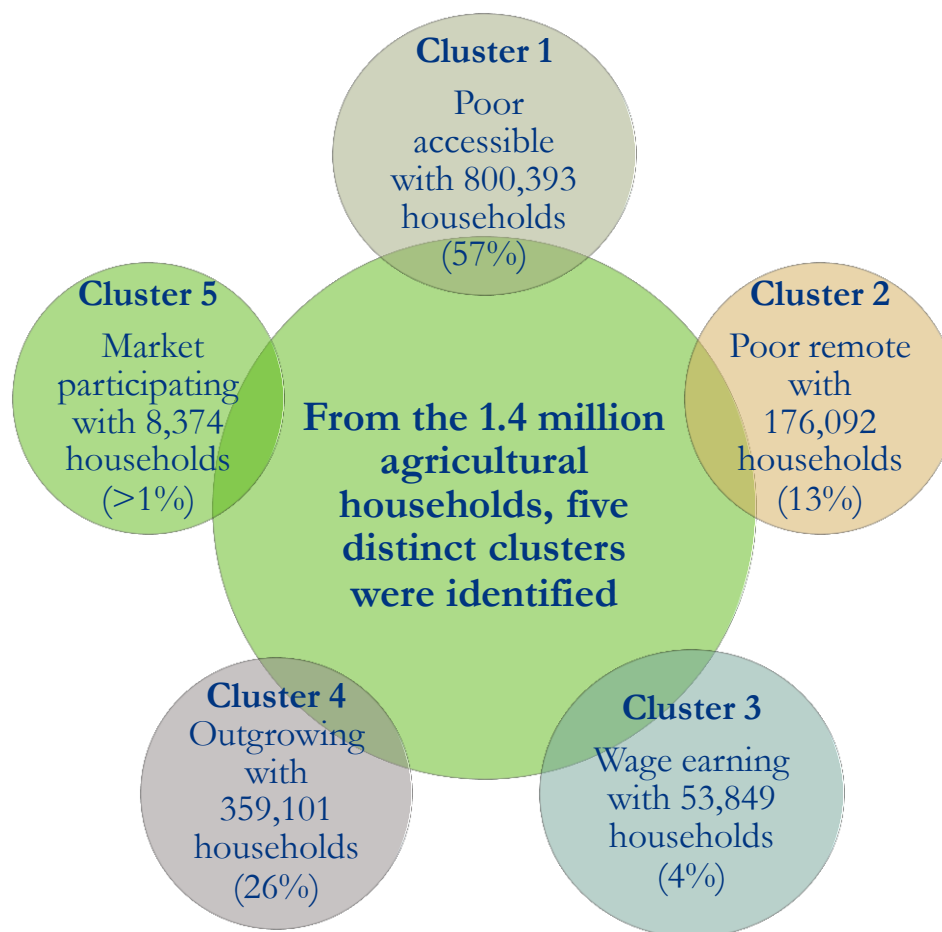
This study uses Principal Component Analysis (PCA) and cluster analysis on:

- (i) selected livelihood asset variables adopted from the Sustainable Livelihood Framework;
- (ii) variables used to target households for different agricultural and social protection programmes in rural Zambia that were collected in the RALS 2015.



Key Findings

6



Key cluster characteristics

7

Characteristic	Household type				
	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Number of Households	800,393	176,092	53,849	359,101	8,374
Percent in low income group	60.7	58.5	3.1	30.1	0.5
Percent female headed	30.8	23.3	14.2	11.5	19.8
Average age of household head	47.4	43.6	44.9	46.6	53.4
Average household dependency ratio	39.4	40.4	28.8	37.5	31.9
Maximum years of education	7.3	7.1	14	8.7	10.9
Percent school age children attending school	62	59	86.5	66.6	78.7
Percent with group membership	40.5	41.8	63.4	77.1	75.8
Percent migrant households	8.7	7.8	42.6	8.6	12.6
Average cultivated land (ha)	1.5	2.3	1.9	3.3	7.9
Percent with good quality housing	10.1	6.4	89.1	30.1	73.2
Average disposable income	4,945	6,483	62,341	14,265	58,652
Percent employed in public sector	0.3	0.4	76.3	0.7	1.9
Percent obtaining credit	4.3	16.2	11	41.8	13.7
HCI	20.1	34.4	37.3	53.4	65.7
Kilometres to the nearest Boma	34.1	100.3	23.5	37.1	36.9
Hours to the nearest urban centre	14	22	11	11	9
% below the poverty line (\$1.25/day)	86.1	85.2	10.5	69.7	18.9

Composition of Household Income by Cluster

8

Income type	Income share (percent) by household type				
	Poor Accessible	Poor Remote	Wage Earning	Outgrowing	Market Participating
Gross farm income	45	50	14	54	68
Gross off farm income	55	50	86	46	32
Gross household income	100	100	100	100	100
Gross business	78	85	33	88	80
Gross wage	17	13	66	10	18
Remittances	5	2	1	3	2
Total off-farm income	100	100	100	100	100
Gross value of horticultural sales	17	7	11	19	4
Gross value of field crops sold	59	82	45	63	20
Gross livestock sales	24	11	43	18	76
Total farm income	100	100	100	100	100

Source: CSO/MAL/IAPRI 2015



Food and Agriculture Organization
of the United Nations

Indaba Agricultural Policy Research Institute



Maize Market Position by Cluster

9

Maize position (%)	Household type					
	All	Poor Accessible	Poor Remote	Wage Earning	Outgrowing	Market Participating
Net seller	37	25	39	35	60	71
Net buyer	38	47	27	48	23	24
Autarkic	25	28	34	17	17	5

Source: CSO/MAL/IAPRI 2015

Participation in the different Agricultural and social protection programmes by cluster

10

Type of participation	Percentage by household type				
	Poor Accessible	Poor Remote	Wage Earning	Outgrowing	Market Participating
%Participation in SCT	2.5	0.82	0.45	0.68	0
%Participation in FISP	27.78	31.33	51.89	58.72	51.33
%Participation in FSP	0.54	0.37	0.12	0.62	1.10
%Selling maize to FRA	24.24	38.75	37.17	41.57	47.62

Source: CSO/MAL/IAPRI 2015



Food and Agriculture Organization
of the United Nations

Indaba Agricultural Policy Research Institute



Household source of fertilizer by cluster

11

Source	Total amount acquired by household type				
	Poor Accessible	Poor Remote	Wage Earning	Outgrowing	Market Participating
Subsidies (kg'000)	47,779	13,562	7,763	61,943	1,634
Cash purchases (kg'000)	34,237	12,489	15,549	95,682	9,868
Loans (kg'000)	1,048	1,611	1,268	14,005	150
Other sources (kg'000)	1,549	347	542	2,627	73
Total	84,613	28,009	25,122	174,258	11,725

Source: CSO/MAL/IAPRI 2015



Food and Agriculture Organization
of the United Nations

Indaba Agricultural Policy Research Institute



Household source of fertilizer by cluster...

12

Average amount acquired by household type					
Source	Poor Accessible	Poor Remote	Wage Earning	Outgrowing	Market Participating
Subsidies (kg)	60	77	144	172	195
Cash purchases (kg)	43	71	289	266	1,179
Loans (kg)	1	9	24	39	18
Other sources (kg)	2	2	10	7	9
Total	106	159	467	485	1,400

Source: CSO/MAL/IAPRI 2015

Poverty incidence, gap and severity

13

Poverty Measure	Household type				
	Poor Accessible	Poor Remote	Wage Earning	Outgrowing	Market Participating
Percentage below income poverty line*	86	85	10	70	19
Percent poor (incidence)					
Poverty gap index	57	57	5	37	6
Poverty severity index	43	43	3	23	2

Note: *=1; 2005 PPP exchange rate. Poverty line=\$1.25/day

Source: CSO/MAL/IAPRI 2015

Household food security outcomes by livelihood cluster

14

Food security measure	Average value by household type				
	Poor Accessible	Poor Remote	Wage Earning	Outgrowing	Market Participating
Percent food secure households	44.66	50.14	87.51	71.59	81.45
Months without adequate food	2.14	1.93	0.44	0.86	0.58
Household Dietary Diversity Score	5.19	4.88	8.05	6.51	7.87

Source: CSO/MAL/IAPRI 2015



Food and Agriculture Organization
of the United Nations

Indaba Agricultural Policy Research Institute



Key facts from the study

15

While agriculture plays a dominant role in the livelihoods of most households, off-farm activities also play an important role

Maize is a staple crop for poorer households and a cash crop for wealthier households

Limited access to land and/or markets are key constraints to poorer households

Some of the wealthiest outgrowing households have access to the Food Security Pack, a programme designed for vulnerable households



Conclusions and recommendations

16

Asset base, income and livelihood strategies among rural households are very diverse. Therefore, **One size fits all programmes** will not be effective

Poor rural households need both income and productive support provided through social protection and smallholder agricultural programmes

Agricultural and non-agricultural support needs to be provided and extended to the poor rural households

The Food Reserve Agency should continue to focus on providing market access to households in the remote areas

There is need for increased coverage of the Social Cash Transfer Programme among the **poor remote households**

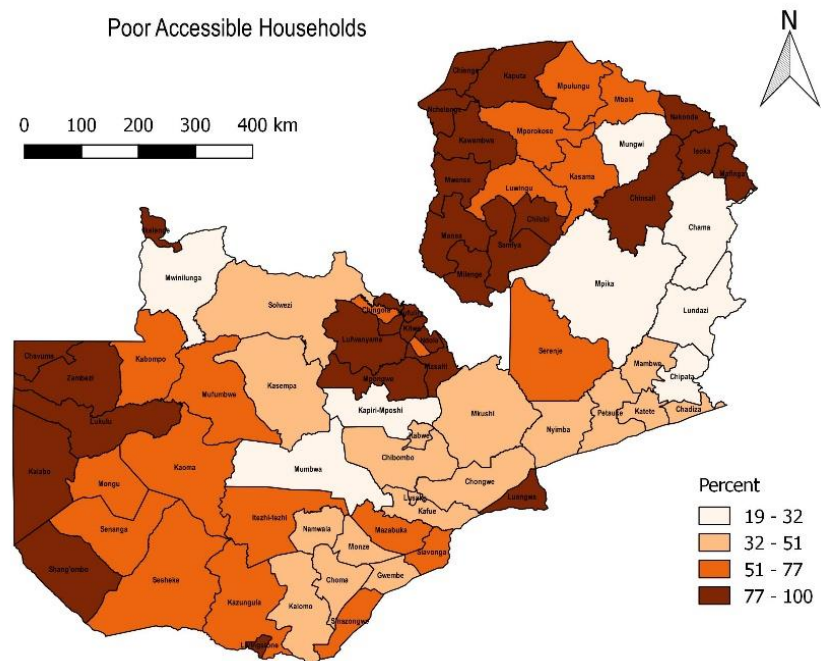
Agricultural support programmes need to be adjusted to the different crop and non-crop agricultural activities



Mapping of household clusters

17

For example, cluster 1, the ‘poor accessible households’ is mostly concentrated in Luapula, Copperbelt and Western provinces and in the north-eastern districts of Muchinga province.



Source: CSO/MAL/IAPRI 2015



Food and Agriculture Organization
of the United Nations

Indaba Agricultural Policy Research Institute



Thank you

For more information visit our websites at:

<http://www.iapri.org.zm/>

<http://www.fao.org/home/en/>

Bonus Slides

19

This study uses Principal Component Analysis (PCA) and cluster analysis to generate the clusters and followed the method in Ansoms and Mckay (2010) paper.

Due to multi-collinearity and the advantage of using fewer variables for cluster analysis, PCA is used which generates principle component scores which are used as input variables in cluster analysis.

Hierarchical cluster analysis was then used. This is used to determine the number of livelihood groups/clusters to use in Non-hierarchical cluster analysis.

Hierarchical cluster analysis has a weakness of possible misclassification of households (Jenson et al., 2006). To this effect, non-hierarchical cluster analysis was used to correct for this using k-means non-hierarchical cluster analysis.

Potential uses of livelihood profiling

20

