

National Outcome Forecast Analysis

South Africa

Presented by T. Dlamini
Analysis prepared by Charles Rethman

Reasons for the NOFA

- South Africa is experiencing its worst drought in 23 years;
- The poor crop performance due to the drought has forced the need for massively increased imports;
- Concurrently, commodity markets have slowed and the currency (Rand; ZAR) is weak;
- Consequently, food prices have soared in local terms

Background

Although tremendous progress in the welfare of citizens has taken place since 1994, some of South Africa's economic and social realities are:

- Unemployment has remained stubbornly high (rising slightly over the last year);
- Economic growth has been slowing;
- Income inequality has widened;

Background

- There are still apartheid and colonial legacies to be overcome—with racial disparities in spatial distribution, ownership, economic access and educational opportunities;
- The country remains beset with deep-rooted social issues including excessive violence, crime and ugly racism

Reality Check

- It's not all doom and gloom.

Tremendous progress has been made in many areas: ranging from education to governance and the extension of services to formerly marginalised people.

- But, given this background and the present economic and climatic outlook, what does this mean for the country's poorest and most vulnerable citizens?

Analysis Process

This assessment was conducted to try answer this question.

- It aims to gain some insight on a broad, national scale into what the near-future consequences of drought and economic turmoil might be for households.
- It is a desk study. It is *indicative*. It draws heavily on secondary sources and is liberally sprinkled with assumptions. Many of the sources and assumptions need to be tested with new and better data.

Analysis Process

Uses the same standard livelihoods-based approach that is used in other SADC member states. Steps:

1. Make use of existing baselines and data (14 LZs)
2. Extrapolate the existing data to include other similar (open access tenure) LZs
3. Construct baselines using secondary sources for two other livelihood types:
 1. Farm workers
 2. The urban poor

Analysis Process

Uses the same standard livelihoods-based approach that is used in other SADC member states. Steps:

1. Analyse rural productive systems to determine local problem specifications
2. Review economic data to determine reasonable price estimates and future price scenarios
3. The issue of social grants. They make an overwhelming difference, so what about those few people who have no access to them?

Baselines

Open access areas without existing baselines

1. Group LZs into three *Livelihood Types*:
 1. Predominantly livestock-based
 2. Predominantly cropping-based
 3. A mixture of the two .

Baselines

Open access areas without existing baselines

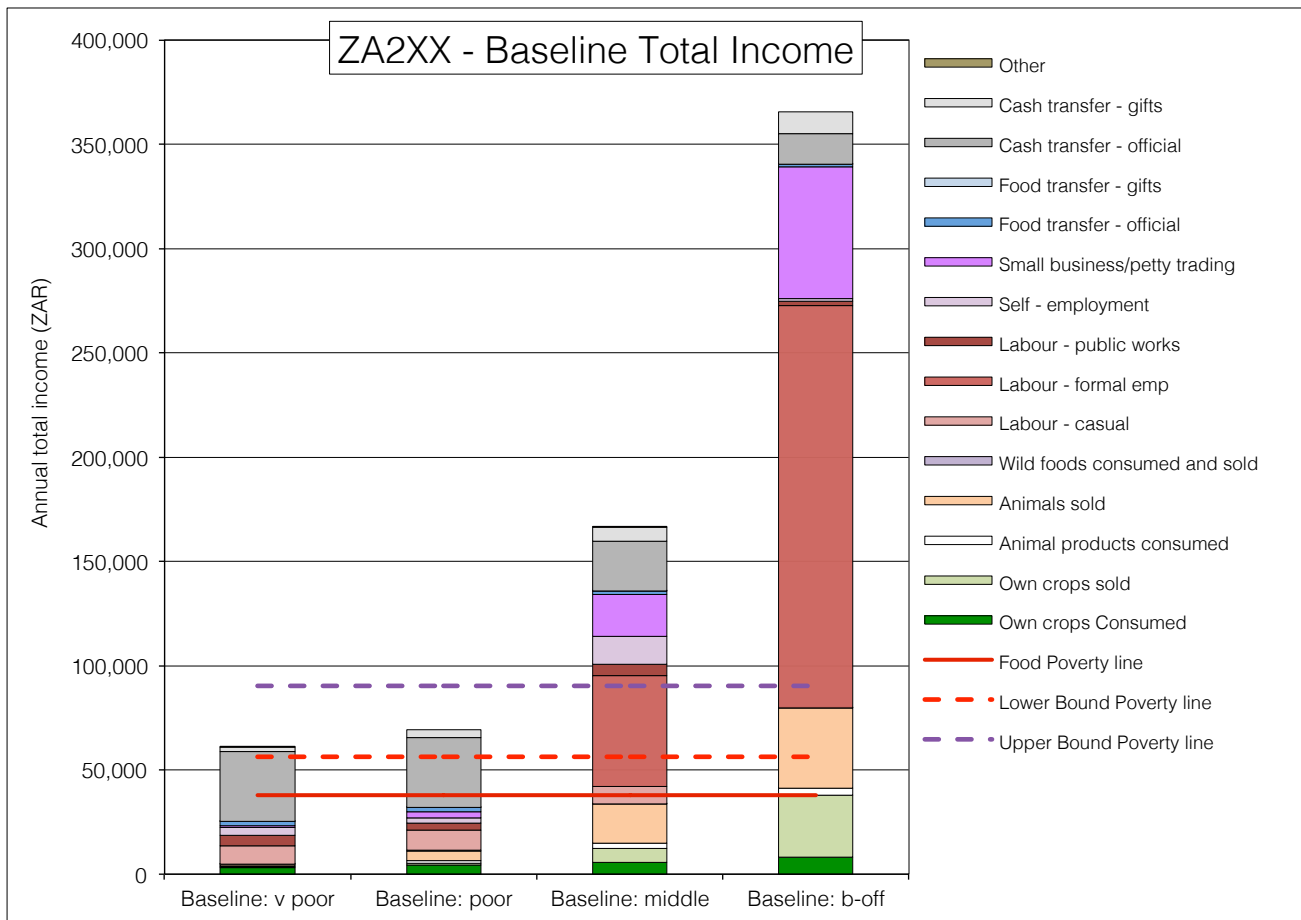
1. Livelihood strategies were derived by aggregating the data from the same

Livelihood Types:

1. Predominantly livestock-based
2. Predominantly cropping-based
3. A mixture of the two .

Baselines

- Example of the mixed baseline (ZA2XX)

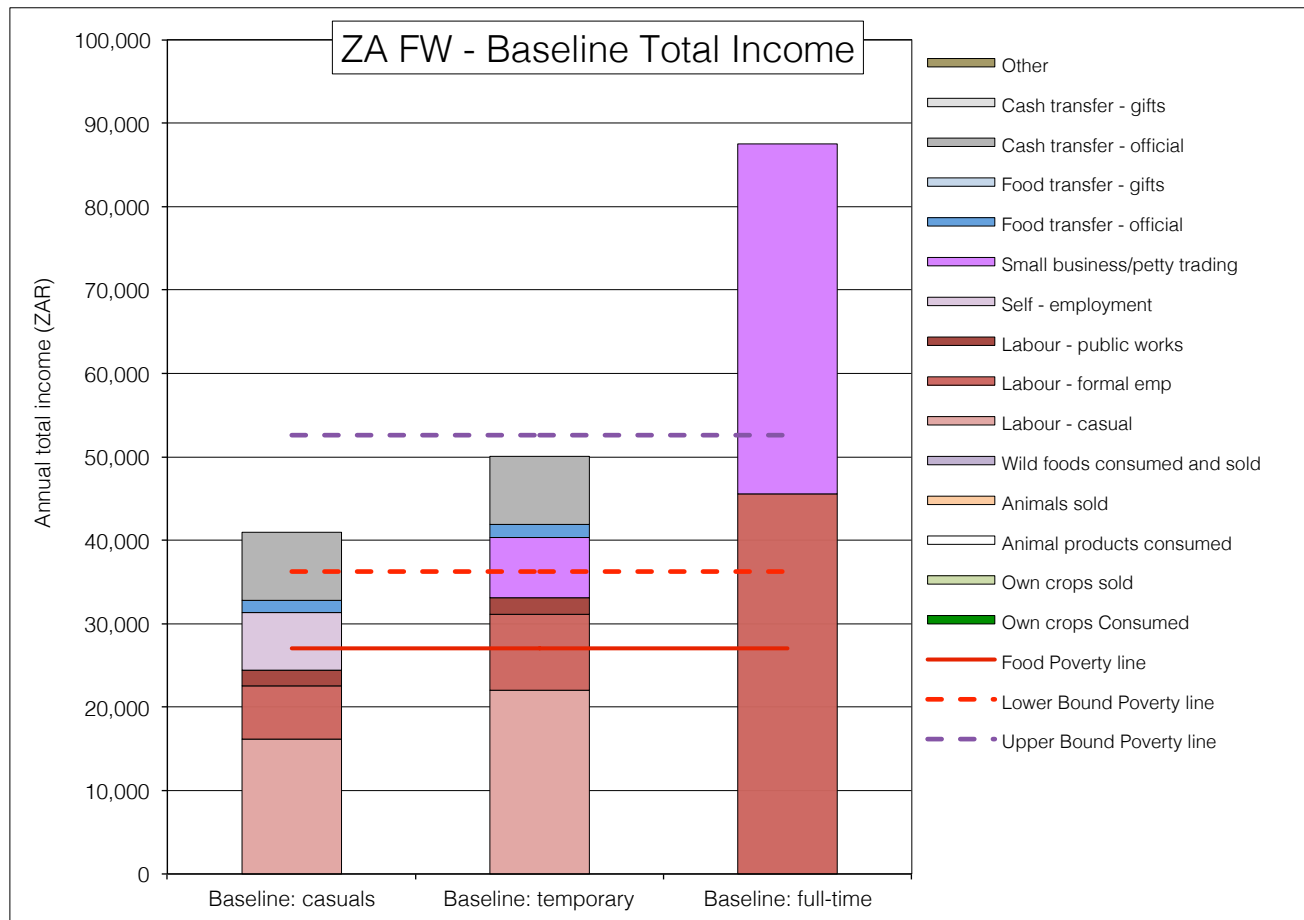


Farm workers & Urban Poor

- Information was pieced together from survey data, mostly the Western Cape Farm Workers' Conditions survey and the National Income Dynamics Survey
- Usual wealth groups replaced with categories:
 - Farm workers: casuals, temporary workers and full-time employees
 - Urban: quintiles (we only looked at the bottom four)

Farm workers and Urban Poor

- Example of the Farm Workers



The Drought

To determine the extent of the impact of the drought, we looked at many sources:

- Standard Precipitation Indices (SPI) from ARC ;
- Normalised Differential Vegetation Indices;
- Vegetation Condition Index (VCI)

SPI

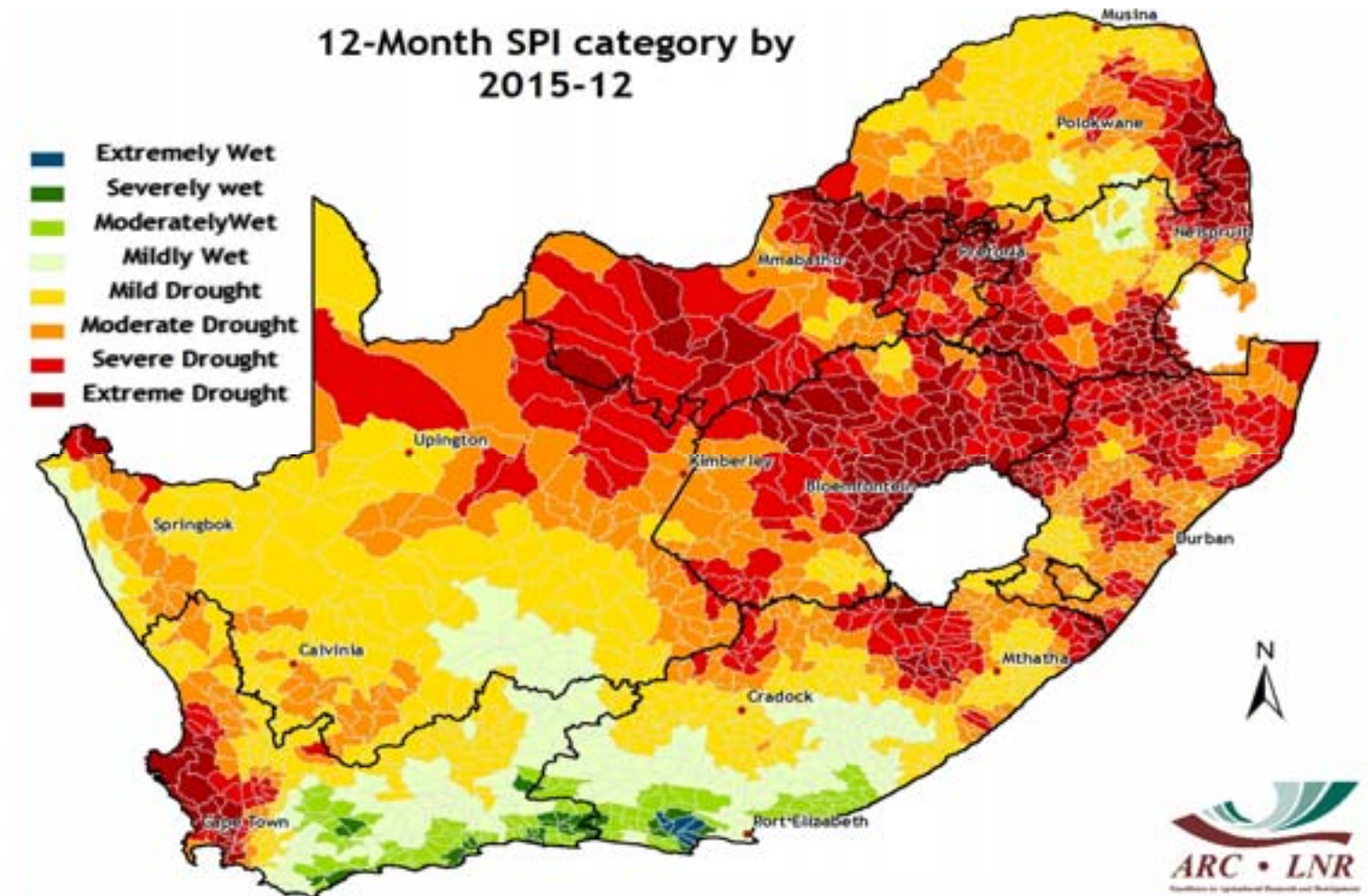
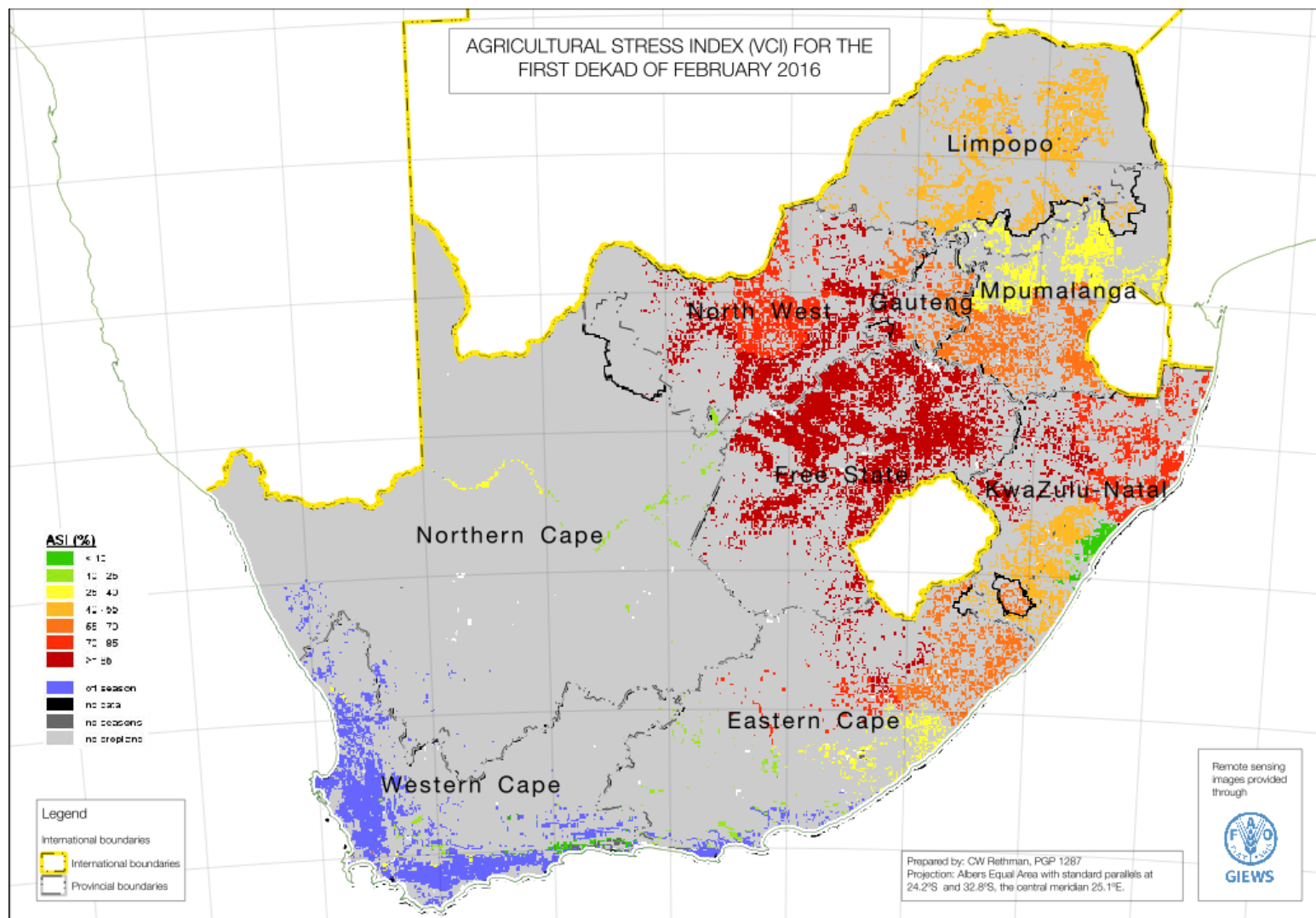
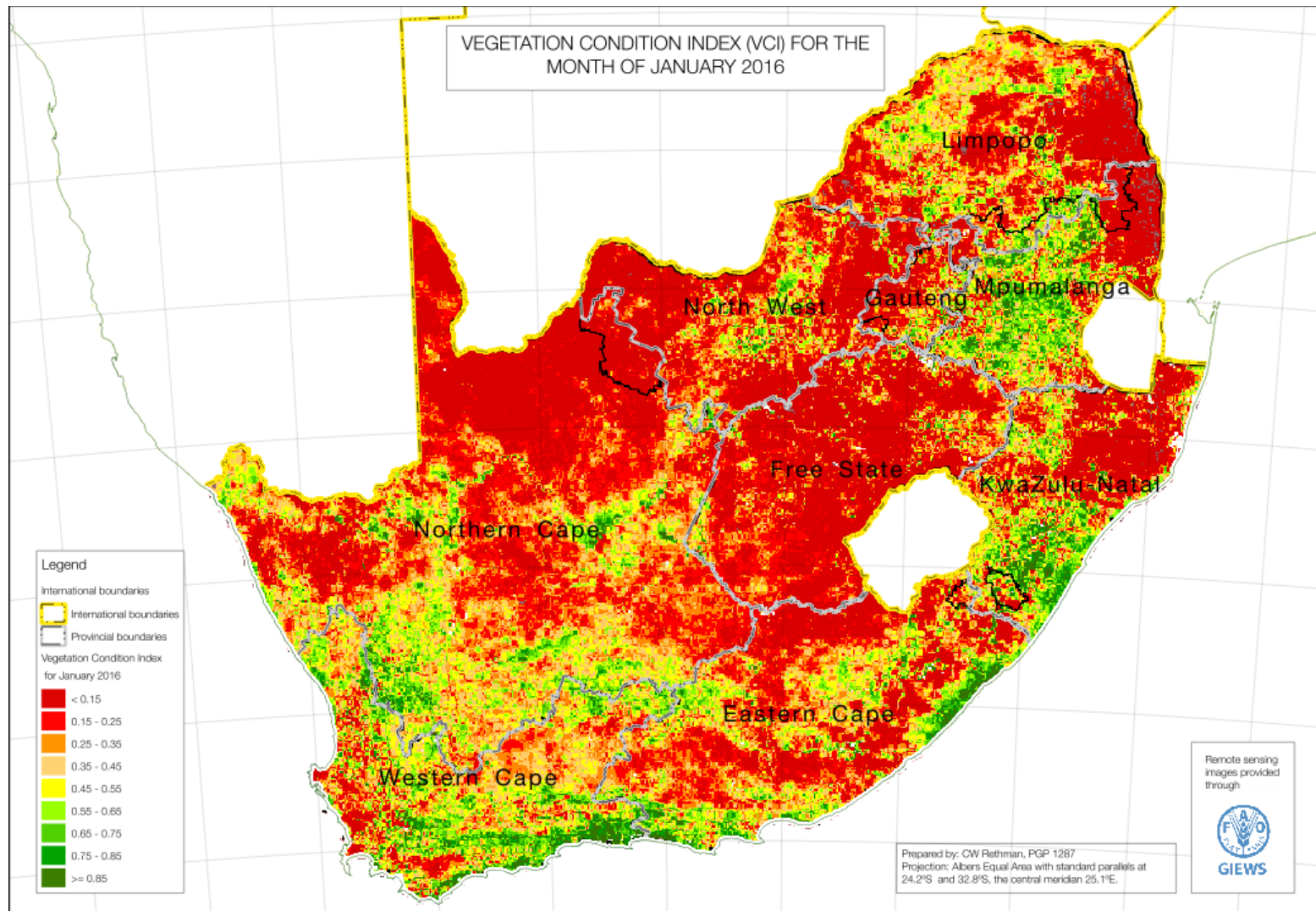


Figure 7

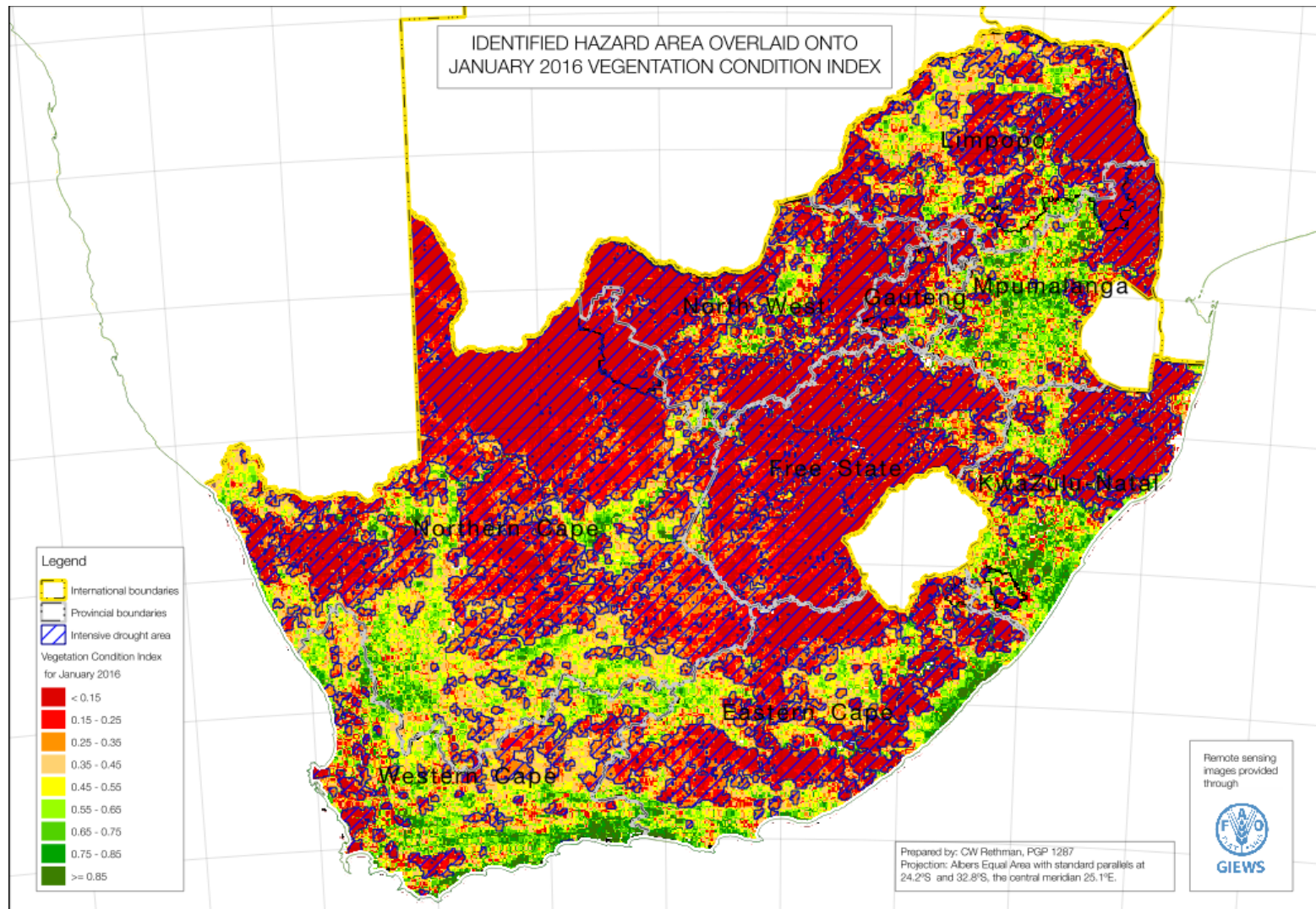
Agricultural Stress Index



Vegetation Condition Index



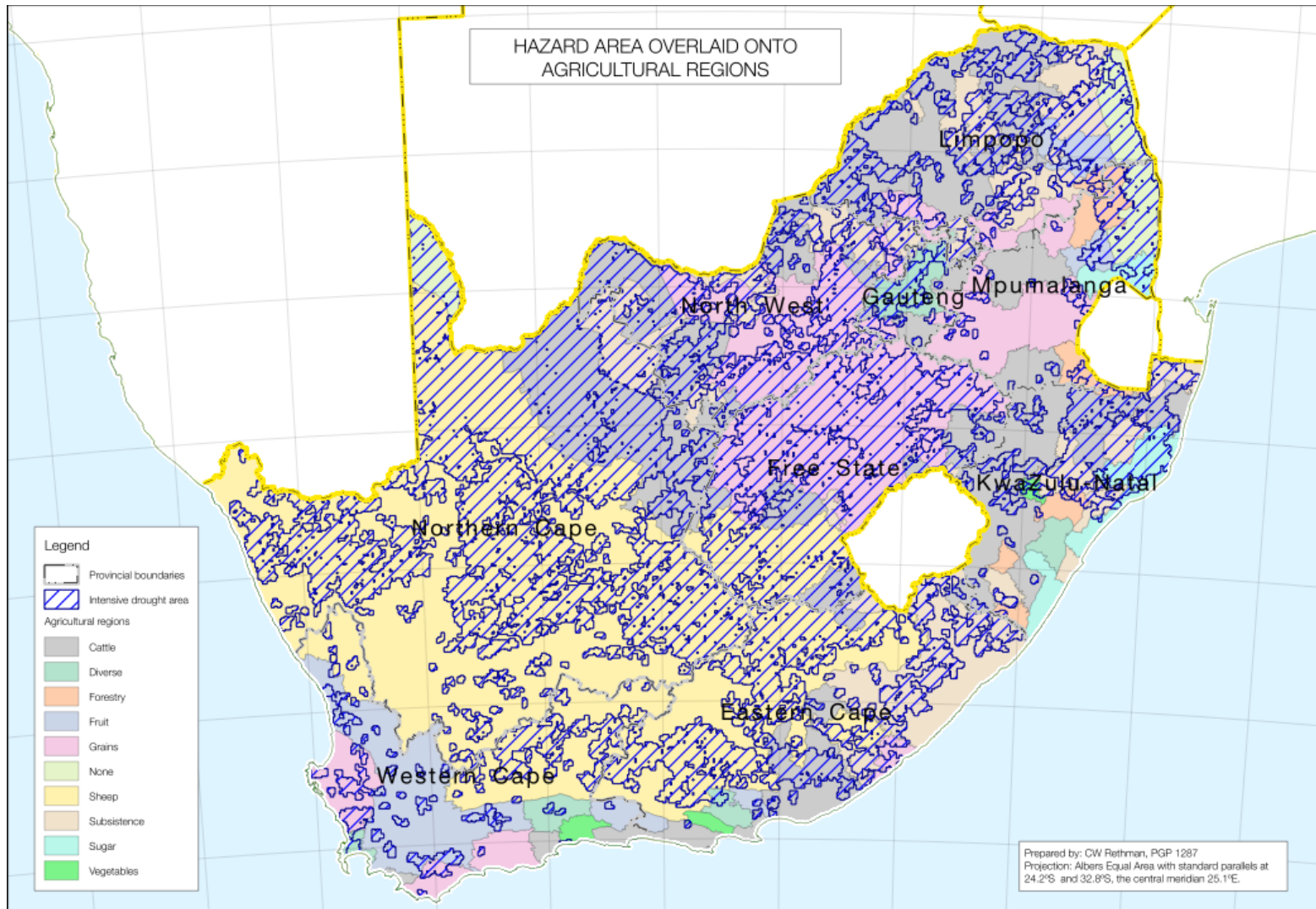
Vegetation Condition Index & Drought Hazard Area



Problem Specifications

- Crop estimates are provided by the CEC and they available data are detailed for commercial farming (exclusive access tenure).
- However, detail in non-commercial crop farming areas is lacking.
- To geographically disaggregate of crop data and obtain a problem spec the analyst overlaid the hazard are onto the agricultural regions.
- This help quantify Prob Specs for basic crop groups, e.g. cereals, legumes, etc.

Hazard Area & Farming Regions

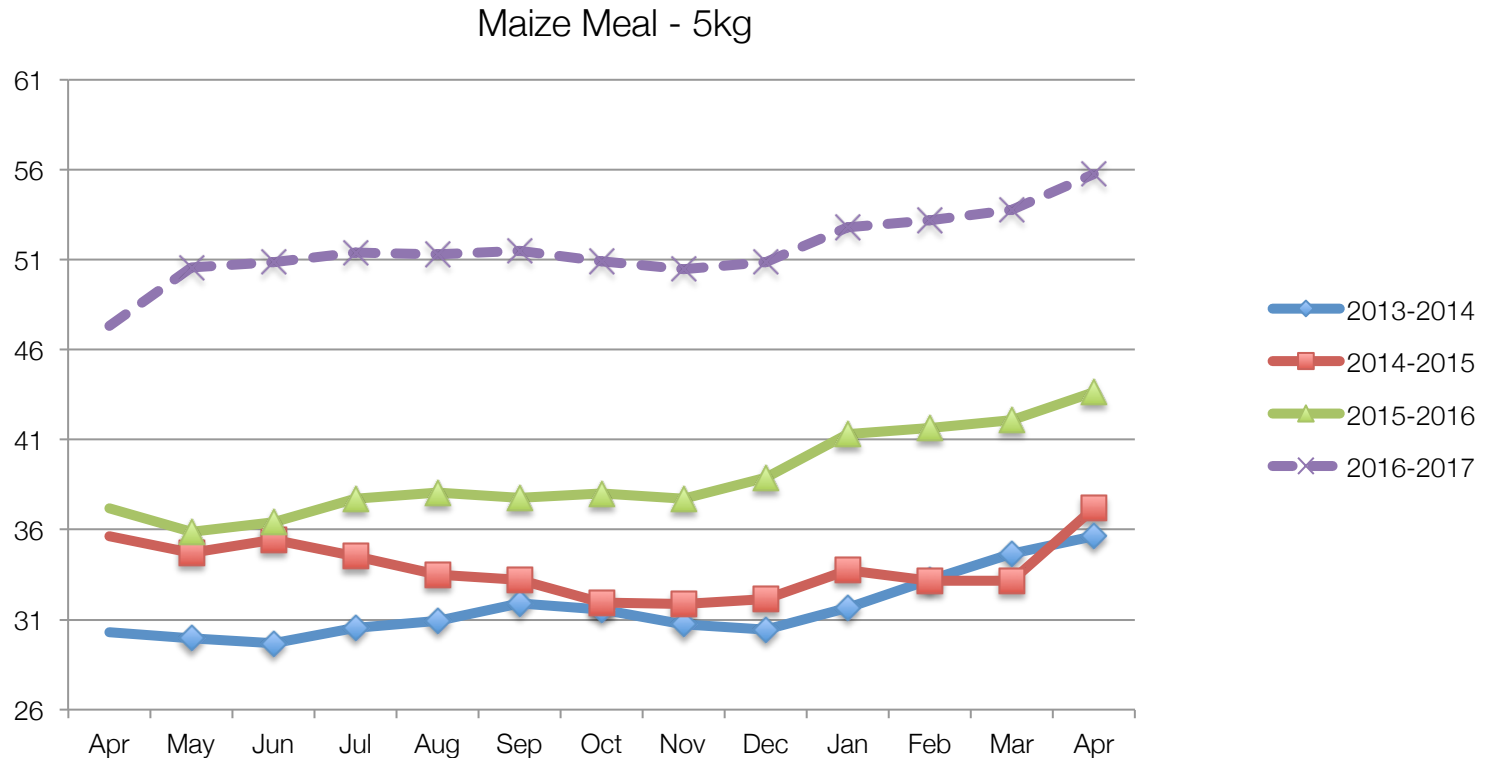


Example Problem Specs for Grains

province	ag_type	hazard	local_probspec	local_probspec	area_local	area_total
Eastern Cape	Grains	drought	54%	35%	1398441124	2885838187
Eastern Cape	Grains	less dry	54%	72%	1487397063	2885838187
Free State	Grains	drought	42%	35%	68047449948	79877460698
Free State	Grains	less dry	42%	82%	11830010750	79877460698
Gauteng	Grains	drought	56%	35%	1371549537	2710036181
Gauteng	Grains	less dry	56%	78%	1338486645	2710036181
KwaZulu-Natal	Grains	drought	75%	35%	195640	4918358
KwaZulu-Natal	Grains	less dry	75%	77%	4722718	4918358
Limpopo	Grains	drought	113%	35%	2850906266	10230620517
Limpopo	Grains	less dry	113%	143%	7379714251	10230620517
Mpumalanga	Grains	drought	66%	35%	2877212423	29746559200
Mpumalanga	Grains	less dry	66%	69%	26869346777	29746559200
North West	Grains	drought	59%	35%	30044157444	46400957667
North West	Grains	less dry	59%	103%	16356800223	46400957667
Northern Cape	Grains	drought	141%	35%	882984	969200
Northern Cape	Grains	less dry	141%	1227%	86215	969200
Western Cape	Grains	drought	167%	35%	5082279753	20977128675
Western Cape	Grains	less dry	167%	209%	15894848922	20977128675

Prices

- Price trends for main household commodities were considered, example here is for maize meal



Social Grants

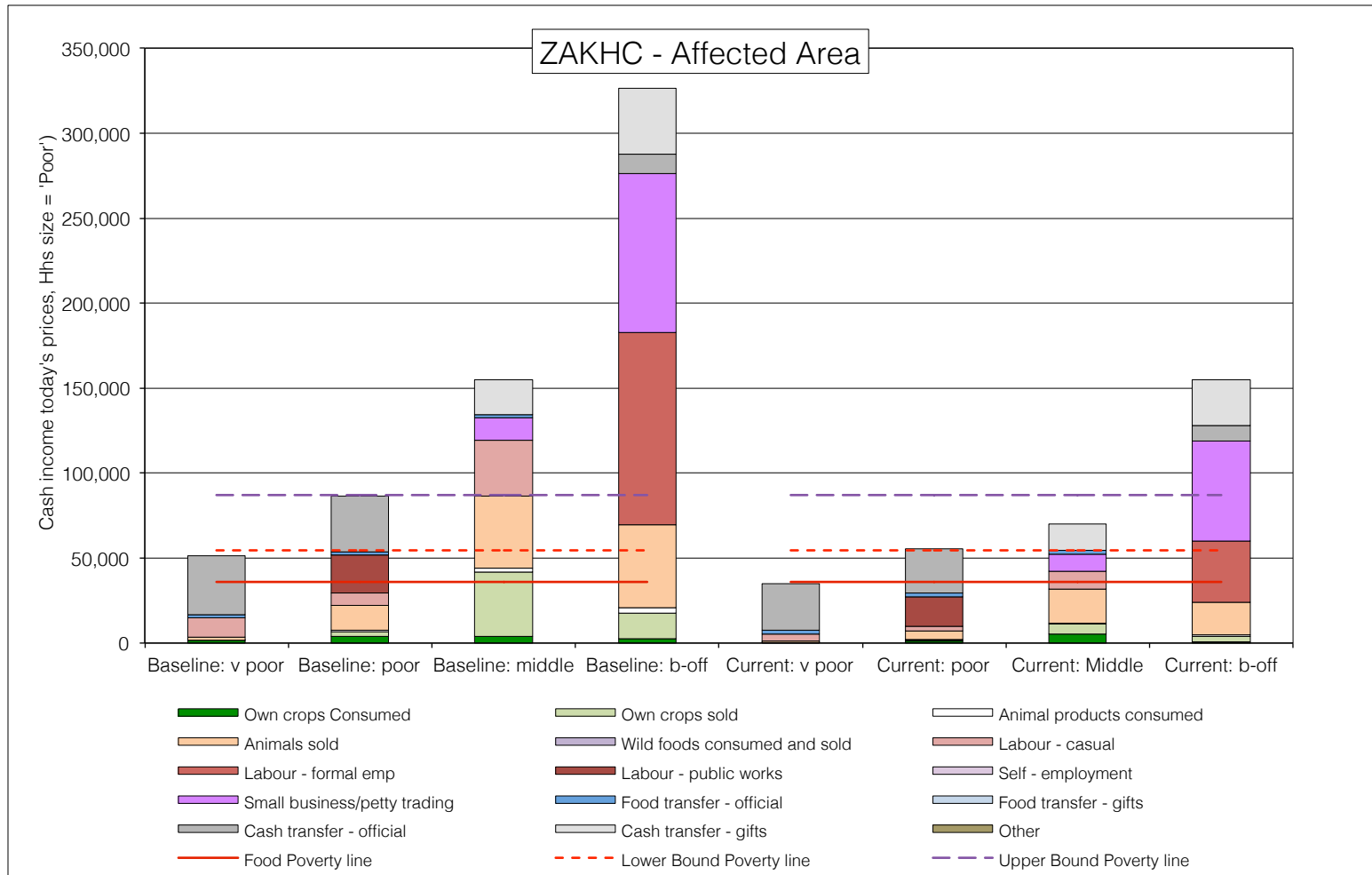
- Two social grants in South Africa make a substantive difference for households' consumption: the Child Grant and the Old Age Grant
- The majority of poor rural households have access to these grants; it is reflected in the baselines
- However, there is still a minority of households that do not receive these grants (do not qualify or exclusion error)
- To manage this situation in the analysis, two 'scenarios' for social grants were used: **receive** and **do not receive**.

Thresholds in South Africa

- In order to inform policy, the SAVAC has base its outcomes in terms of the poverty lines defined by Statistics South Africa's Income-Expenditure Surveys. There are
 - Food Poverty Line
 - Lower Bound Poverty Line
 - Upper Bound Poverty Line
- This is:
 - To enable comparison's of SAVAC forecasts with other survey data;
 - To link the VA with the National Development Plan objectives – **impact on policy**
- Food Poverty Line: SAVAC takes this as “survival threshold” although strictly it is not. It includes basket with a wide range of commodities and people could “survive” on a much smaller, cheaper set of commodities;
- This is because we are concerned with ***inequality*** and ***living standards***; it is unacceptable that people show only just survive.

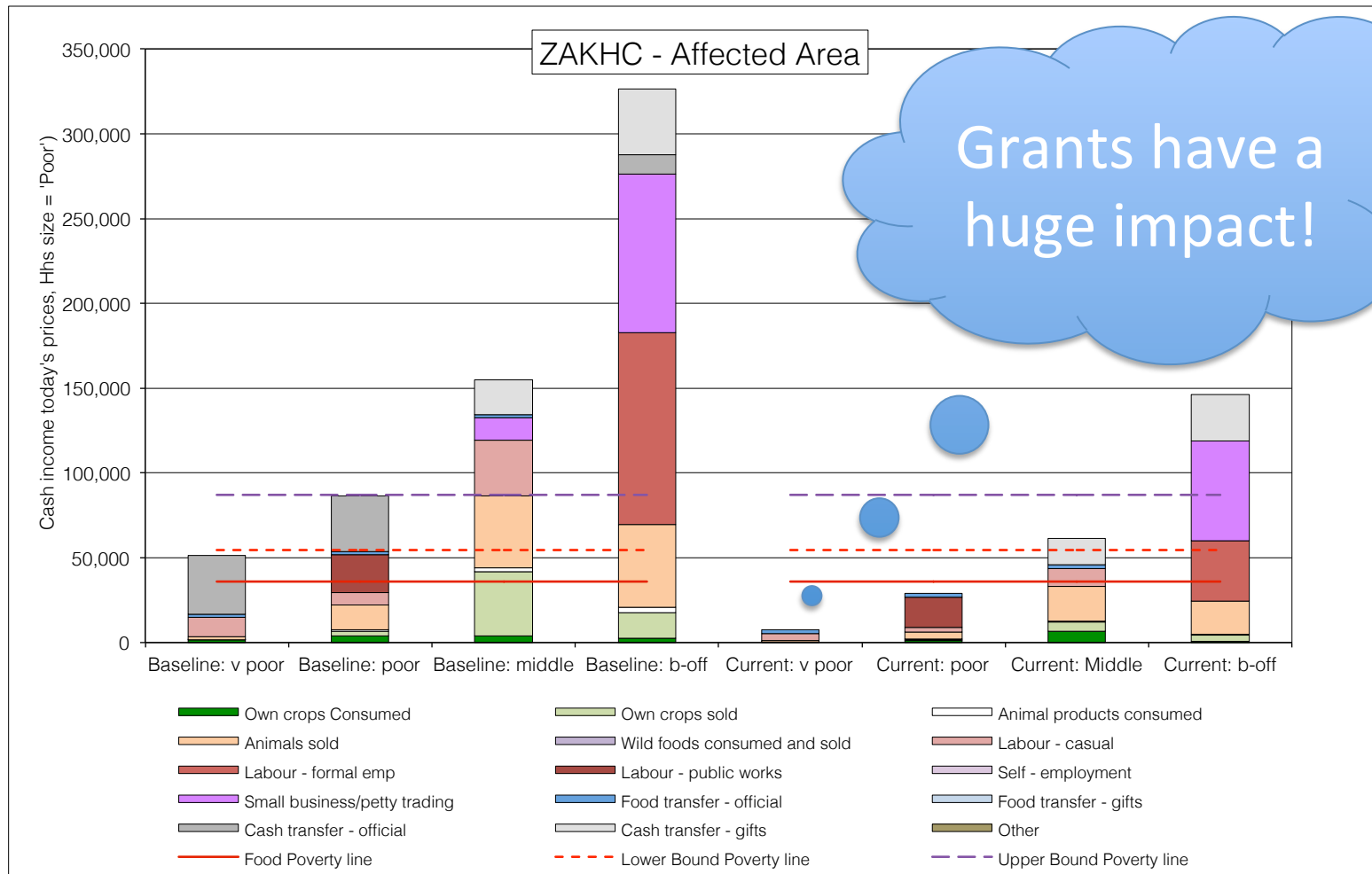
Analysis

- Examples of impact on household total income: Okahlamba open-access intense crops and livestock
- Hazard-affected area, household receiving grants



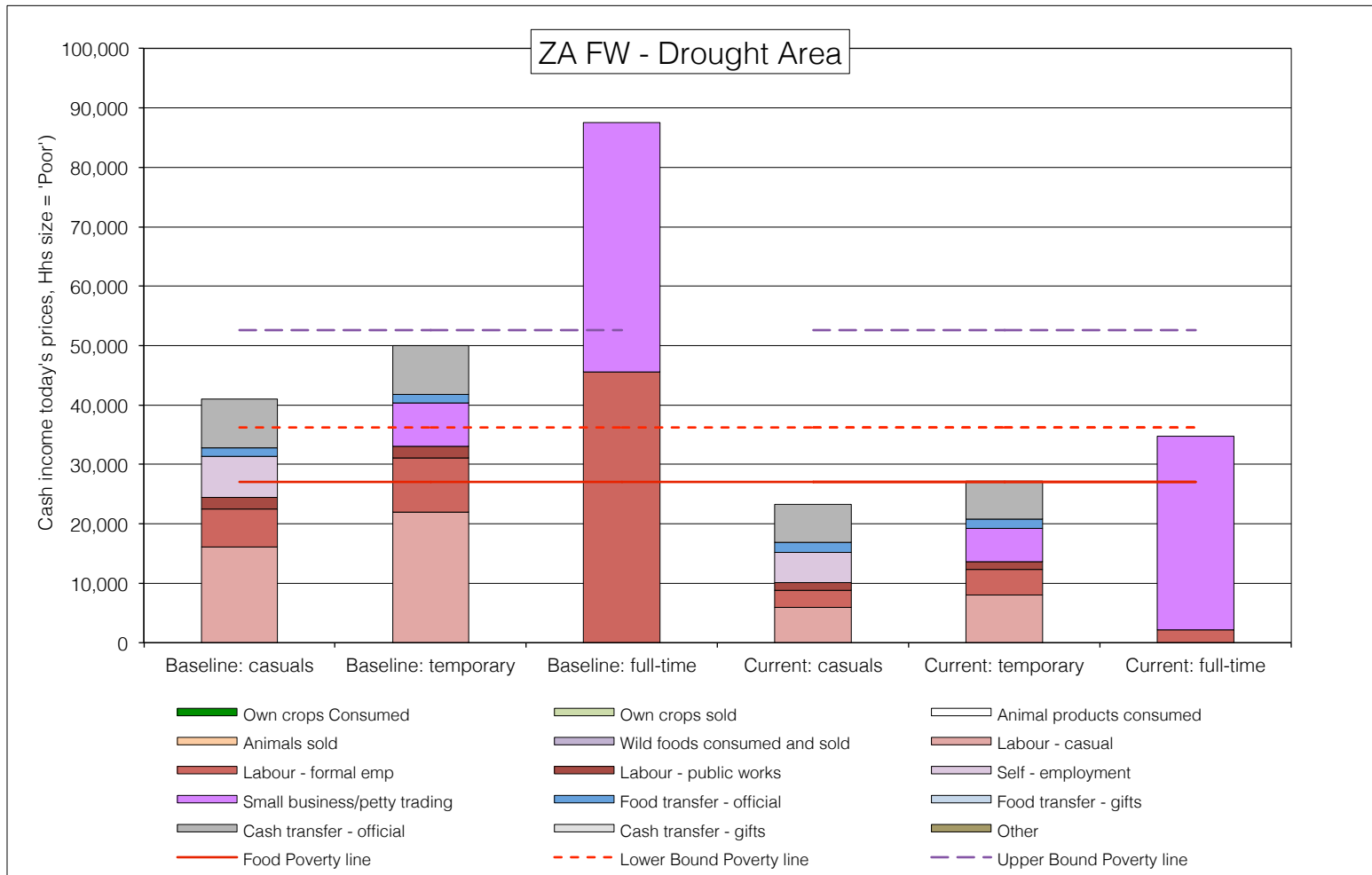
Analysis

- Examples of impact on household total income: Okahlamba open-access intense crops and livestock
- Hazard-affected area, household **not receiving** grants

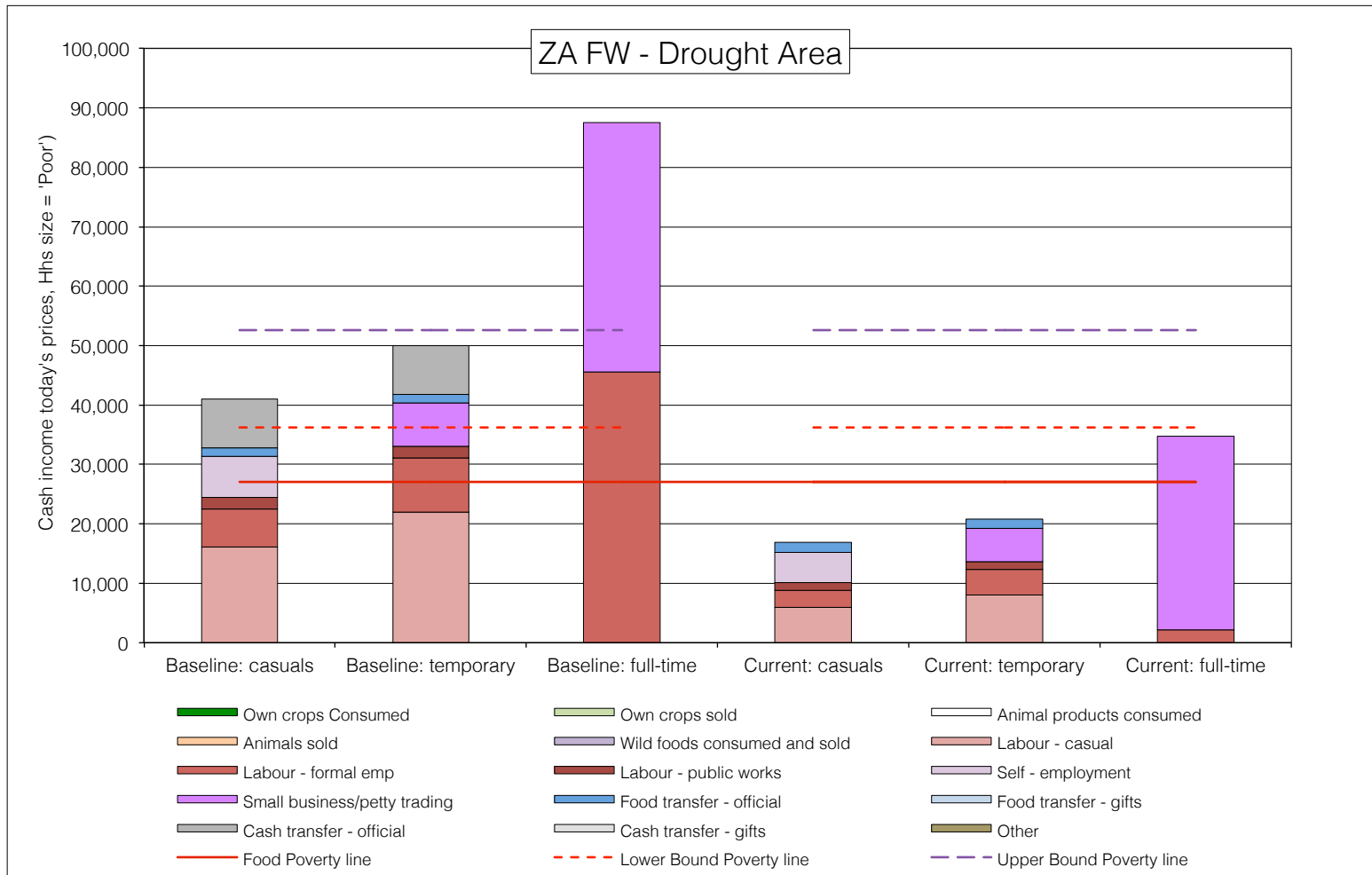


Analysis

- Examples of impact on household total income: farm workers
- Hazard-affected area, household receiving grants

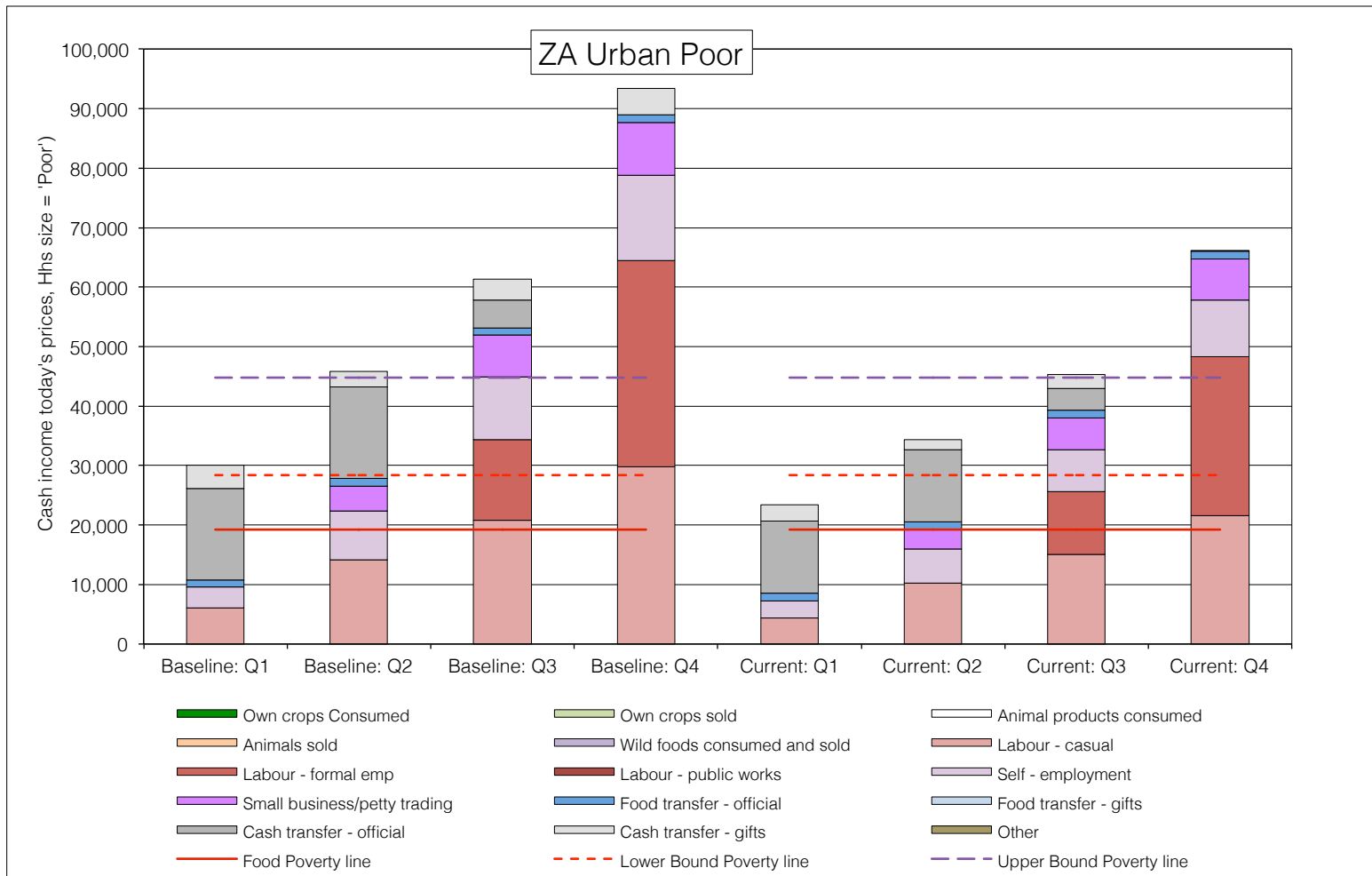


- Examples of impact on household total income: farm workers
- Hazard-affected area, household **not receiving** grants

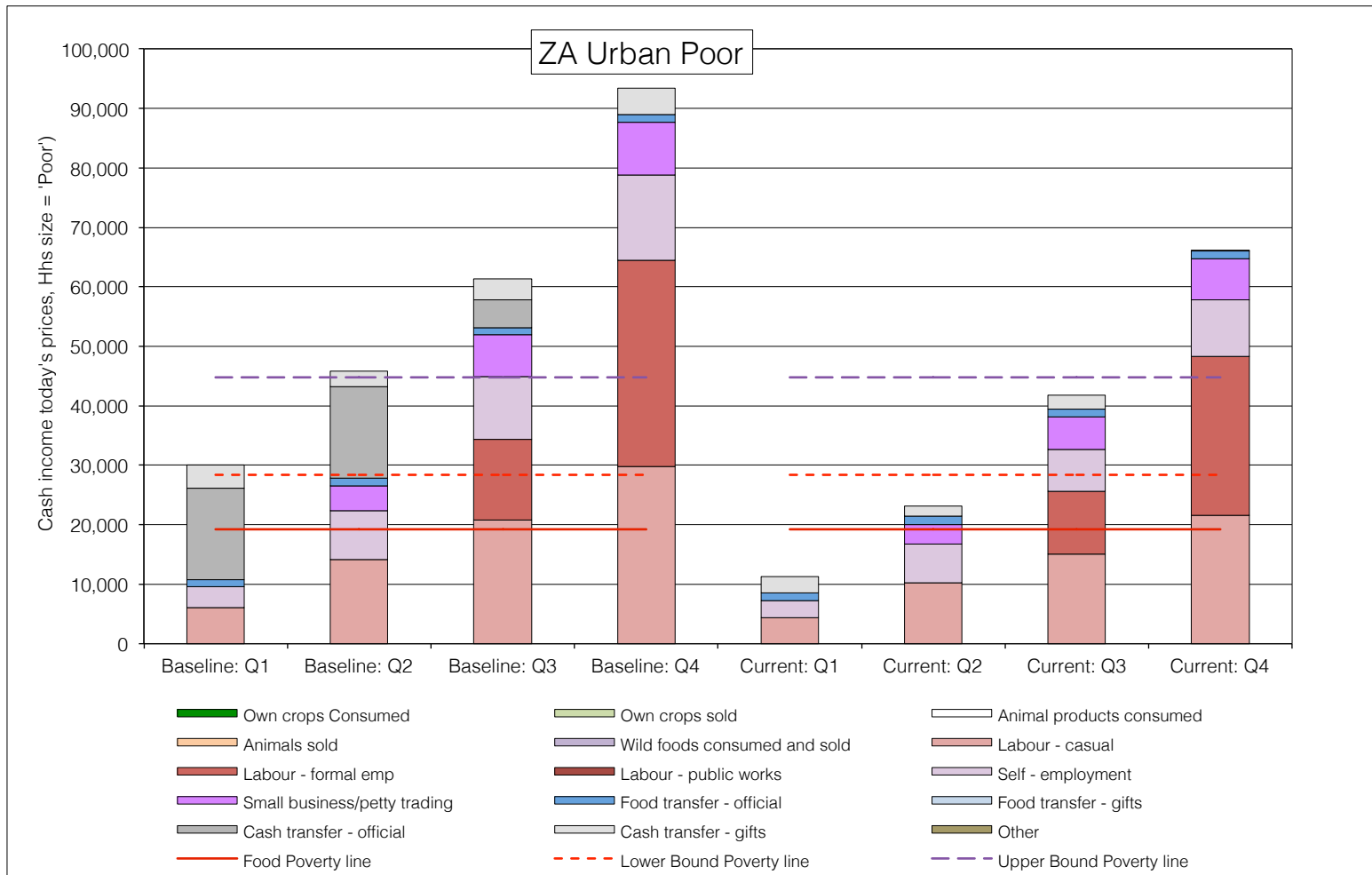


Analysis

- Examples of impact on household total income: urban poor
- Hazard not so significant, household receiving grants

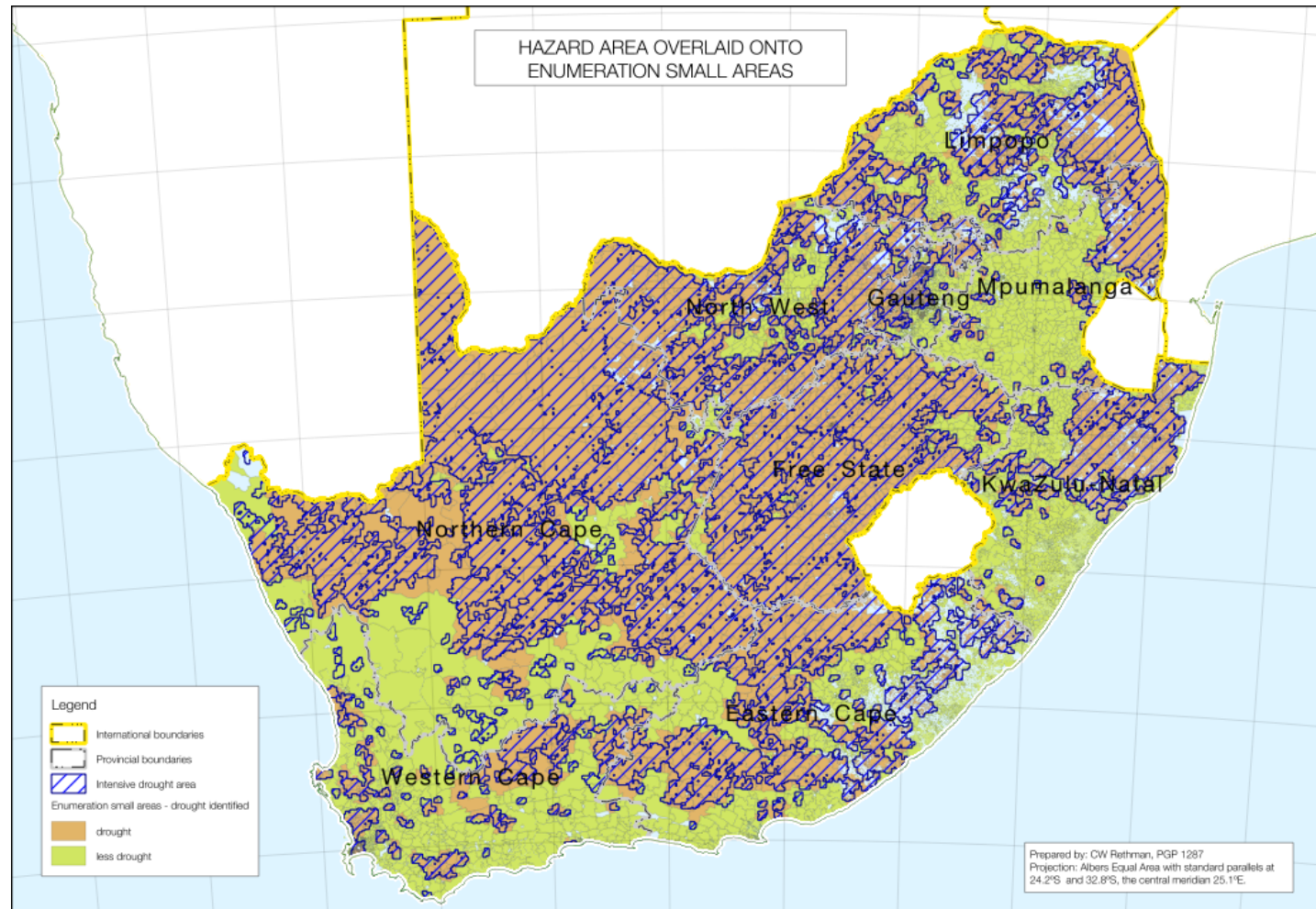


- Examples of impact on household total income: urban poor
- Hazard not so significant, household **not receiving** grants



So how does it all add up?

The hazard and analysis can be overlaid onto the Enumeration small areas; populations and deficits can then be summed over the whole country



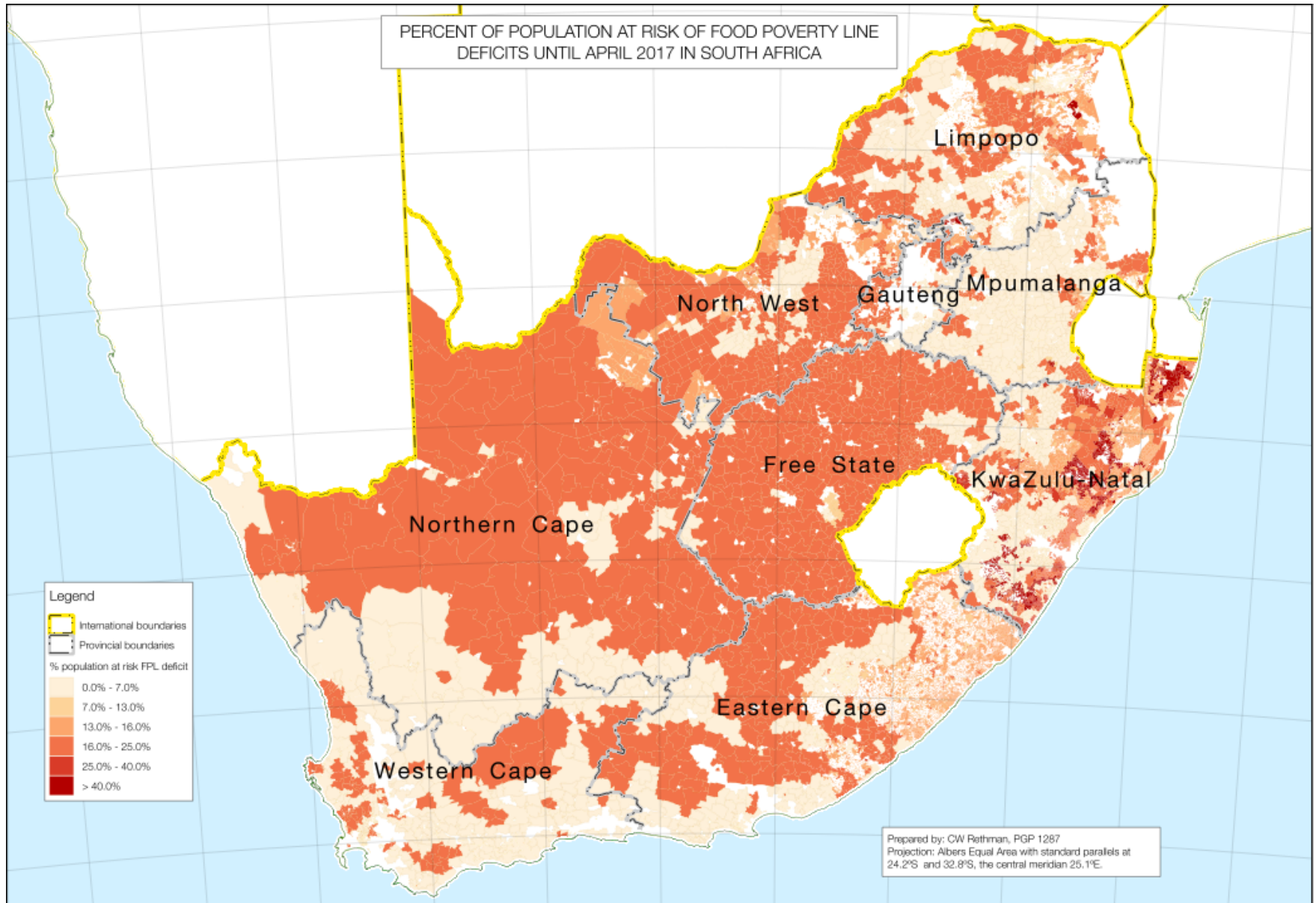
Food Poverty Line Deficit Totals

Province	Pop at Risk	FPL Deficit
Eastern Cape	521,889	992,476,678
Free State	68,318	107,568,303
Gauteng	18,136	21,791,592
KwaZulu-Natal	1,626,157	2,753,551,121
Limpopo	467,766	1,037,630,165
Mpumalanga	314,481	618,120,122
North West	291,624	596,371,762
Northern Cape	177,314	234,940,381
Western Cape	53,957	51,460,699
Grand Total	3,539,642	6,413,910,824

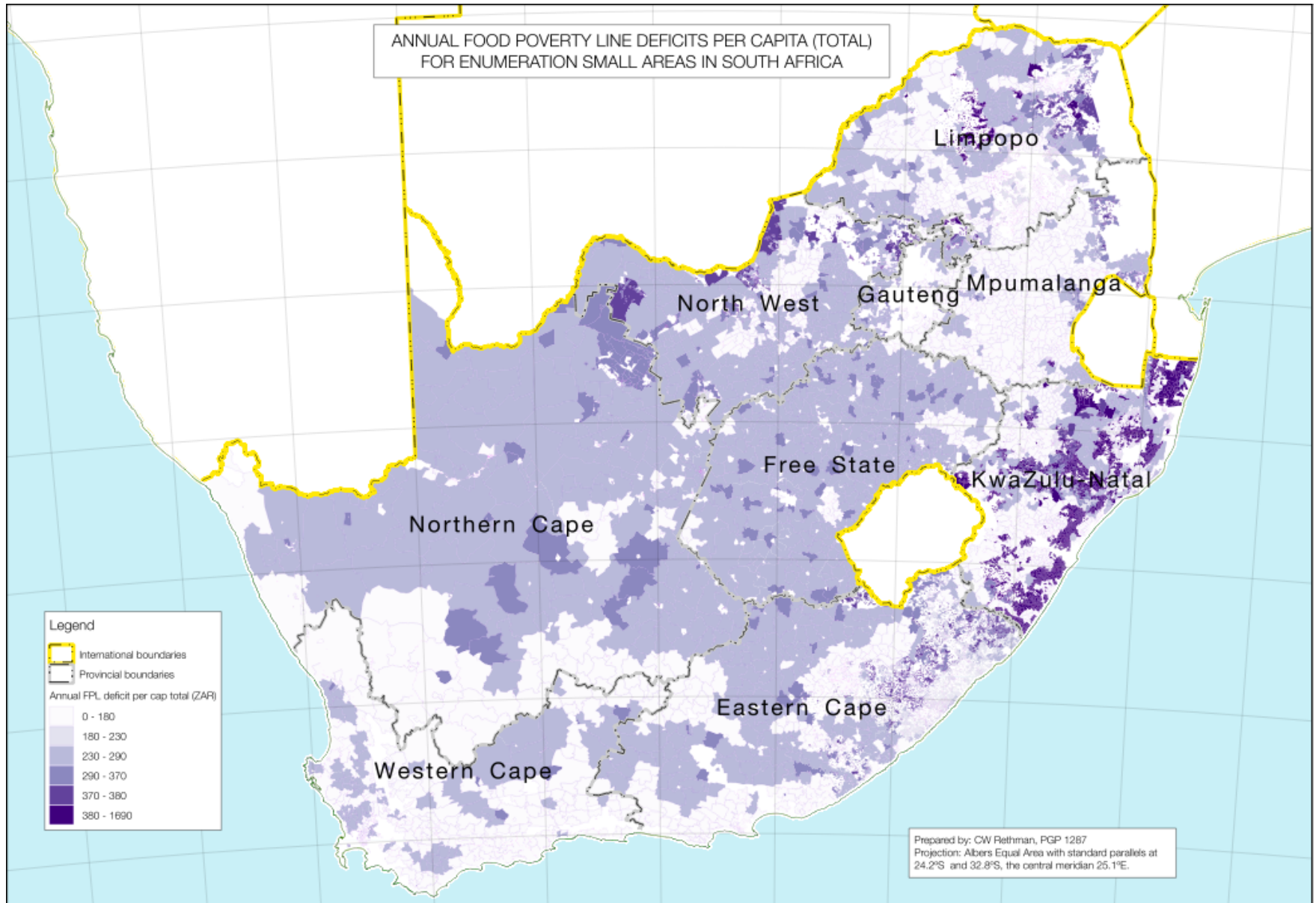
Lower Bound Poverty Line Deficit Totals

Province	Pop at Risk	LBPL Deficit
Eastern Cape	2,112,132	4,306,200,620
Free State	489,207	370,289,310
Gauteng	275,235	76,053,790
KwaZulu-Natal	4,006,428	9,487,561,101
Limpopo	2,002,784	4,170,699,730
Mpumalanga	1,640,691	2,604,395,509
North West	2,181,987	2,399,275,038
Northern Cape	399,567	1,015,768,406
Western Cape	2,117,129	141,095,760
Grand Total	3,539,642	6,413,910,824

Outcomes



Outcomes



Outcomes

