MALAWI
Vulnerability
Assessment Committee

SADC FANR
Vulnerability
Assessment Committee

The MVAC's Analytical Framework

Livelihoods Based Vulnerability Analysis

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Technical Support

Save the Children®

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A little history of LBVA…

- Origins in late-20th Century African famines: Biafra, 1970s and 1980s famines in Ethiopia, Sahel –clear need for better assessment and improvements on EW
- …Sen's work on the Entitlement Theory of Risk → insights from the Indian experience
- Understanding that famine is not just about crop production failure –key role of economics and poverty…

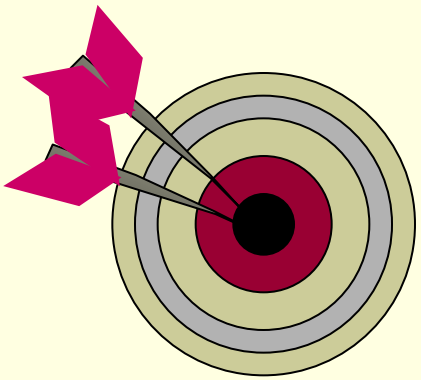
Why LBVA?

- FAO/GIEWS requested Save the Children to develop a practical assessment system for measuring *entitlements* –the productive and exchange systems that fail during famines
- The system had to be practical and implementable in poor countries

To make that work, there were many requirements for the system…

What is needed in an information system in poor countries is…

- Credibility
  - Accuracy (resolution vs. coverage)
  - Nurturing of skills (for buy-in and ownership) Collaborative analysis
  - Demand-driven & responsive



What is needed in an information system for poor countries is…

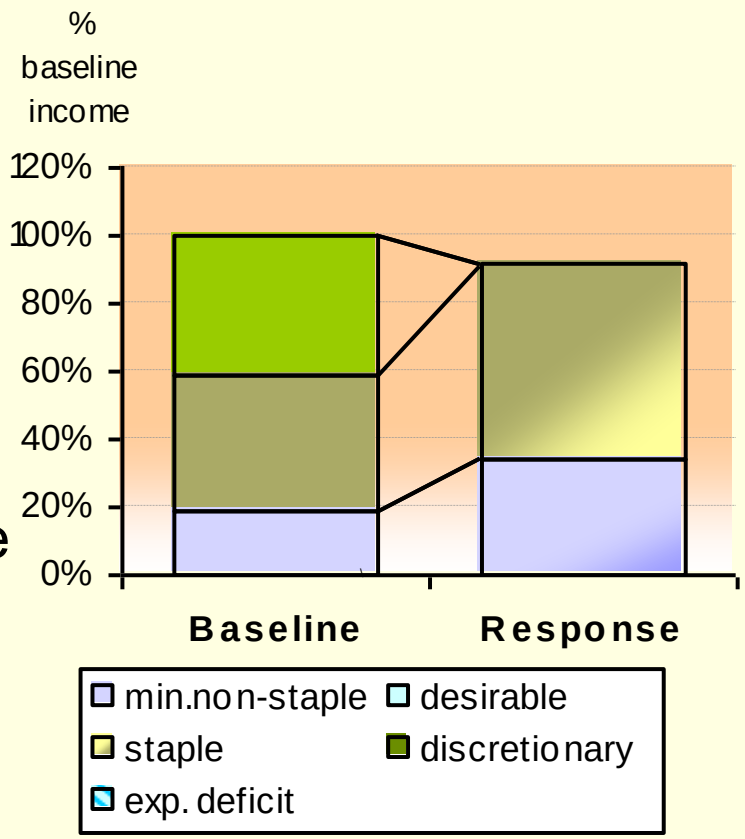
- Timeliness
  - Speed of assessment, analysis, reporting
  - Cover large geographical areas (often with difficult logistics)

What is needed in an information system in poor countries is…

- Low cost (for sustainability)
  - Minimal outside support (after initial setting up)
  - Able to draw on other existing information/data sources
  - Scalable

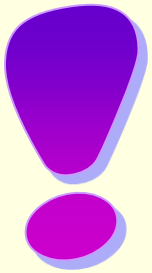
LBVA developed was designed to fulfil all these things…

- It was, however, designed primarily for EW of famines, by *modelling*:
  - Baselines
  - Change Specification
  - Coping (thresholds/compromises)
  - Markets ('capacity'/volume as well as prices)



Entitlements

- The sum of all production, property and activities that Hhs can use to obtain their minimum needs
  - Assets and production, exchange
  - Idea that: ‘right to life’ → basic remuneration and access to services (for work or effort) that sustain life
  - Like ‘property rights’



NOT: ‘what people are entitled to’

The Process: ‘Classic’ approach

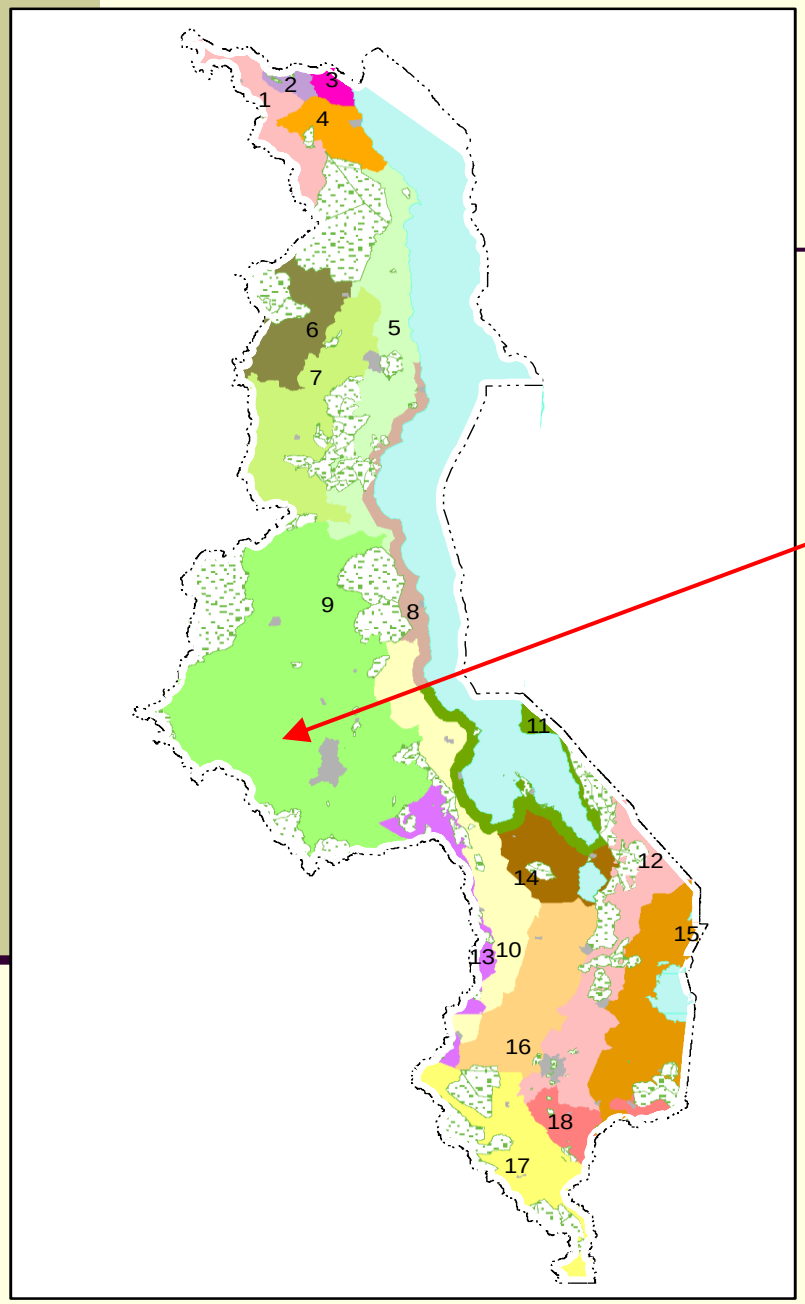
- Looks at 5 components:
  - Assets
  - Income
  - Expenditure
  - Food
  - Markets
- Inter-relationships, e.g.
  - Land (asset) to production → food and income
  - Commodities consumed (food) vs that sold (income)
  - Items purchased that can be foregone for food

The Process: ‘Classic’ approach

- Construct a baseline
  - Measure: quantities by spatial units (LZs), wealth groups and time
  - Tools used: largely RRA/PRA with some surveys if practical or available
  - Secondary sources

GIS software really helps with geography

Semi-structured interviews to probe the how, who, when, where and why? Also to cross-check and ensure all details are covered



Example: Baselines

- Context, or 'normal' situation
- Geographical areas, or "Livelihood Zones"
- Households resources, "wealth groups", e.g. Kasungu-Lilongwe Plain

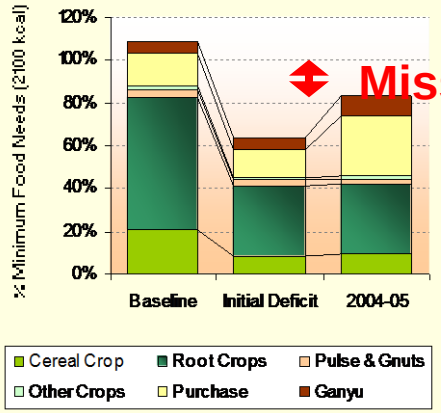
Item	'Poor'	'Middle'	'Better-off'
Land holdings	1.5-2.5 acres	2-3 acres	3 acres +
Livestock (incl poultry)	<10 chickens	0-2 cattle 0-3 goats	3-10 cattle 5-10 goats
Employ/ seek *ganyu*	seek	employ but sometimes seek	employ
Other Hh assets		Bicycle	Ox-cart
Yearly income (2003)	K8150	K30,000	K70,000

The Process: ‘Classic’ approach

- Measuring change –expressed as a % of baseline
- Include acceptable expandability (coping) strategies
- If Entitlements < Needs then “Missing Entitlements”

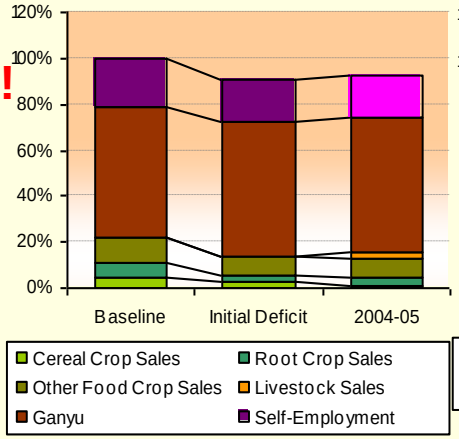
Example: Flood-Affected Area in Nkhata Bay

Food Sources

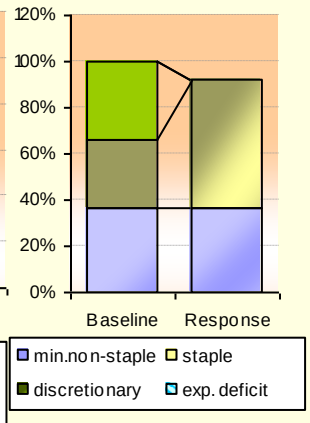


Miss Ent!

Income Sources



Expenditure



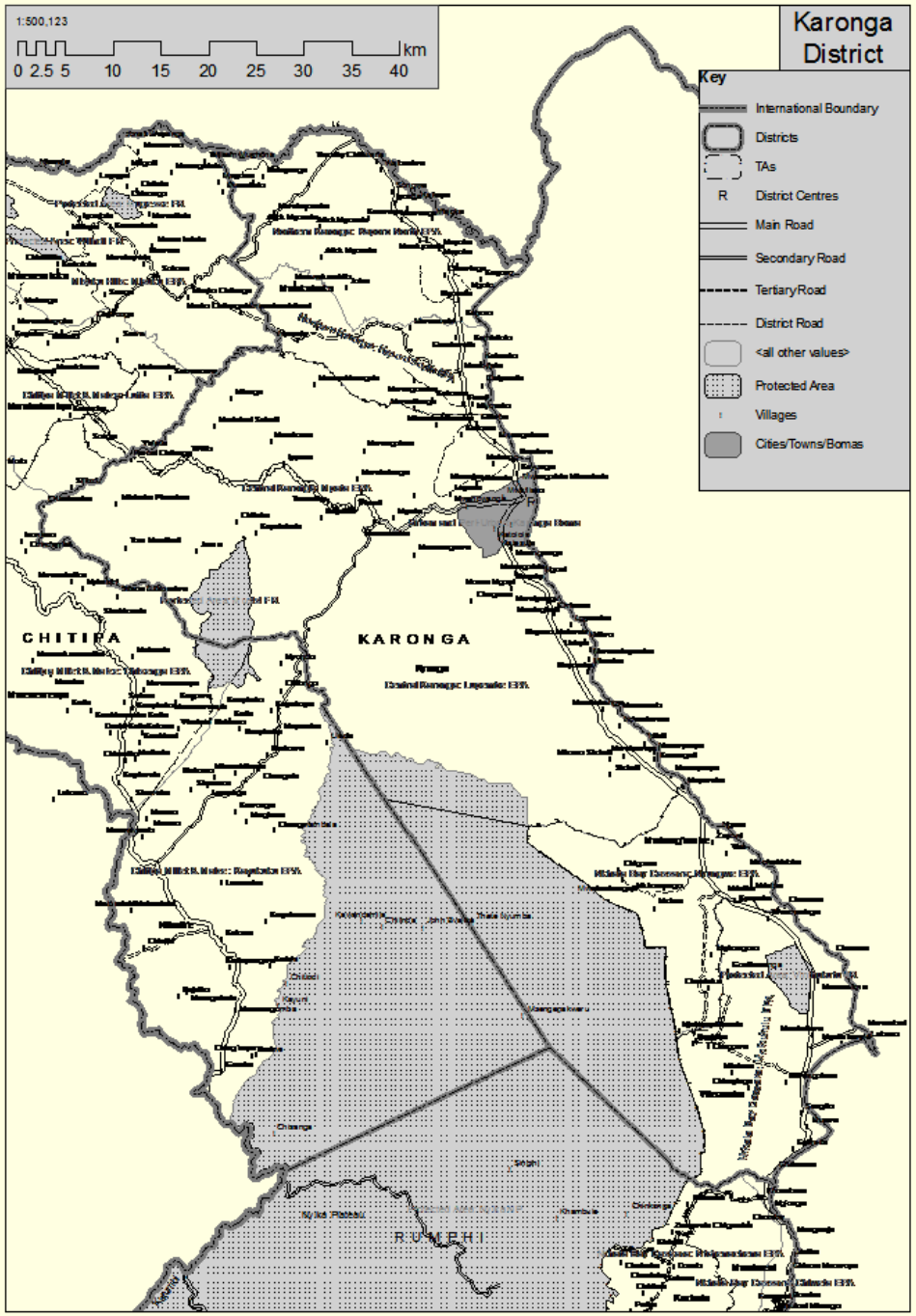
POOR Households

- Lost 60% of maize
- Lost 45% of cassava
- Lost 40% of sweet potatoes
- Households respond by:
  - Increasing income
  - Switching expenditure

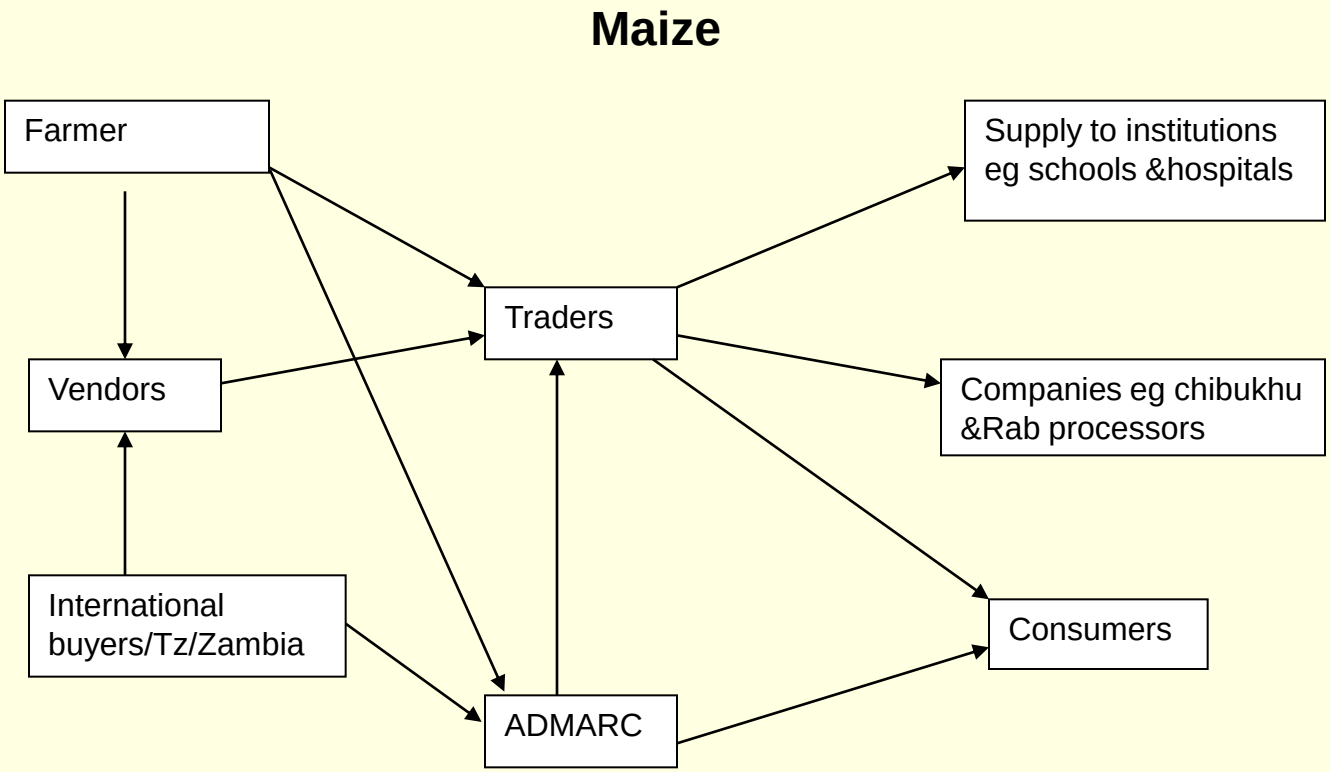
but are unable to secure enough to purchase their food energy needs

Markets

- Measuring capacity:
  - Can be based on good key-informant interviews with traders active participants:
    - Establish market chain
    - Map established markets/trading centres
    - Capacity and contraints of operators at different points in the chain identified (bottlenecks)



Market Chain example – Western Rumphi and Mzimba



‘Classic’ Approach: Is it Useful?

- Accuracy
  - Worldwide so far: 14 forecasts, 0 false -ve, 0 false +ve
- Timeliness
  - Last year in Malawi forecast allowed build up of 280,000 MT equivalent of food
- Sustainability
  - Costs:
    - Baselines $200,000 (once every 5 years)
    - Current analysis forecast $25,000
    - Current analysis update $10,000
    - Supporting secretariat $266,000 (could be scaled down)
    - TOTAL yearly cost: $341,000

    NOTE: excludes other contributing staff costs, e.g. MVAC members
  - Value:
    - In 2005-06, MVAC-based HEA information for Malawi influenced ~$100 million of donor spending, of which $20 million was Government spending
  - Human assets:
    - ~50 trained practitioners, 12 practitioners able to train
    - Far greater understanding by *users* of Food Security issues

Tools for the Analysis

- Spreadsheets

Household Economy: Kasungu-Lilongwe Plain - Chilaza, Kasungu-Chipala & Chulu EPAs Spreadsheet prepared by The Food Economy Group, 2003

BASELINE ACCESS | PROBLEM SPECIFICATION | RESPONSE | SUMMARY

Sources of Food : Poor HHs

	Baseline Access	Expand -ability	Max. Access	Problem %norm	Food Intake kcals/day	Con.prob %norm	Max.curr Access	Curr. Access	Baseline Access	Initial Deficit	Curr. Access
maize	42%	0%	42%	69%	baseline:	69%	29%	29%	42%	29%	29%
rice	0%	0%	0%	100%	2100	100%	0%	0%	0%	0%	0%
s.potatoes	6%	0%	6%	54%	for analysis:	54%	3%	3%	6%	3%	3%
cassava	0%	0%	0%	100%	2100	100%	0%	0%	0%	0%	0%
g/nuts	3%	1%	4%	52%		52%	2%	2%	3%	1%	2%
pulses	3%	0%	3%	79%		79%	3%	3%	3%	2%	3%
sorghum	0%	0%	0%	100%		100%	0%	0%	0%	0%	0%
millet	0%	0%	0%	100%		100%	0%	0%	0%	0%	0%
purch/exch.	5%		37%	100%		100%	13%	13%	5%	2%	13%
winter maize	1%	0%	1%	100%		100%	1%	1%	1%	1%	1%
bananas	0%	0%	0%	100%		100%	0%	0%	0%	0%	0%
pumpkin	0%	0%	0%	100%		100%	0%	0%	0%	0%	0%
maize surplus	0%	0%	0%	100%		100%	0%	0%	0%	0%	0%
wild foods	2%	0%	2%	100%		100%	2%	2%	2%	2%	2%
ganyu	31%	3%	34%	80%		80%	27%	27%	31%	25%	27%
milk/meat	0%	0%	0%	100%		100%	0%	0%	0%	0%	0%
Other Food	0%	0%	0%	100%		100%	0%	0%	0%	0%	0%
deficit	0%							19%	0%	34%	19%
total	94%	4%	130%				81%			66%	
							adj.fact =	2.32			

Income : Poor HHs

Cash	Baseline Access	Expand -ability	Max. Access	Problem %norm	Comm. Price	Staple Price	Con.prob %norm	Max.curr Access	Curr. Access	% of baseline income Baseline Access	Initial Deficit	Curr. Access
maize sales	0	0	0	69%	140%	177%	97%	0	0	0%	0%	0%
rice sales	0	0	0	100%	100%	177%	100%	0	0	0%	0%	0%
s.pot sales	0	0	0	54%	100%	177%	54%	0	0	0%	0%	0%
cassava sales	0	0	0	100%	100%	177%	100%	0	0	0%	0%	0%
g/nut sales	500	-125	375	52%	111%	177%	58%	216	216	5%	3%	2%
pulse sales	188	-47	141	79%	162%	177%	128%	180	180	2%	3%	2%
sorghum sales	0	0	0	100%	100%	177%	100%	0	0	0%	0%	0%
millet sales	0	0	0	100%	100%	177%	100%	0	0	0%	0%	0%
tobacco	6,000	0	6,000	85%	122%	177%	104%	6,222	6,222	66%	68%	68%
cotton	0	0	0	100%	100%	177%	100%	0	0	0%	0%	0%
fruit/veg	0	0	0	100%	100%	177%	100%	0	0	0%	0%	0%
bananas	0	0	0	100%	100%	177%	100%	0	0	0%	0%	0%
milk/meat sale	0	0	0	100%	100%	177%	100%	0	0	0%	0%	0%
chickens	200	100	300	30%	160%	177%	48%	144	144	2%	1%	2%
goats	0	0	0	33%	160%	177%	53%	0	0	0%	0%	0%
cattle	0	0	0	60%	160%	177%	96%	0	0	0%	0%	0%
pigs	0	0	0	100%	160%	177%	160%	0	0	0%	0%	0%
ganyu - ag	2,000	0	2,000	80%	160%	177%	128%	2,560	2,560	22%	28%	28%
ganyu - other	0	0	0	100%	160%	177%	160%	0	0	0%	0%	0%
self-emp	250	500	750	100%	100%	177%	100%	750	750	3%	3%	8%
petty trade	0	0	0	100%	100%	177%	100%	0	0	0%	0%	0%
other trade	0	0	0	100%	100%	177%	100%	0	0	0%	0%	0%
Other (PWP)	0	0	0	100%	100%	177%	100%	0	0	0%	0%	0%
total:	9,138	428	9,566					10,072	10,072	100%	106%	110%

Expenditure : Poor HHs

Cash	Baseline Expend	Problem %norm	Comm. Price	Con.prob %norm	Max.curr Expend	Curr. Expend	% of baseline expenditure Baseline Expend	Initial Deficit	Curr. Expend
min.non-staple	3,540	100%	177%	177%	6,266	6,266	39%	69%	69%
desirable	0	100%	141%	141%	0	0	0%	0%	0%
staple	816				3,807	3,807	9%	5%	42%
discretionary	4,782					0	52%	32%	0%
total:	9,138				10,072	10,072	100%	106%	110%
exp. deficit					0	0		0%	0%

Cost of staple

name of staple	maize
kg pppd	1
HH size	5
cost per kg	17
cost of staple	16,195

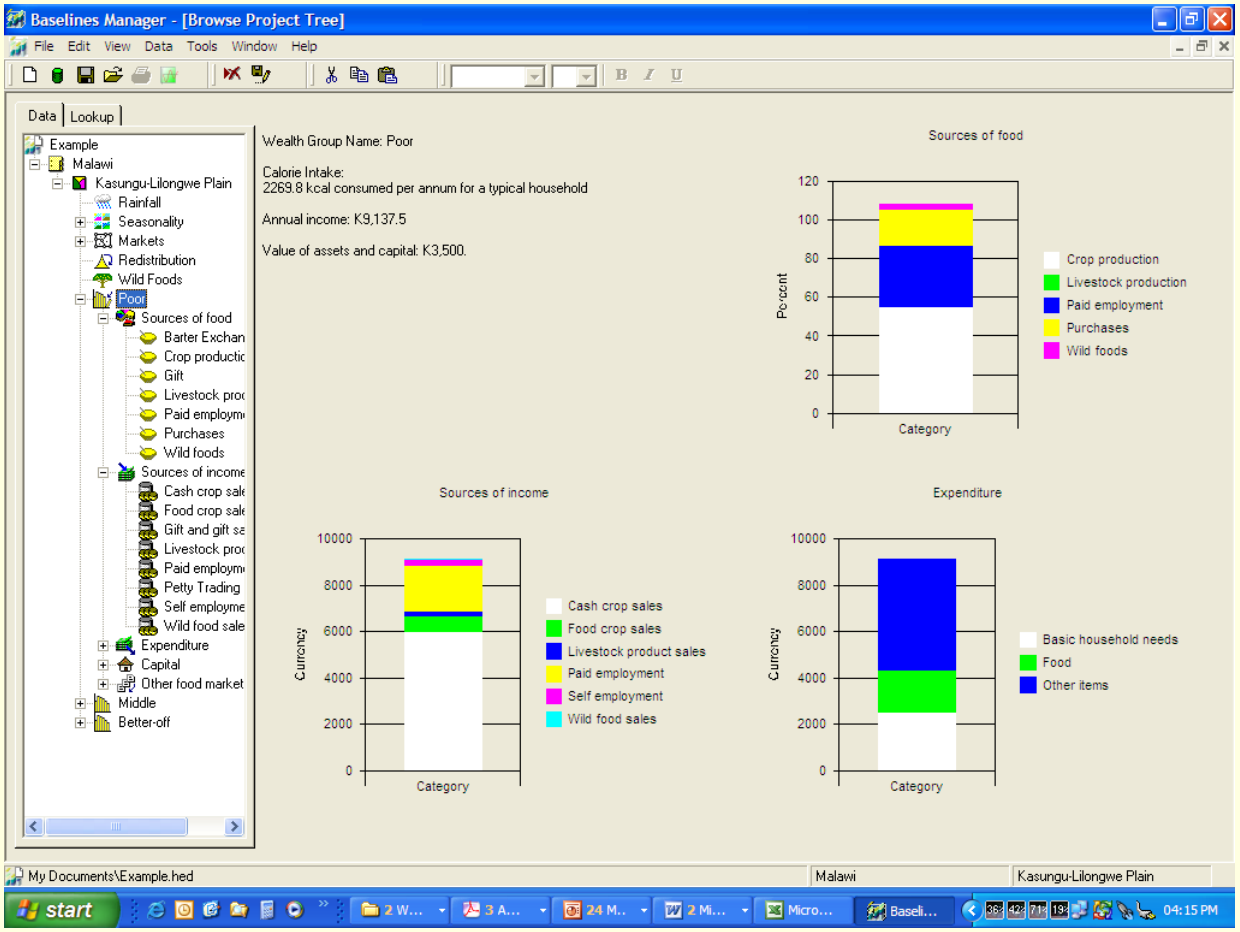
		177%	28,665

Exchange rate ($1 = amount of local currency)

Mal. Kwacha	93

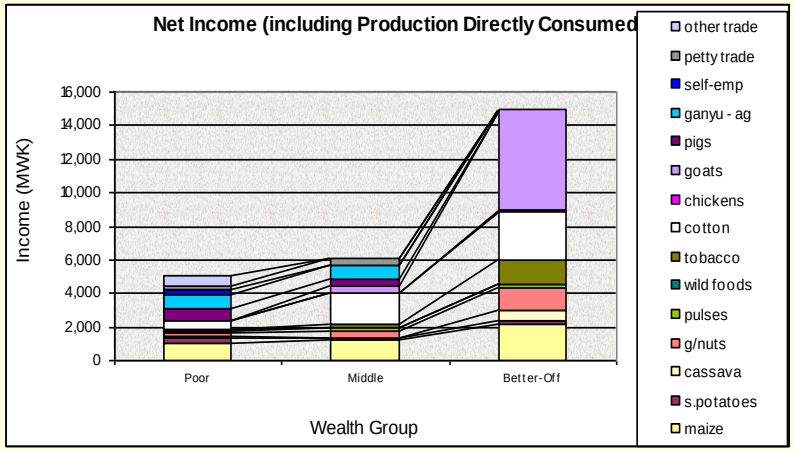
Tools for the Analysis

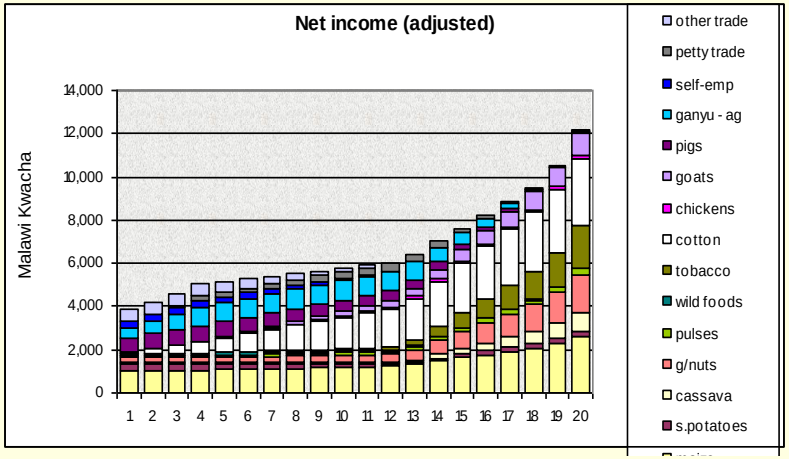
- Software (under development)
- GIS tools
- Statistical Analysis



Evolution: 'Wider Needs' Approach

- Look at income
  - Income 'in kind' (e.g. production directly consumed)
  - Cash income
- Needs
  - Definition depends on the objective of the policy or intervention being informed
- Develop Percentiles or Histogram
  - Better information on distribution





Income

- Production consumed directly (has a value & would otherwise be bought)
- Food & commodities earned, e.g. though labour, and consumed directly
- Food aid, other handouts, consumed
- Cash earnings (crops, labour, sustainable off-take of assets, petty trading, collection & sale)
- Terms of trade

Needs

- Emergency: basic life and livelihood maintenance

- ‘Development’: much broader definition of needs:
  - Health, schooling, materials
  - Time for health, schooling
  - Stocking, asset-building for resilience, repaying debt
  - Ability to make healthy consumption choices
  - Ability to provide for children (incl. care, time)

Expandability or coping

Two kinds:

- Overall increases in income items, e.g. making more firewood
- Switching between commodities and cash and among commodities to maximise efficiency in meeting priority needs

Percentiles

- How? Two Options:

  1. Expand existing baseline data sets, incorporating with others, e.g. National Integrated Household Surveys.

  2. Conduct household-level (probability-sample based) surveys using LBVA methods

- Both options include linking non-economic data such as demographic or nutrition data with economic data.

Linking Information Sets

- Key to this process is harmonisation of assessment units:
  - Spatial
  - Temporal
  - Wealth groups

  e.g. Nutrition indicators disaggregated by economic status

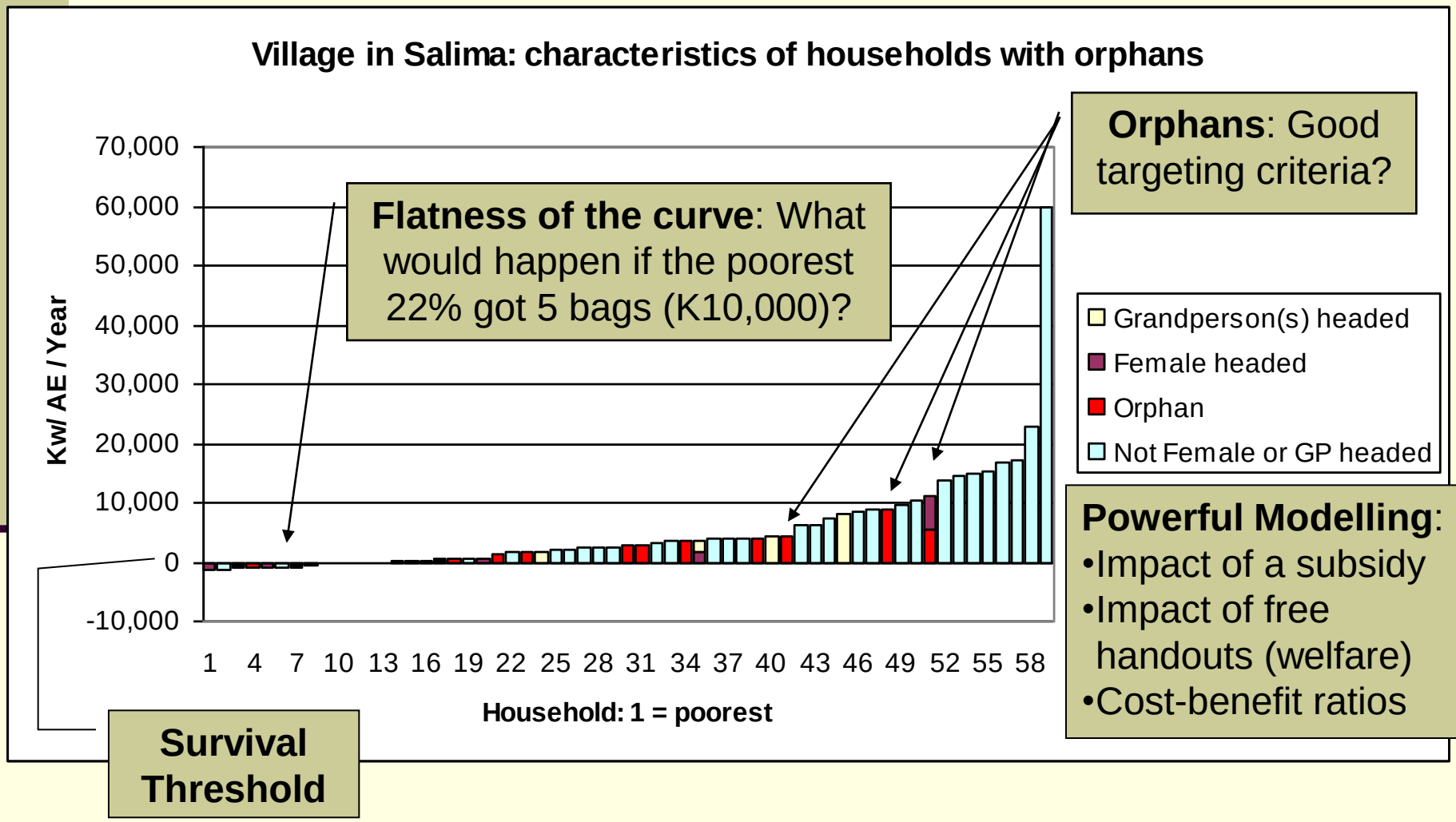
Proposal for LBVA by Individual Hhs

Being developed to

- allow estimates of household vulnerability to a wider range of shocks, including shocks internal to the household e.g. HIV/AIDS and
- greater discrimination between households

To see if this was useful in obtaining insights into the dynamics of vulnerability to a wider range of shocks and providing information useful for planning / policy / programming.

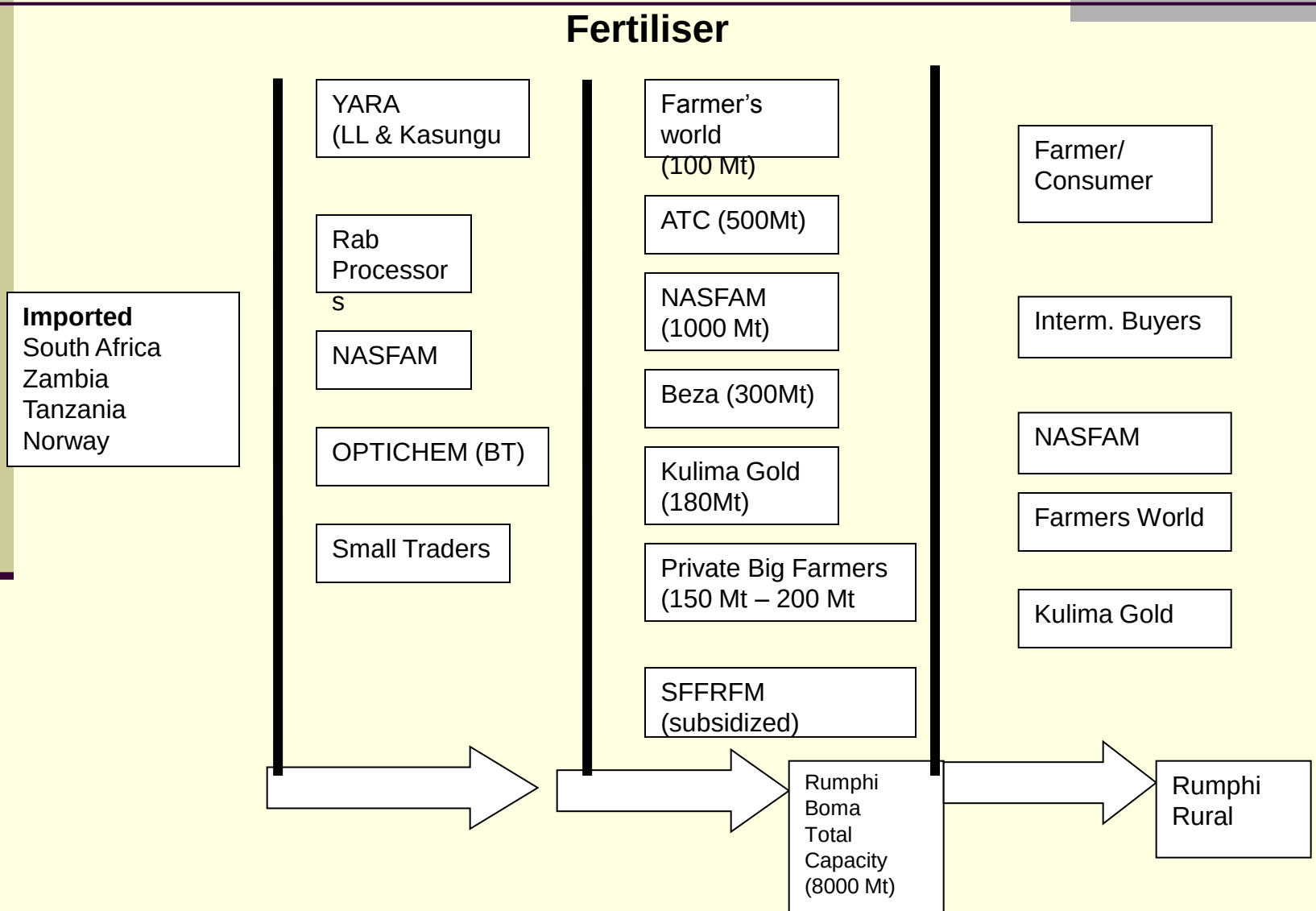
Example


Village in Salima: characteristics of households with orphans
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
-10,000
Kwl AE / Year
1 4 7 10 13 16 19 22 25 28 31 34 37 40 43 46 49 52 55 58
Household: 1 = poorest
Grandperson(s) headed
Female headed
Orphan
Not Female or GP headed
Orphans: Good targeting criteria?
Flatness of the curve: What would happen if the poorest 22% got 5 bags (K10,000)?
Powerful Modelling:
•Impact of a subsidy
•Impact of free handouts (welfare)
•Cost-benefit ratios
Survival Threshold

The End

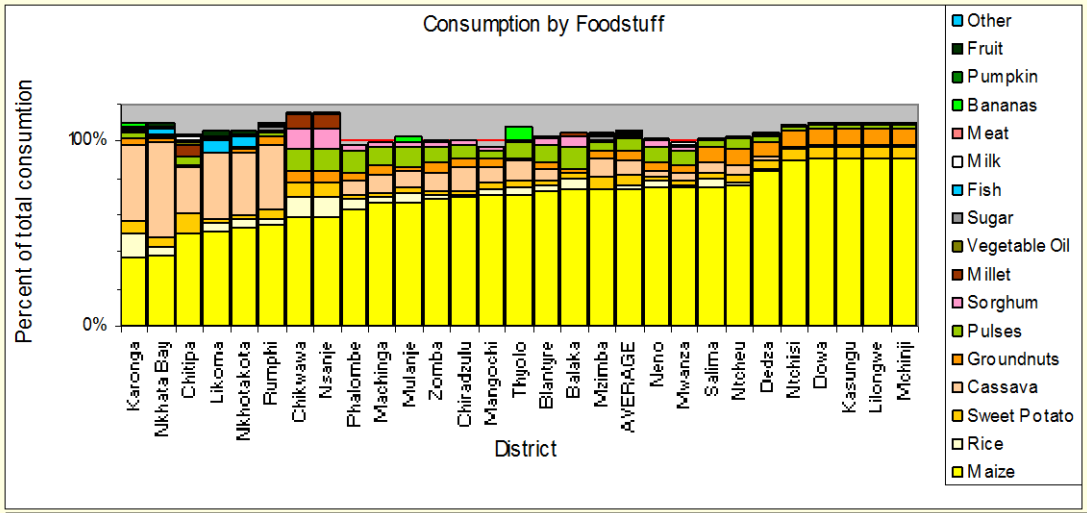
Thank you!

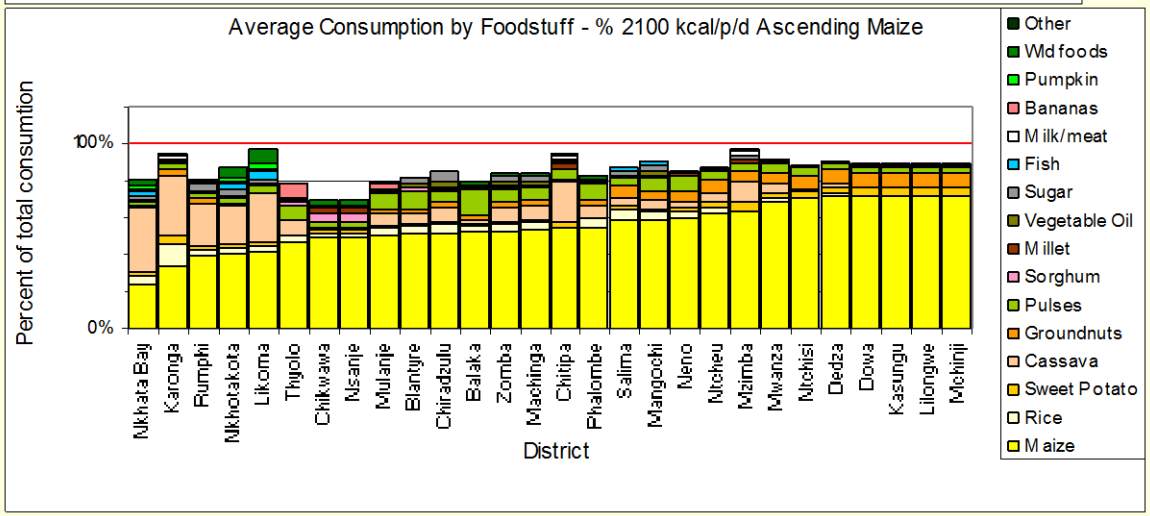
Market Chain example – Western Rumphi and Mzimba



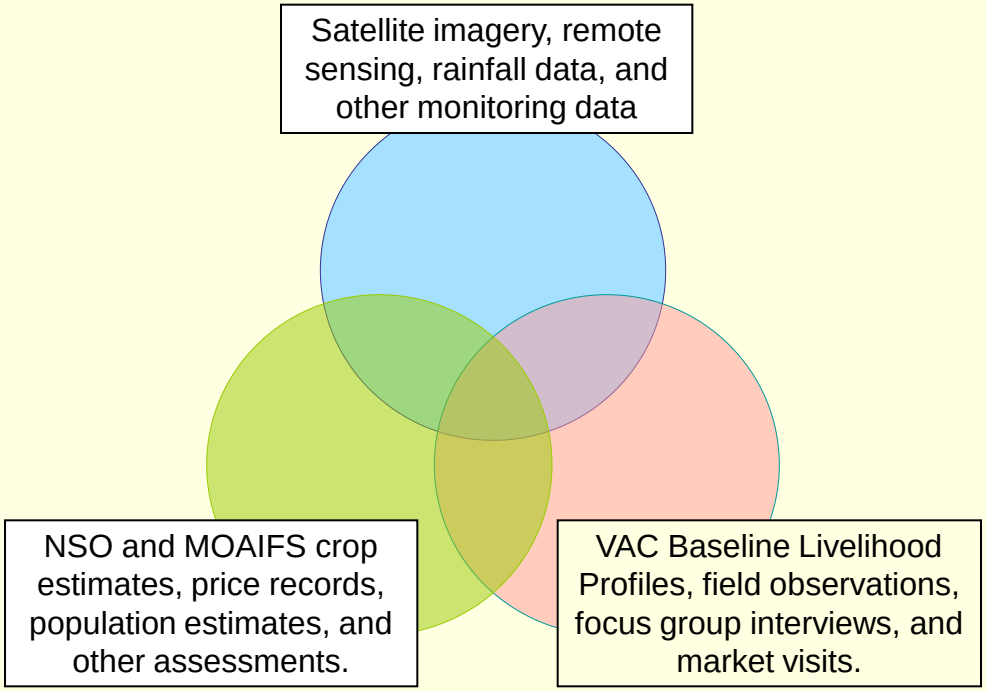
Extra insights

- % contribution to calorific intake by foodstuff





VAC Assessment Process – Triangulation



Responses

- Change use of food crops –eat, don't sell
- Increased cassava
- Increase in cotton + cotton price
- Sell livestock
- Seek more casual labour
- Switch expenditure, non-food to staple food (cheap kcals)
- Wild foods

Hampered by:

•LOW INCOMES (b/l < 50% of food needs)

•Lack of Assets

•Exhausted Natural Environment

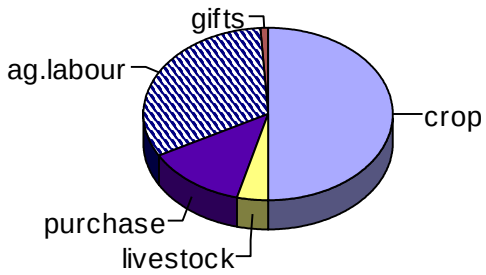
•Low starting point

The Approach: Summary

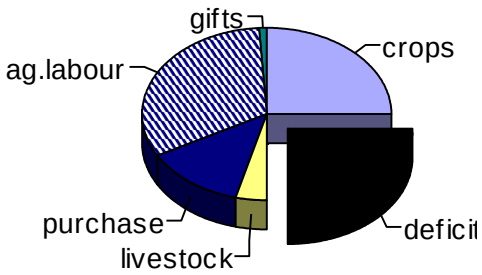
Hazard example:
50% crop failure

Coping step example:
Sell 1 additional goat

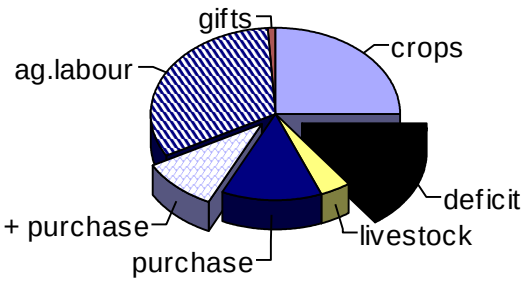
The baseline picture

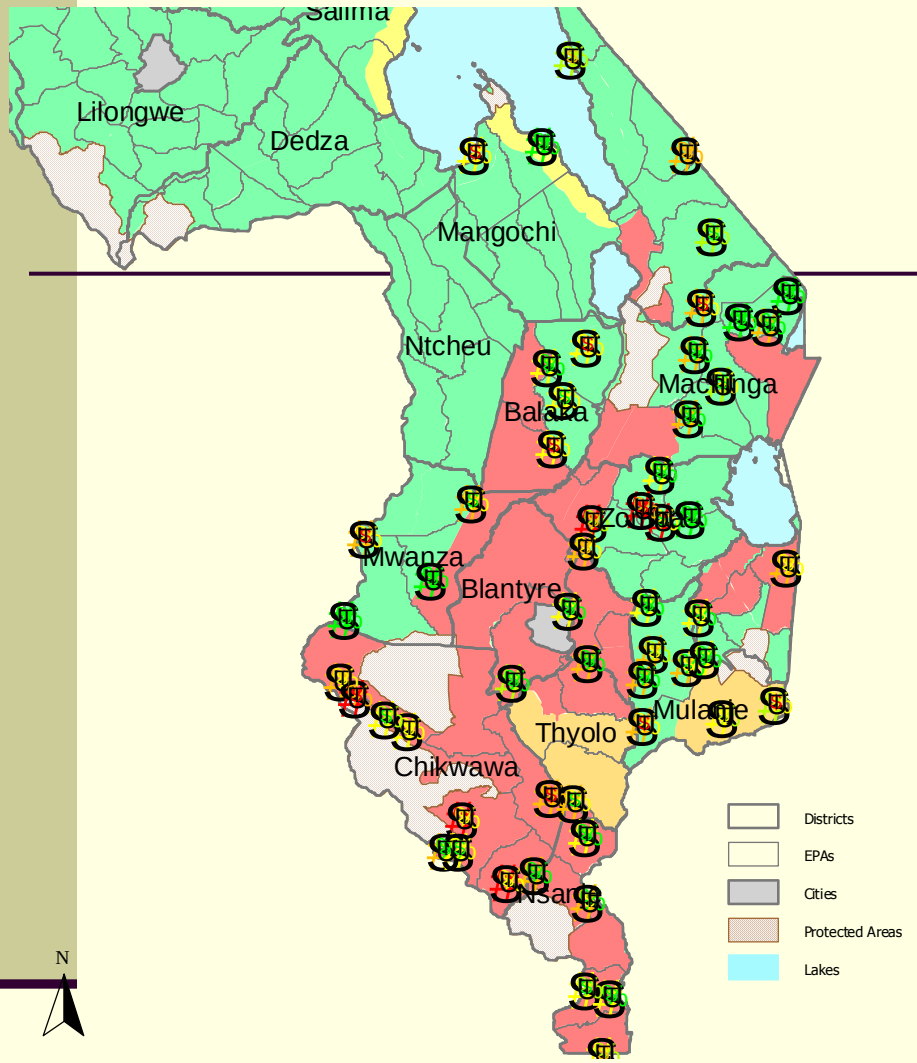


Effect on access to crops



Final result





Example: Try Mapping Deficits and Nutrition data