



World Food Programme



vam
vulnerability analysis and mapping

Food Security and Livelihood Survey in the Central Highlands of Rural Angola

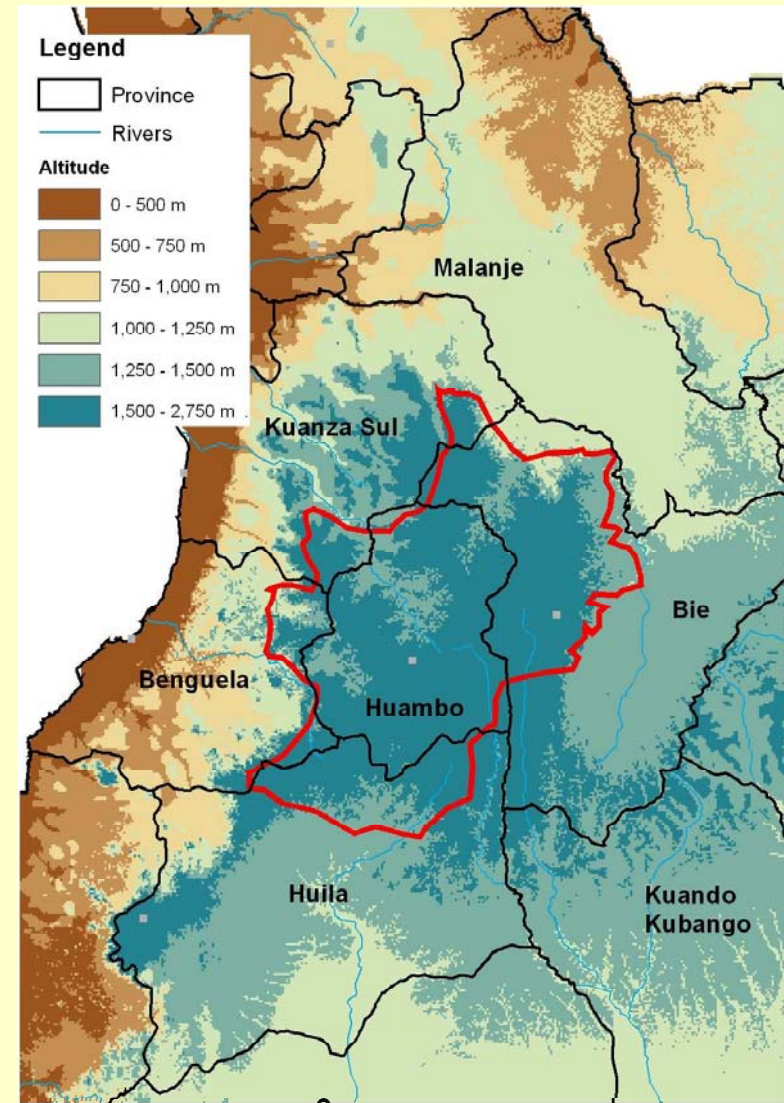


June 2005

*With the financial assistance of a GTZ Grant and
DFID's Institutional Strengthening Partnership
with WFP*

Central Highlands Baseline

- ❑ Survey Background and Objectives
- ❑ Survey Methodology
- ❑ Central Highlands Background
- ❑ Household Food Security and Poverty Patterns
- ❑ Vulnerability Profiles
- ❑ Impact on WFP Interventions



Survey Background

Based on 2004 VA and CFSAM:

- ❑ Generalised poverty
- ❑ Livelihoods exposed to various social, productive and economic risks.
- ❑ Extensive recourse to negative coping mechanisms
- ❑ Few options for income diversification
- ❑ Localized high population density
- ❑ Impoverished soils, poor farming practices with few agricultural inputs.
- ❑ High pressure on natural resources

Survey Objectives

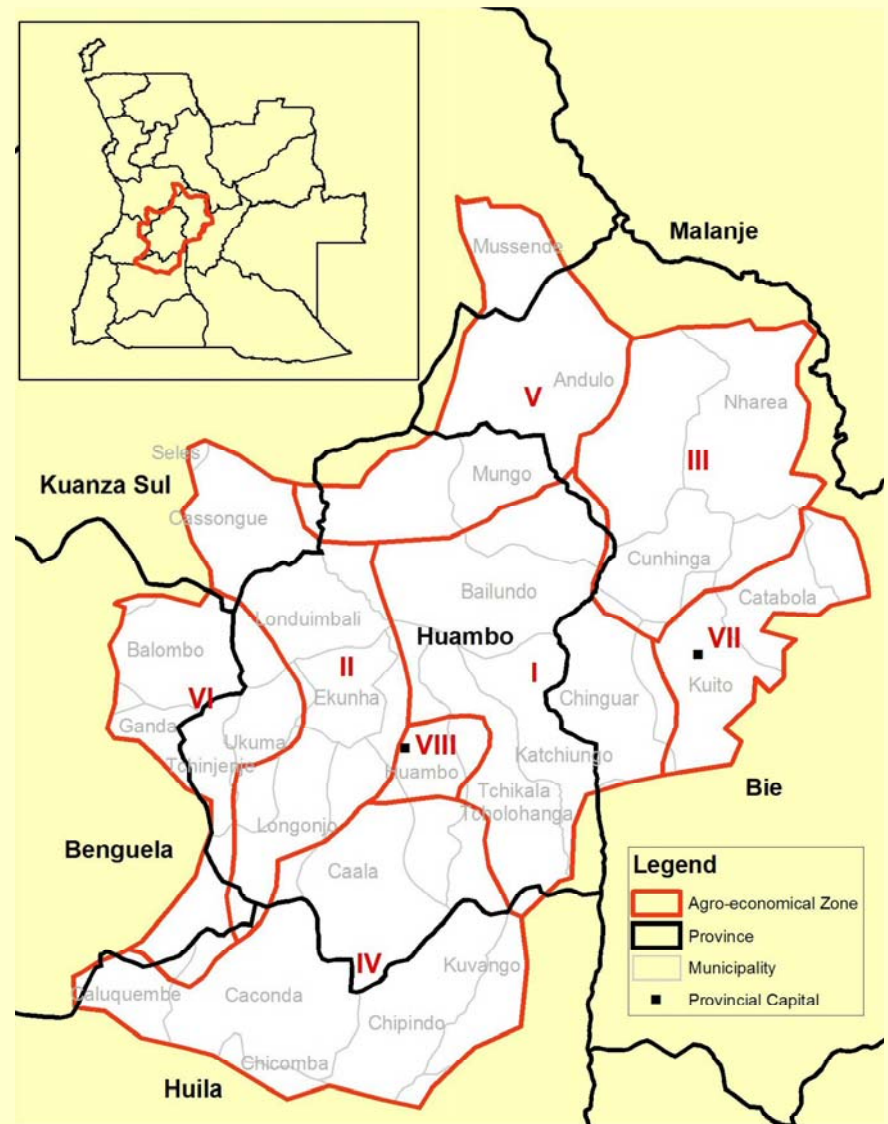
The overall objective was to **understand the livelihoods of the rural population in the Central Highlands of Angola.**

More specifically:

- ❑ Assess the overall socio-economic situation of resident population and returnees and their levels of food security.
- ❑ Assess people's livelihood objectives.
- ❑ Provide recommendations on whether there is a need for food aid beyond 2005 and if yes, where and in which sectors.

Survey Methodology

- ❑ Region divided into eight strata, corresponding to agro-ecological/economic zones
- ❑ Use of a three-stage cluster sampling method
- ❑ For each strata, 25 communities selected randomly
- ❑ For higher geographical coverage, 105 alternative cells selected



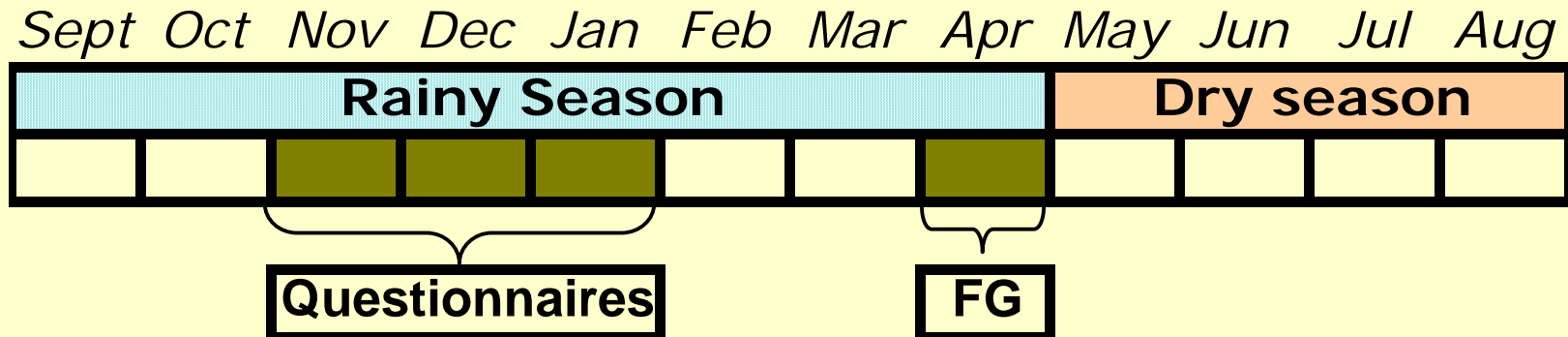
Survey Methodology

- ❑ In each village, 12 households randomly selected using the list of inhabitants supplied by the *soba*.
- ❑ The household survey covered 160 rural communities, 1,921 households out of 2,100 planned (91% achievement).
- ❑ Based on the preliminary results of the quantitative survey, 12 villages were chosen for focus group discussions, totalling 48 groups.

Survey Tools

- ❑ Household questionnaire
- ❑ Nutrition questionnaire
- ❑ Community survey
- ❑ Focus group discussions:
 - ❑ Livelihoods (men and women)
 - ❑ Education (women only)
 - ❑ Health and food intake (women only)
 - ❑ External aid and solidarity (women only)

Survey Period



The data collection was done entirely during the so-called "lean period", in the middle of the rainy season.

This period corresponds to the second half of the agricultural season, as the main cereal harvest is in April.

Survey Analysis

The quantitative data analysis was carried out by:

- ❑ staff of Tulane University, in the framework of World Vision's Global Geospatial Warning Information Surveillance Evaluation and Reporting (GWISER) initiative.
- ❑ WFP staff participated in the analysis.

The Focus Group Analysis was carried out by VAM staff, who compiled the report.

Central Highlands Background

- ❑ Plateau in the centre of Angola
- ❑ Altitude ranging from 1,000-2,500 m.
- ❑ Maximum temperatures: 25-27°C, slightly higher during the wet season. Minimum temperatures: 11-13°C.
- ❑ *Ferralsols* dominant: low agricultural productivity, low water retention, and low content of organic matter. *Luvisols* found in depressions and valleys.
- ❑ *Maize yields* on *ferralsols* range from 100-400 kg/ha. *Luvisols* provide yields up to 1MT/ha, but high population pressure on them.
- ❑ One third of the rural *population* of Angola live here. The *Ovimbundu* ethnic group is the most important.

Central Highlands Background

- ❑ After independence major livelihoods did not change but degradation of the road network and impact of the war seriously affected rural livelihoods
- ❑ 95% of households are subsistence farmers, with very little access to agricultural inputs besides low-tech equipment.
- ❑ Redistribution of population during the war resulted in accelerated degradation of vegetation and soil.
- ❑ Generally considered that soils in the *planalto* are more suitable for forestry and intensive livestock.

Household Food Security and Poverty Patterns (HFSPP)

- ❑ Demographics
- ❑ Living Conditions
- ❑ Assets
- ❑ Livelihoods
- ❑ The Wealth Index
- ❑ Expenditures
- ❑ Nutritional status of under five children
- ❑ Dietary food intake
- ❑ Access to Social Infra-structure and services
- ❑ Risk Exposure and Management

HFSP - Demographics

Head of HH

- HH heads:
57% men; 36% women; 5% elderly and 2% children
- Average size of HH: 5 persons
- Dependency ratio: 1-2 dependents
- 12% of HH have mentally and/or physically handicapped members.

HFSP - Demographics

Education

- ❑ 60% of HH illiterate. Of the literate HH, 73% never made it beyond the primary education level.
- ❑ Illiteracy especially high in Bié, which correlates highly with female household headship, suggesting a potential gender-bias.
- ❑ 69% of communities have a primary school and for those without a school, the average distance to the nearest is 5 km.

School Enrolment	Primary	Secondary
Total Enrolment in Age Group	115%	11%
Total Children (5-18)	63%	5%

HFSP - Demographics

Displacement

- ❑ 30% in Bié and 32% in Huambo
- ❑ Last wave of massive re-settlement in the region took place in 2002-03: 47% of total IDP population
- ❑ 23% of the total: less than 2 harvests.
- ❑ 6% of total: less than 1 year return and no harvests

2/3 of the population displaced at some point in time. The floating population tends to constitute an important share of the total population in the region.

HFSP – Living Conditions

Housing

- ❑ 56% of HH have adobe housing with grass roofing
- ❑ 31% of HH have "*pau-a-pique*" housing with grass roofing
- ❑ 22% of HH overcrowding (persons per sleeping room \geq 6, as a proxy)

Sources of Energy

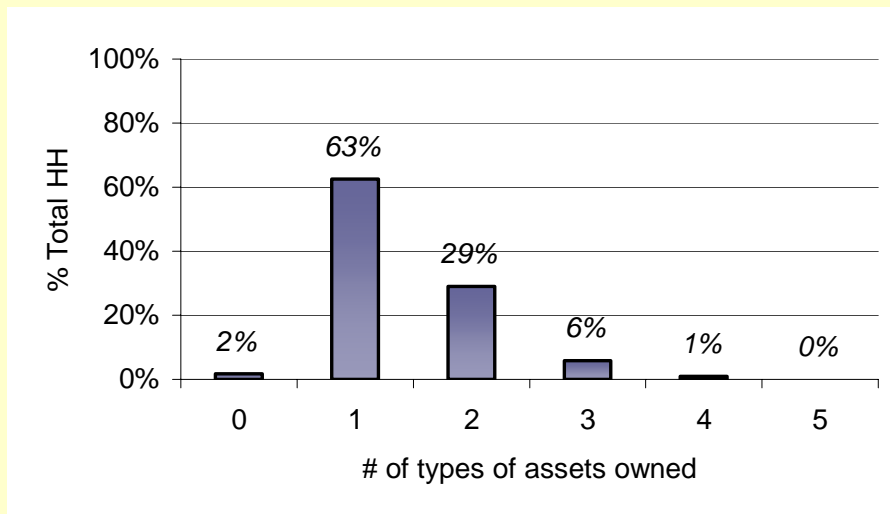
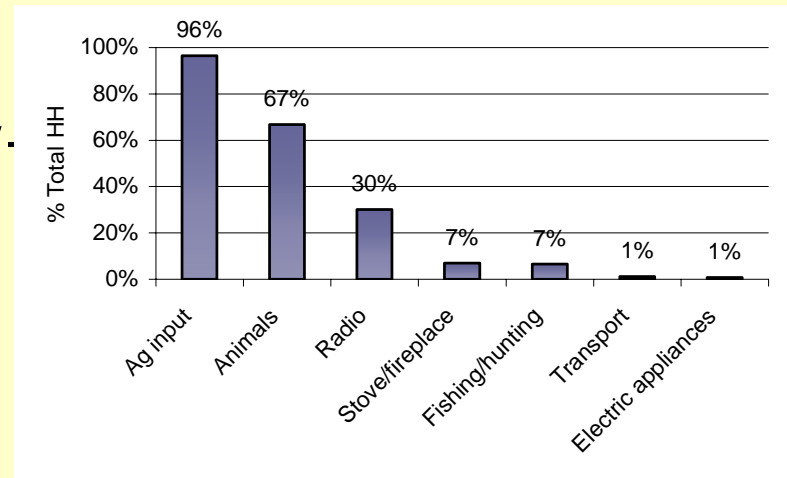
- ❑ 83% of HH use petroleum/oil for illumination
- ❑ 93% firewood as cooking fuel

Water Sources

- ❑ 70% of HH obtain drinking water from the river
- ❑ 96% of HH live within 30 minutes of a water source

HFSP – Assets

- Majority of HH have agricultural inputs, but low-tech and highly inefficient.
- 96% of the households own a hoe, 30% a radio.



- Less than 5% of HH own oxen for animal traction.
- 92% of HH have 2 assets or less.

HFSP – Livelihoods

Livelihoods	%HH	
Agriculture	93.9	
Agriculture + Livestock	64.4	
Agriculture + Fishing	5.3	
Livestock Only	2.2	
Fishing Only	0.4	

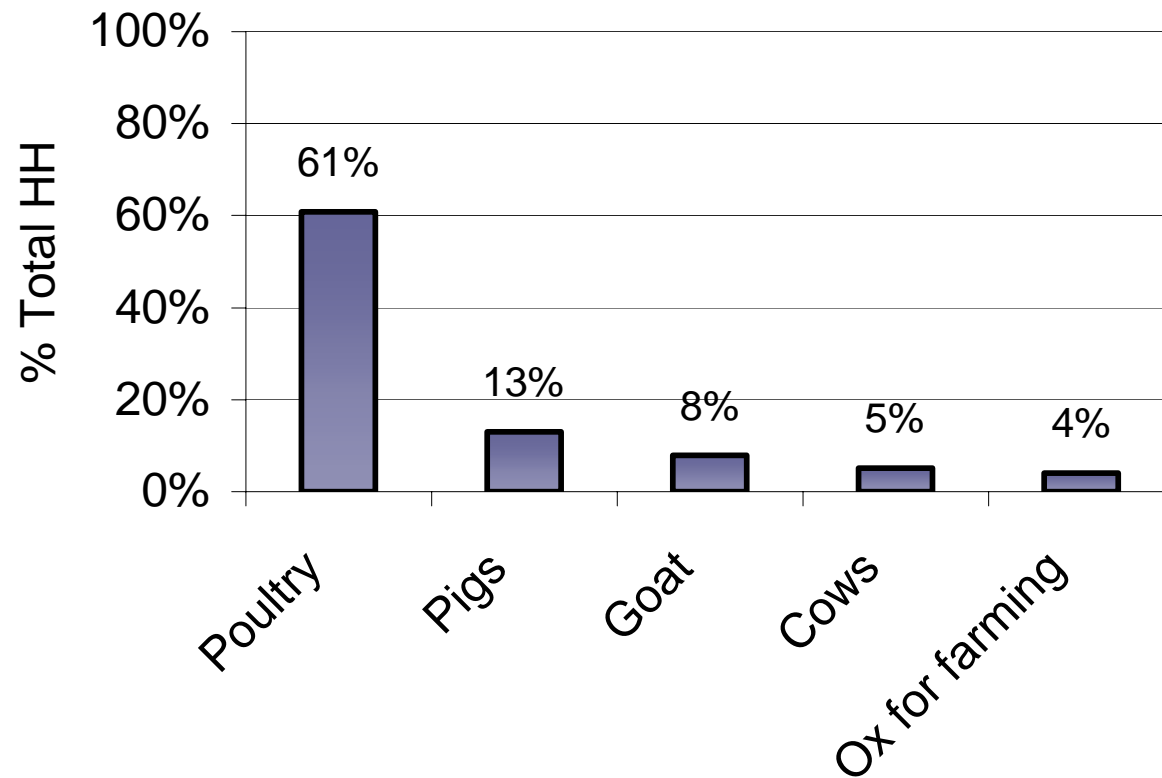
Men's Priorities	Women's Priorities
Oxen and ploughs to enlarge productive areas	Vegetable and potatoe seeds
	Dynamisation of markets for acquisition of capital

HFSP – Livelihoods

Income diversification opportunities are extremely limited

- ❑ 60% of HH have no additional income source
- ❑ Salaried and casual on-farm work accounts for 56% and 48% of the employment
- ❑ Permanent work is only available to 7% of households
- ❑ 13% are engaged in the sale of goods
- ❑ 18% in trading of natural resources, mainly cutting wood and firewood for charcoal

HFSP – Livelihoods



Livestock ownership

2/3 of the population own livestock but livestock diversity is low.

HFSP – Livelihoods

Two main sources of income:

- ❑ Income from the sale of agriculture products and animals;
- ❑ Income from paid work, in the agricultural sector.

Utilisation:

- ❑ Most for self-consumption
- ❑ 20 to 25% saved as seeds
- ❑ small proportion is sold in the markets.

HFSP – Livelihoods

Additional sources of income:

Mainly temporary activities in agricultural sector:

- ❑ 13% casual agricultural labour
- ❑ 18% trade of natural resources

but

- ❑ done on a daily-hire basis
- ❑ in exchange for food or to pay

Women strongly felt that the market favours male labour and also that it is a seasonal source of income with high levels of competition.

HFSP – The Wealth Index

Variables	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7
Total income (in Kz\$)	3,412	4,335	3,318	4,642	2,406	2,911	3,854
Wealth index	0.14	0.72	-0.26	0.03	-0.59	0.07	-0.33
Rank of wealth index	2	1	5	4	7	3	6
House quality index and access to water	0.35	0.85	-0.09	-0.21	-0.49	-0.12	-0.75
Ownership of goods and equipments index	-0.05	0.31	-0.18	-0.02	-0.13	0.07	-0.09
Ownership of livestock index	-0.40	0.06	-0.23	0.44	-0.27	0.60	-0.14

higher values for the index are better

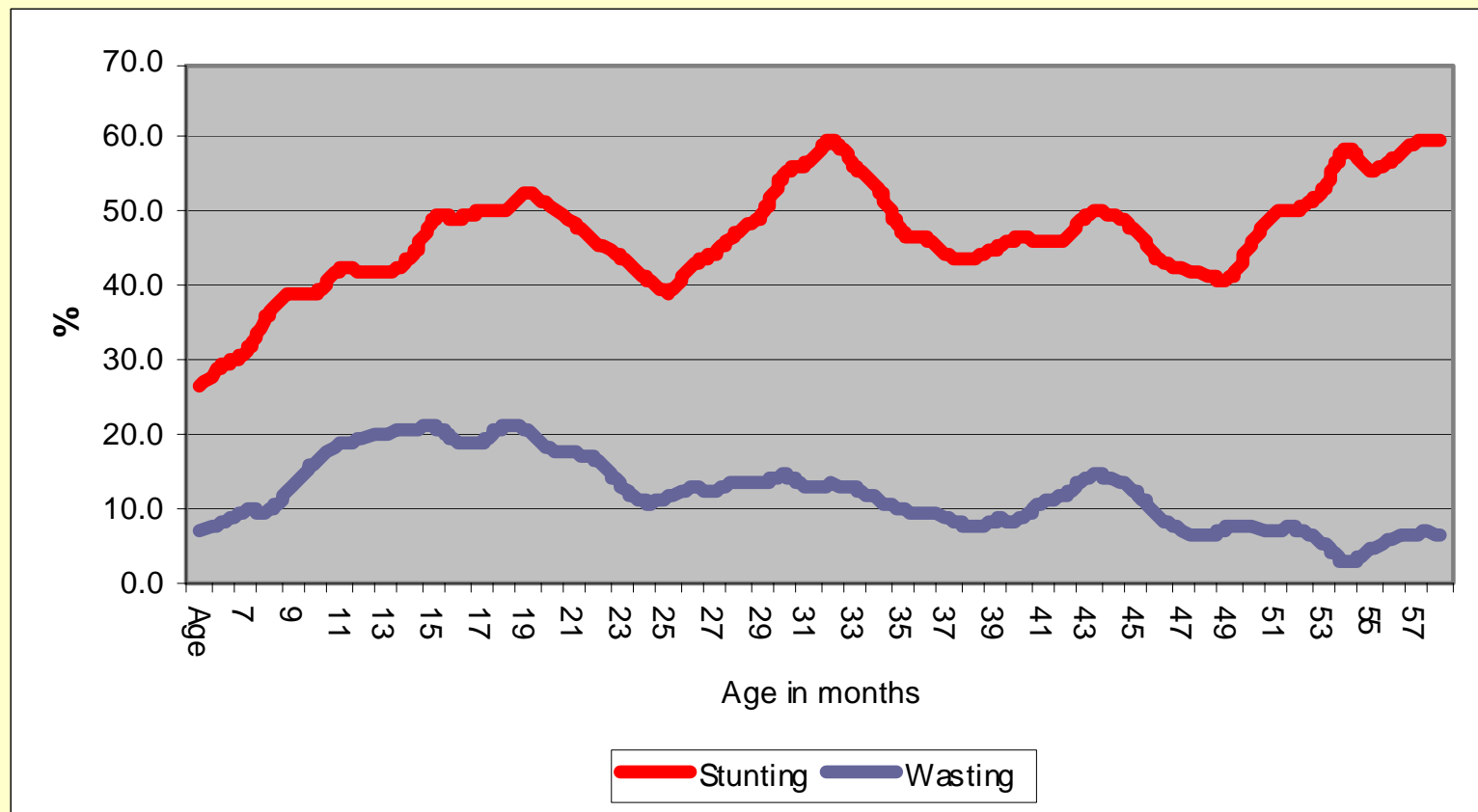
HFSP – Expenditures

- ❑ There is a coherent link between income and expenditures
- ❑ The wealthiest zones have the highest expenditure levels
- ❑ Percentage of food expenditure over total expenditure is very high: 80%.

Exception: Zone 6 = one of the poorest, but highest monetary expenditure, because has the smallest participation in the agricultural sector and it should be expected that the agricultural surpluses for self-consumption are insufficient for the average household dietary needs.

HFSSPP – Nutritional Status of children < 5 years old

Malnutrition by age class (moving average)



HFSP – Dietary Food intake

Dietary information	<i>Planalto</i>
Eating ≤ 1 meal/day	16%
Eating $1 < \text{meal/day} < 2$	21%
Eating $2 \leq \text{meal/day} \leq 3$	63%
Average # of meal/day	1.85
Food diversity (average # of food products consumed)	6.70

Most often-consumed food groups during the week:

Cereals (87%) Tubers (76%) Pulses (55%)

Meat (12%) Dairy products (2%)

HFSP – Access to social infra-structure and services

Road and Transportation

- ❑ 82% are connected to the road network, but 31% of those remain isolated for at least five months per year.
- ❑ Mobility restrictions due to mines were mentioned by 11% of the communities.

Markets

- ❑ Only 6% have a market and the frequency of the existing markets is low, with only 22% working on a weekly basis.

HFSP – Access to social infra-structure and services

Health

- ❑ None of the communities visited had a hospital and only 13% had a health post.
- ❑ 47% of women deliver with traditional midwives.
- ❑ 36% at home.
- ❑ Only 13% deliver in maternity and general hospitals or health posts.
- ❑ 70% had vaccination campaigns during the last three months.

HFSP – Risk Exposure and Management

Risk	% HH Exposed to Risk	% HH with Reduced Capacity to Meet Consumption Needs*
Lack of seeds	47%	90%
Death of animals	42%	83%
Plague attacks on crops	39%	94%
Sudden increase in purchasing price of food	25%	97%
Flood	23%	97%
Death/ illness of HH member	14%	92%
Death/ illness of other HH member	14%	88%
Termination/delay of aid	11%	95%

In general, the number of coping strategies increases with exposure to risks, but excessive exposure to risks, in this case over six, erodes households' ability to cope

HFSP – Risk Exposure and Management

44% of HH are currently receiving aid

Returnees receive the majority of aid: 70%

Displaced HH: 45%

New Returnees (<1 year) are on aid: 41-45%

75% of HH exposed to >7 currently receive aid

Less than half of HH facing 5-7 are under assistance

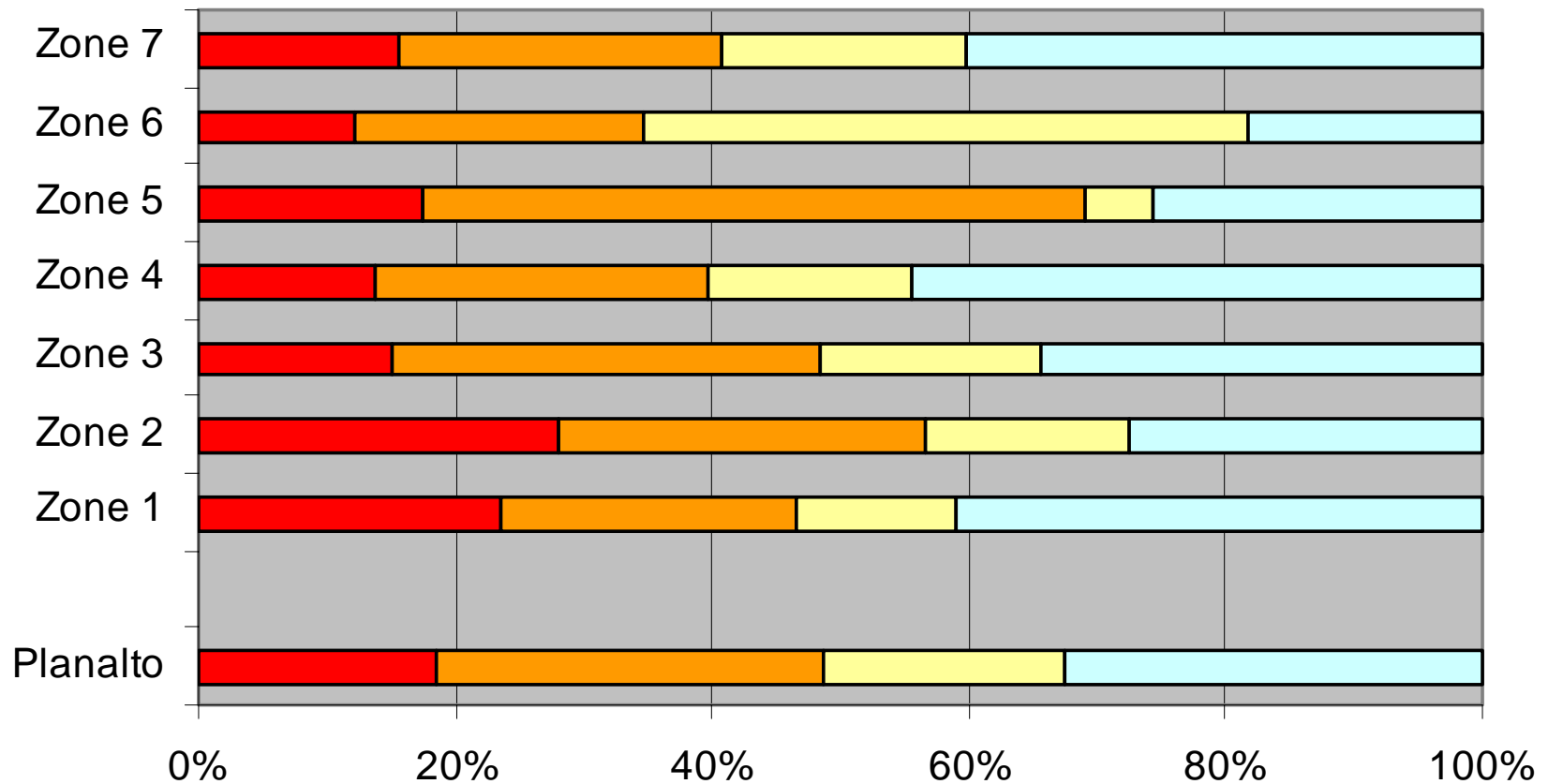
Further analysis is required to determine whether further aid coverage is warranted for those households with medium-high risk exposure

Vulnerability Profiles

Vulnerability profiles constructed by clustering:

- ❑ Sex of the head of household
- ❑ Dependency ratio of the family
- ❑ Displacement and time of resettlement
- ❑ Education parameters
- ❑ Living conditions
- ❑ Food intake and food diversity
- ❑ Assets
- ❑ Livestock ownership and diversity
- ❑ Livelihood and income source diversity
- ❑ Risk exposure and risk management

Vulnerability Profiles



■ Food Insecure (Group 1)

■ Highly Vulnerable (Group 2)

■ Moderate Vulnerable (Group 3)

■ Low Vulnerable (Group 4)

Vulnerability Profiles

- **Group 1 - Food Insecure Households:** chronically food deficient; eat one meal per day; consume less than three food groups; highest risk exposure; rely exclusively on agriculture as source of food; least diverse income sources; almost no assets.

19% of HH in the *Planalto*

- **Group 2 - Highly Vulnerable Households:** eat one meal per day; only three food groups; generally unable to manage medium risk exposure; just one additional source of food and income besides their own agriculture production; low asset ownership and diversity.

30% of HH in the *Planalto*

Vulnerability Profiles

- **Group 3 - Moderately Vulnerable Households:** eat at least one meal per day; consume more than three food groups; exposed to more than three risks; more than one food or income sources outside their own agricultural production.

19% of HH in the *Planalto*

- **Group 4 - Low Vulnerability Households:** the best dietary intake; consume more than three food groups; exposed to few risks; many sources of income; relatively best animal and other asset ownership and diversity.

32% of HH in the *Planalto*

Vulnerability Profiles

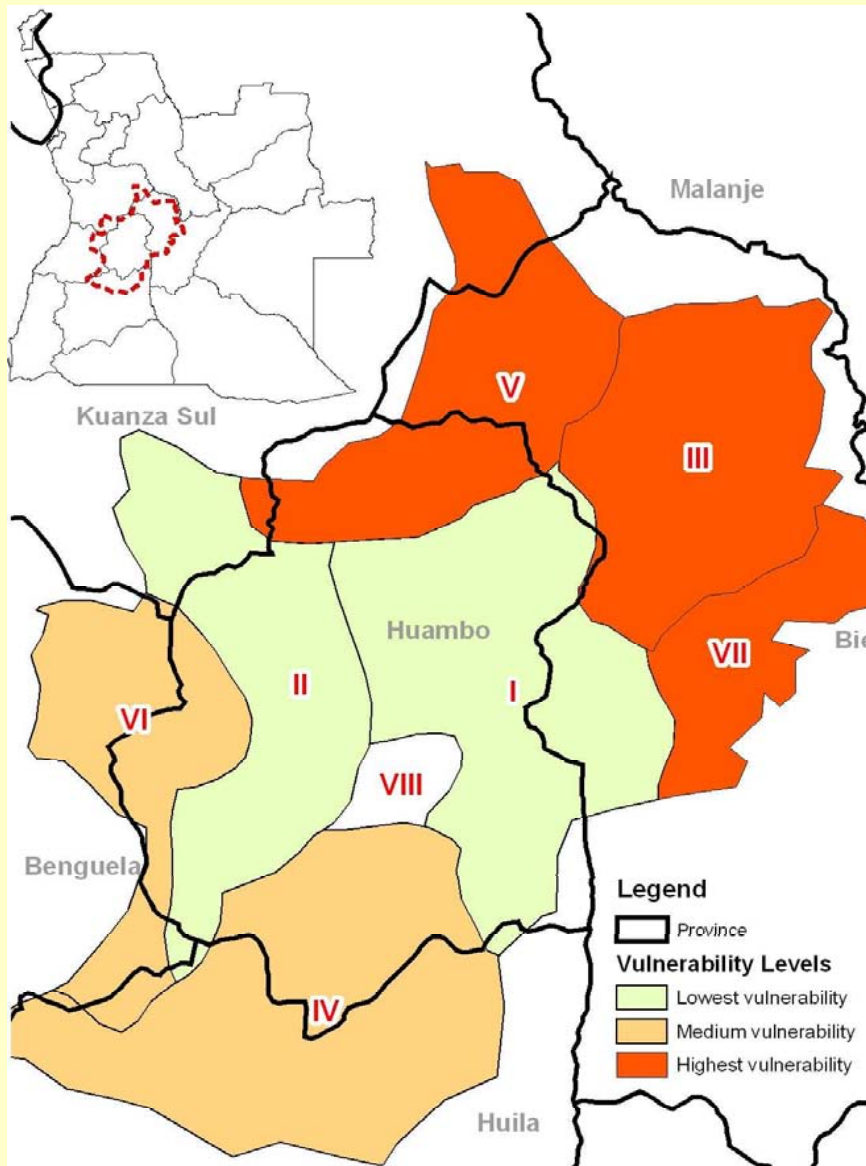
Household Profiles

	Group 1	Group 2	Group 3	Group 4
Demography:				
HH female headship	35%	38%	47%	27%
HH ever been displaced	72%	64%	18%	68%
Newly resettled (<=3 years)	20%	20%		15%
Living conditions:				
Food diversity: less than 3 food groups	26%	30%	9%	13%
Assets ownership:				
Animal ownership	13%	24%	24%	31%
Risk exposure:				
High risk exposure (>3)	27%	37%	73%	32%
Aid:				
Receiving food aid	35%	34%	38%	23%

Vulnerability Profiles

	Area in km2	Total rural population (estimate)	Food Insecure population	Highly Vulnerable population
Zone 1	14,510	365,000	85,775	84,315
Zone 2	10,640	310,000	87,420	88,350
Zone 3	10,950	215,000	32,250	72,025
Zone 4	16,120	309,000	42,333	80,340
Zone 5	10,240	170,000	29,580	87,720
Zone 6	7,629	168,000	20,496	37,632
Zone 7	4,883	245,000	37,975	61,985
Total	74,972	1,782,000	335,829	512,367

Vulnerability Profiles



**Spatial distribution
of relative
vulnerability levels**

Highest Vulnerability:
Zones 5, 3 and 7

Moderate Vulnerability:
Zones 1 and 2

Lowest Vulnerability:
Zones 4 and 6

IMPACT ON WFP INTERVENTIONS

Strategic objectives	Programme components	Priority intervention area
Social Rehabilitation and Protection	School Feeding	Zones 3 (Bié) and 6 (East of Benguela)
	Nutritional rehabilitation of children (Safety Nets)	Zones 3, 4 and 6
Maternal and Child Health	Support to maternal educational health programmes	Zones 3,5 and 7 (Bié)
	Support to basic hygienic practices	
	Support to HIV programmes (awareness campaigns and assistance to infected people)	In main towns
	Support to medical programmes	Zones 1 and 2
Rural environmental protection and extension	Reforestation of degraded areas	Zones 1 and 2
	Environmental education in schools (through school feeding)	Follow school feeding, but important in Zones 1 and 2
	Support to rural extension programmes	Zones 3, 5 and 7 (Bié)
Social and economic promotion	Rehabilitation of infrastructure (roads and bridges)	
	Support to gardens for women	Zones 3, 5 and 7
	Infrastructure rehabilitation (small irrigation, etc.)	