TO BE OR NOT TO BE – PERSPECTIVES ON FOOD SELF-SUFFICIENCY IN SUB SAHARAN AFRICA

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2018 Bertebos conference: Global Food Security – Ensuring sustainable food production at local to global scales

August 26-29, 2018, Falkenberg, Sweden

FOOD PRICE DILEMMA

A never ending Government struggle!!!

Farmers lobby for higher maize prices + lower fertilizer prices

Lower consumer prices, usually culminating into consumer subsidies

National Treasury

POLITICS VS. GROWTH

Government Policy

•Supply of public goods
✓ Long-term productive investments: R&D, infrastructure, education, etc.
✓ Private agribusinesses manage market transactions

• High social payoffs
• But payoffs come 5-20 years later
• Critical for sustained poverty reduction

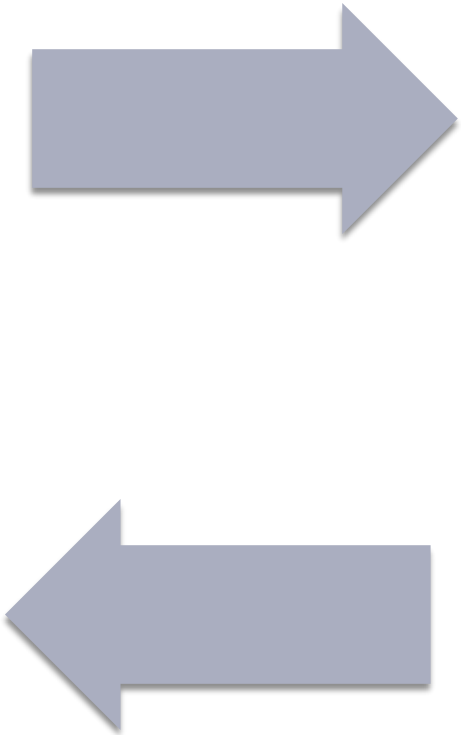
•Public management of agricultural inputs and output markets
✓ Input subsidy programs
✓ Marketing board price supports

• Immediate political payoffs;
• Visible support to constituencies
• Contribution to sustained growth / poverty reduction is unclear

Which way to go?

FOOD SELF-SUFFICIENCY POLICIES REHEATED

The resurgence of self-sufficiency policies- triggered by the 2007/08 food crises that reinforced the general perception that staple food prices are far too strategically and politically important to leave to the market forces and trade.



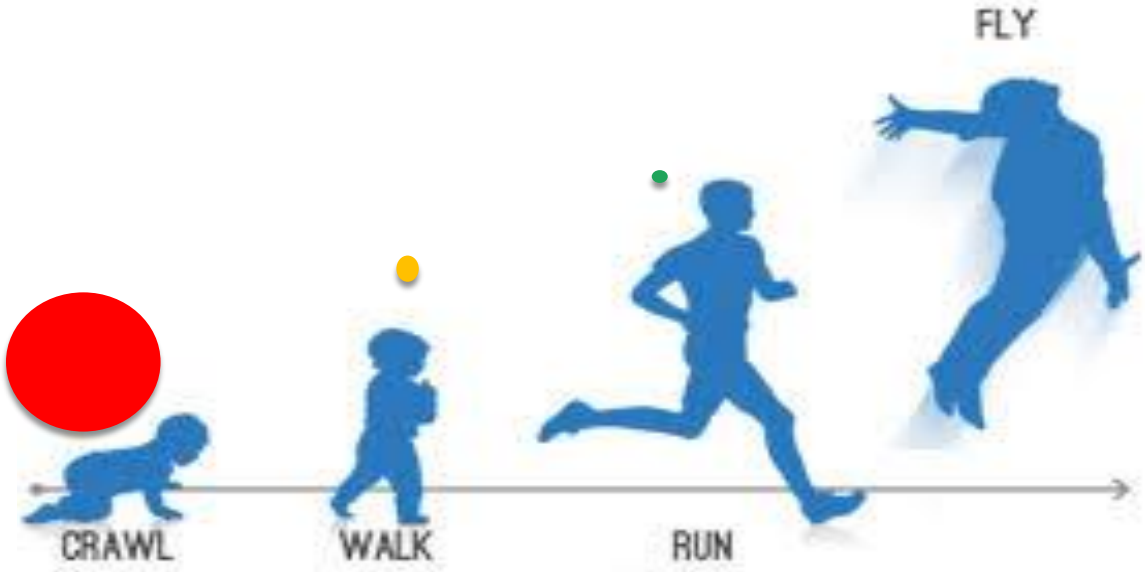
The availability, access and affordability of food (in particular staple cereals—maize, rice and wheat) is at the center of most of the sub-Saharan African countries' food security policies and political economy.

AU-MALABO DECLARATION, 26-27 JUNE 2014

- To uphold Maputo declaration of allocating at least 10% of public expenditure to agriculture
- To sustain an annual agricultural GDP growth of at least 6%
- To end hunger and cut poverty in half by 2025
- To accelerate agricultural growth by doubling current agricultural productivity levels by 2025
- To halve post-harvest losses by the year 2025
- To triple intra-African agricultural trade by 2025
- To eliminate child under-nutrition by bringing down stunting to 10% and underweigh t to 5% by 2025

Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods

MOST VALUE CHAINS ARE STILL CRAWLING!!!! BUT HAVE LOTS OF POTENTIAL



Hinderances to change and growth:

- Inconsistent agricultural policies
- Low productivity
- Price Volatility
- Trade barriers
- etc.

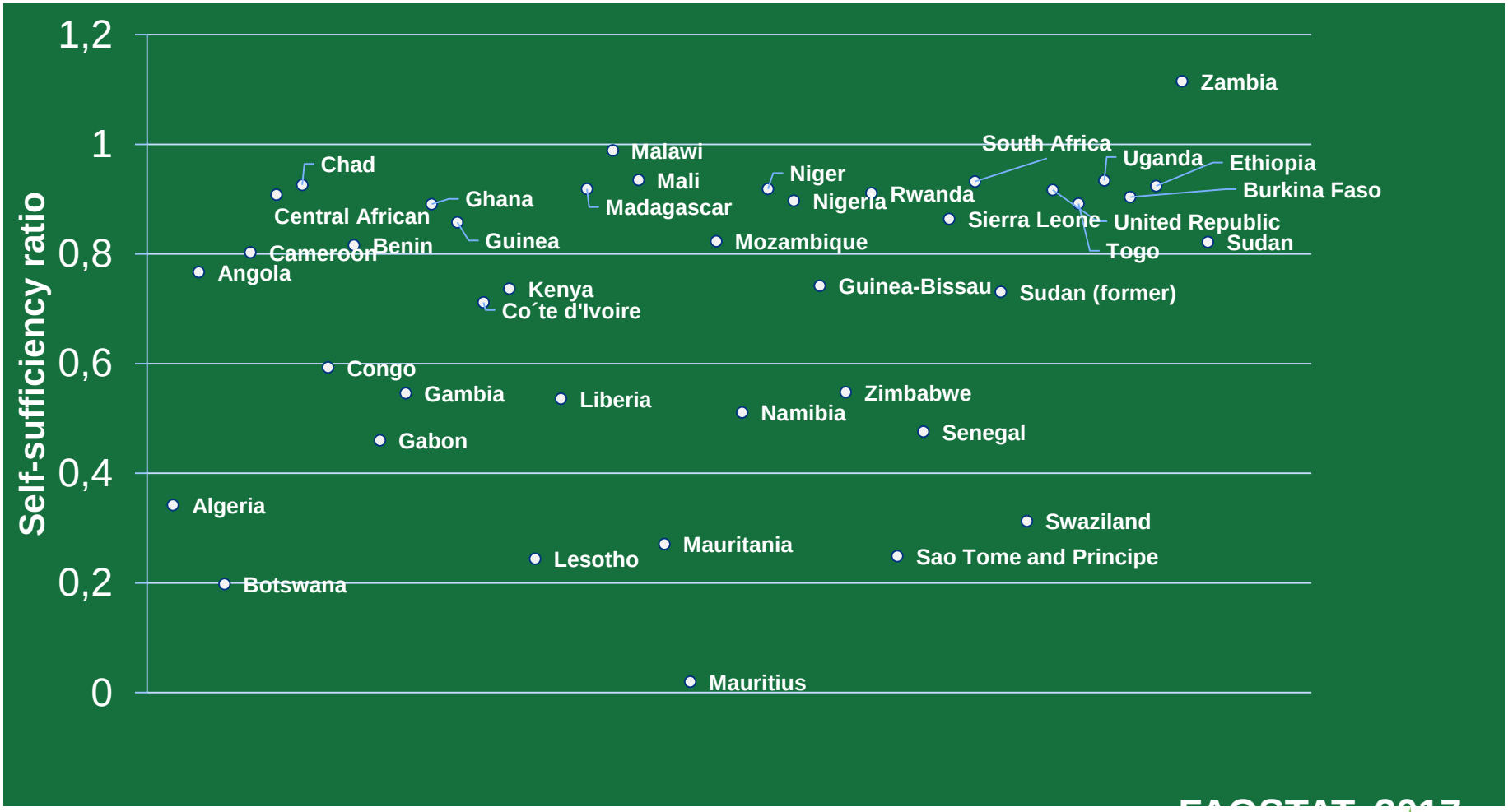
OPPOSING FORCES

Food self-sufficiency, is it possible?

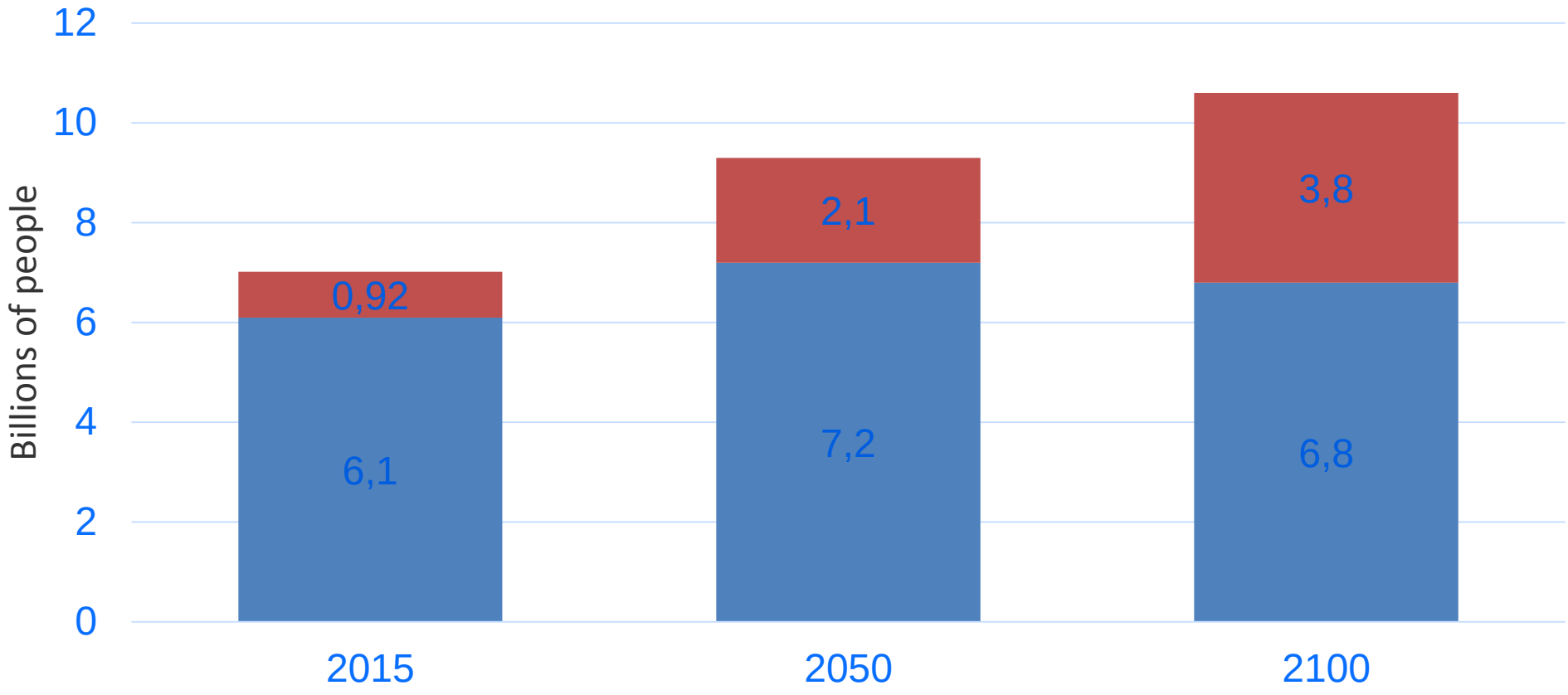
Skeptics

Supporters

SELF-SUFFICIENCY RATIO (CEREALS & TUBERS)



AFRICA'S RAPID POPULATION GROWTH



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HIGH CONCENTRATION OF EXPORTS: TOP 5 EXPORTERS

United States - 90.4%
Paraguay - 1.4%
France - 1.2%
China - 1.1%
Brazil - 0.9%

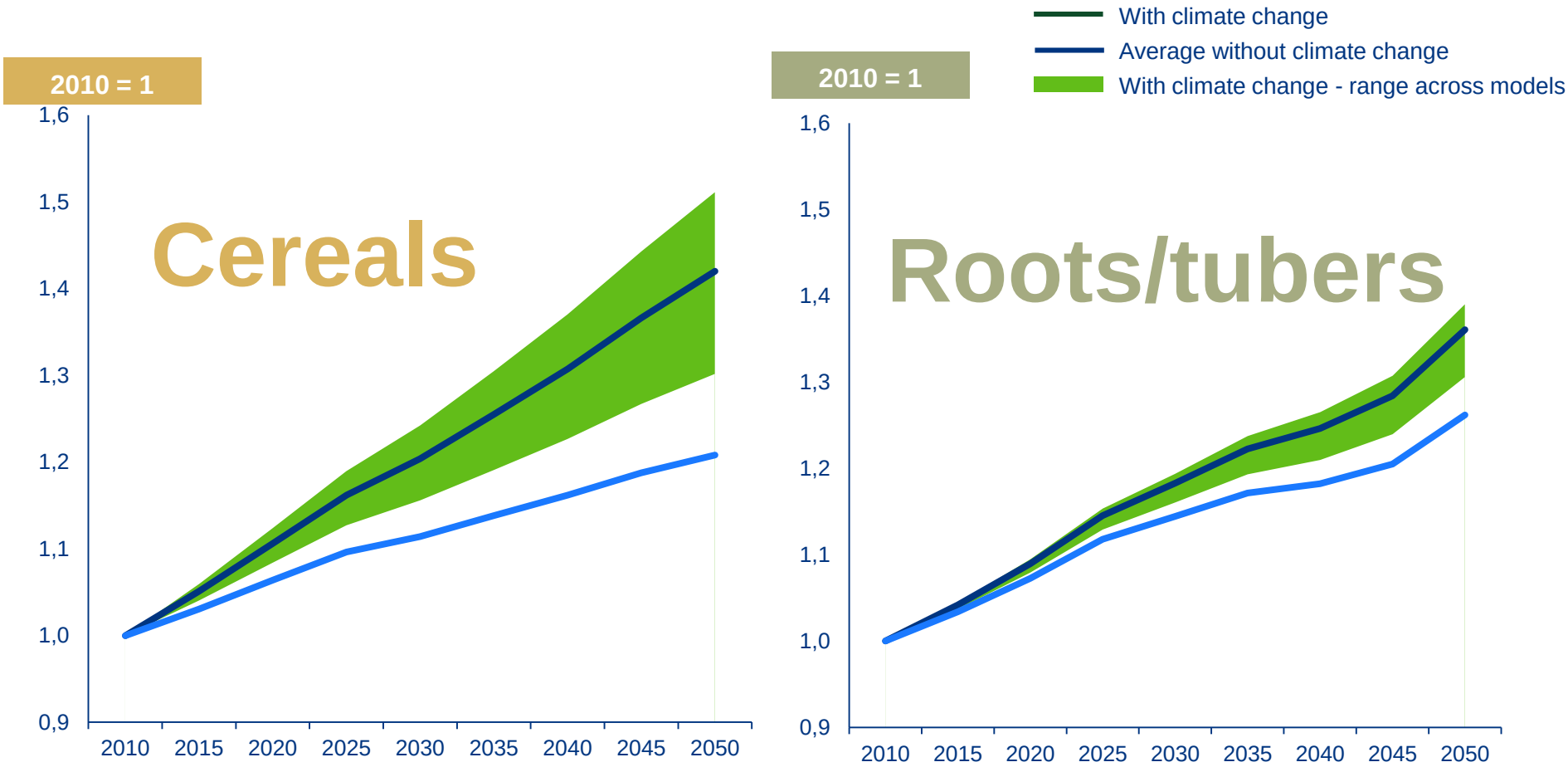
Thailand - 36.4%
Vietnam - 19.9%
Pakistan - 10.9%
India - 10.4%
United States - 7.2%

United States - 53.0%
Argentina - 15.1%
Brazil - 6.3%
France - 6.0%
India - 3.5%

United States - 22.9%
France - 12.4%
Canada - 12.0%
Russian Federation - 8.9%
Argentina - 6.7%

TOO DISTANT!!!!

FOOD PRICES INCREASE WITHOUT CLIMATE CHANGE; EVEN HIGHER WITH CLIMATE CHANGE



Source: IFPRI IMPACT 3.2 Projections.

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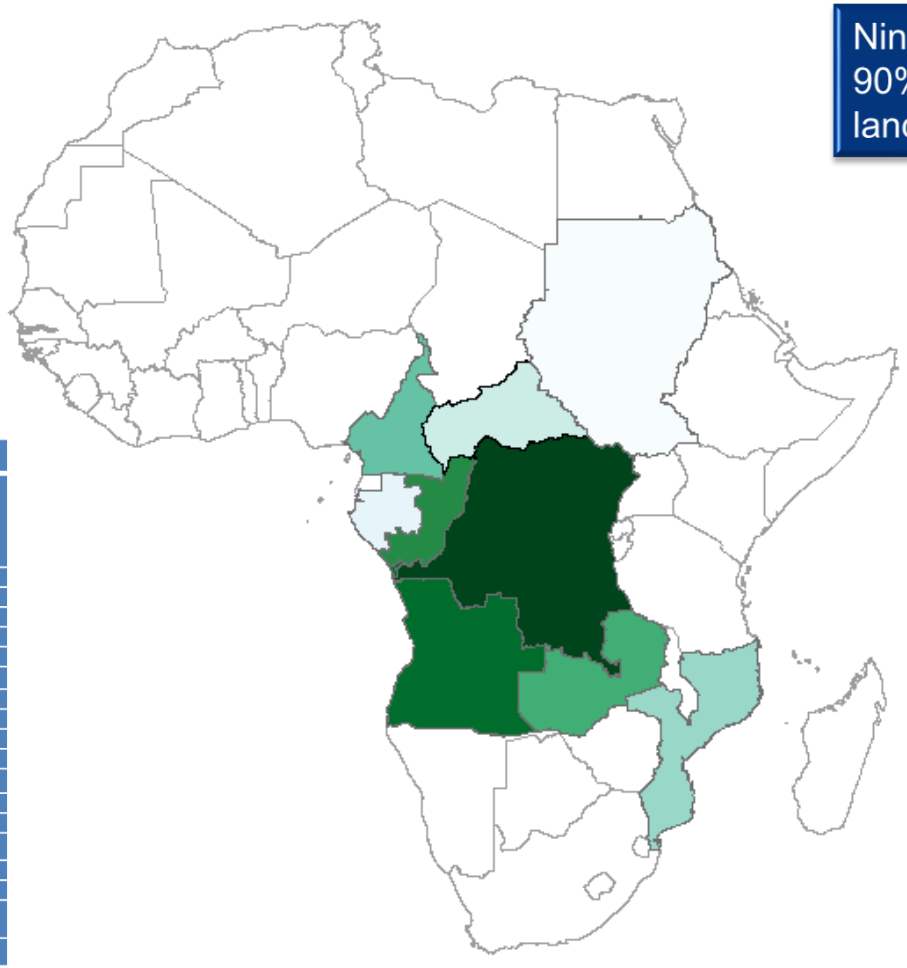
LAND AVAILABILITY IN AFRICA

Nine countries contain at least 90% of Africa's unutilized arable land



LAND AVAILABILITY IN AFRICAN COUNTRIES			
	Non-forested unutilized land (1000s Ha)	Proportion	Cumulative Proportion
DRC	84824	46.5%	46.5%
Angola	18889	10.4%	56.9%
Congo	12872	7.1%	63.9%
Zambia	10834	5.9%	69.9%
Cameroon	10447	5.7%	75.6%
Mozambique	8994	4.9%	80.5%
CAR	7049	3.9%	84.4%
Gabon	6534	3.6%	88.0%
Sudan	5803	3.2%	91.2%
Tanzania	4313	2.4%	93.5%
Madagascar	2718	1.5%	95.0%
Zimbabwe	2142	1.2%	96.2%
Chad	1520	0.8%	97.0%
South Africa	1219	0.7%	97.7%
Kenya	807	0.4%	98.2%
Mali	800	0.4%	98.6%
Burkina Faso	655	0.4%	99.0%
Ethiopia	651	0.4%	99.3%
Rest of Africa	1259	0.7%	100.0%

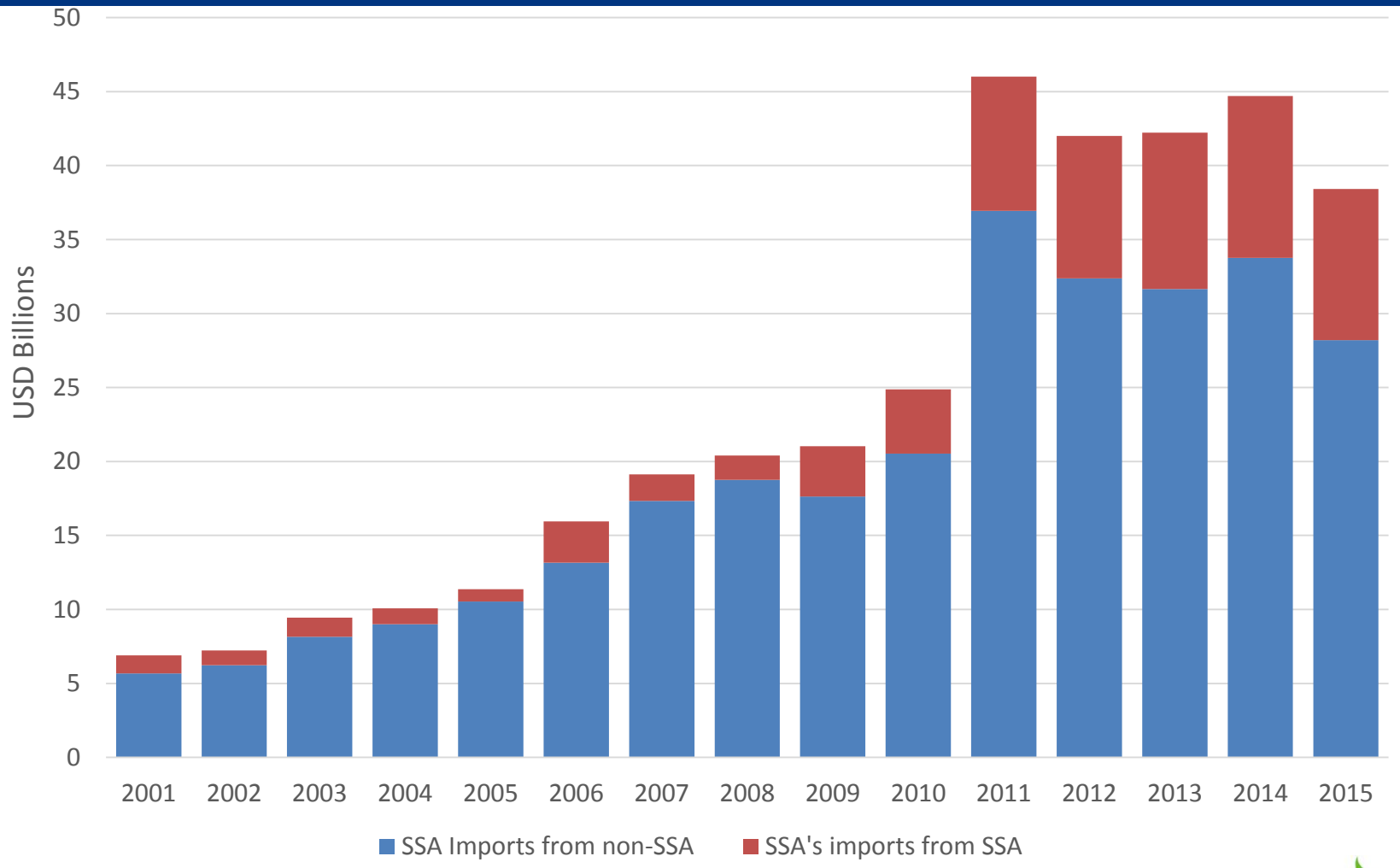
Sudan 3.2%
Gabon 3.6%
CAR 3.9%
Mozambique 4.9%
Cameroon 5.7%
Zambia 5.9%
Congo 7.1%
Angola 10.4%
DRC 46.5%
Rest of Africa 8.8%

SUPPORTERS OF FSS

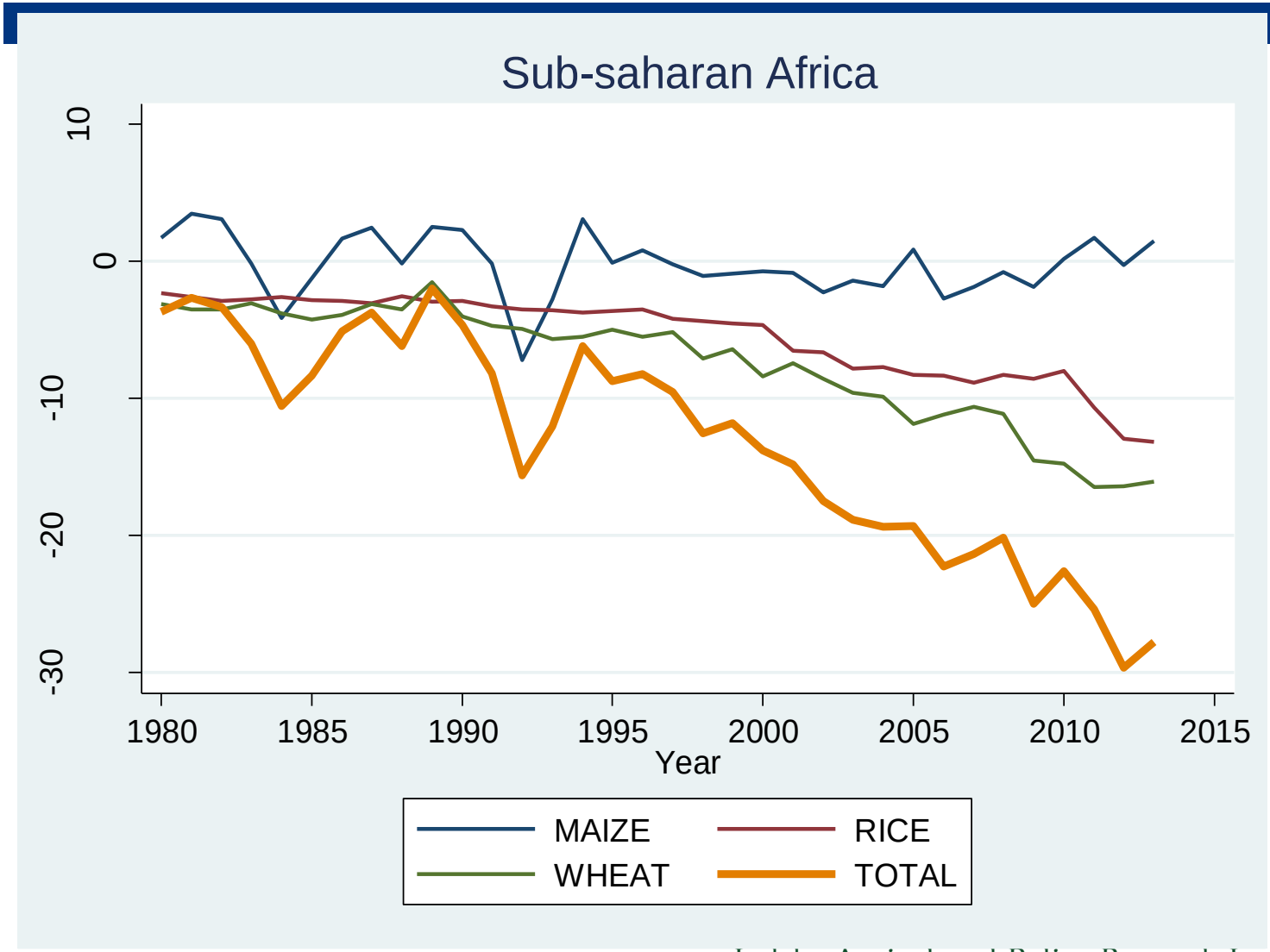
- Trade might fail (2007/08 crises) –may be held hostage by large exporting countries
- Food security: relying on imports is politically risky
- Africa is too far from exporting countries
- Need trade restrictions to create temporary excess demand that then stimulates supply response by local farmers

- **Most countries have FSS goals**
- **Huge input and output subsidies for staple grains**
- **Trade restrictions (impose import and export bans)**

SSA TOTAL FOOD IMPORTS FROM 7 TO 40 BILLION USD (2001-2015) (INTRA SSA TRADE FROM 1 TO 10 BILLION USD)



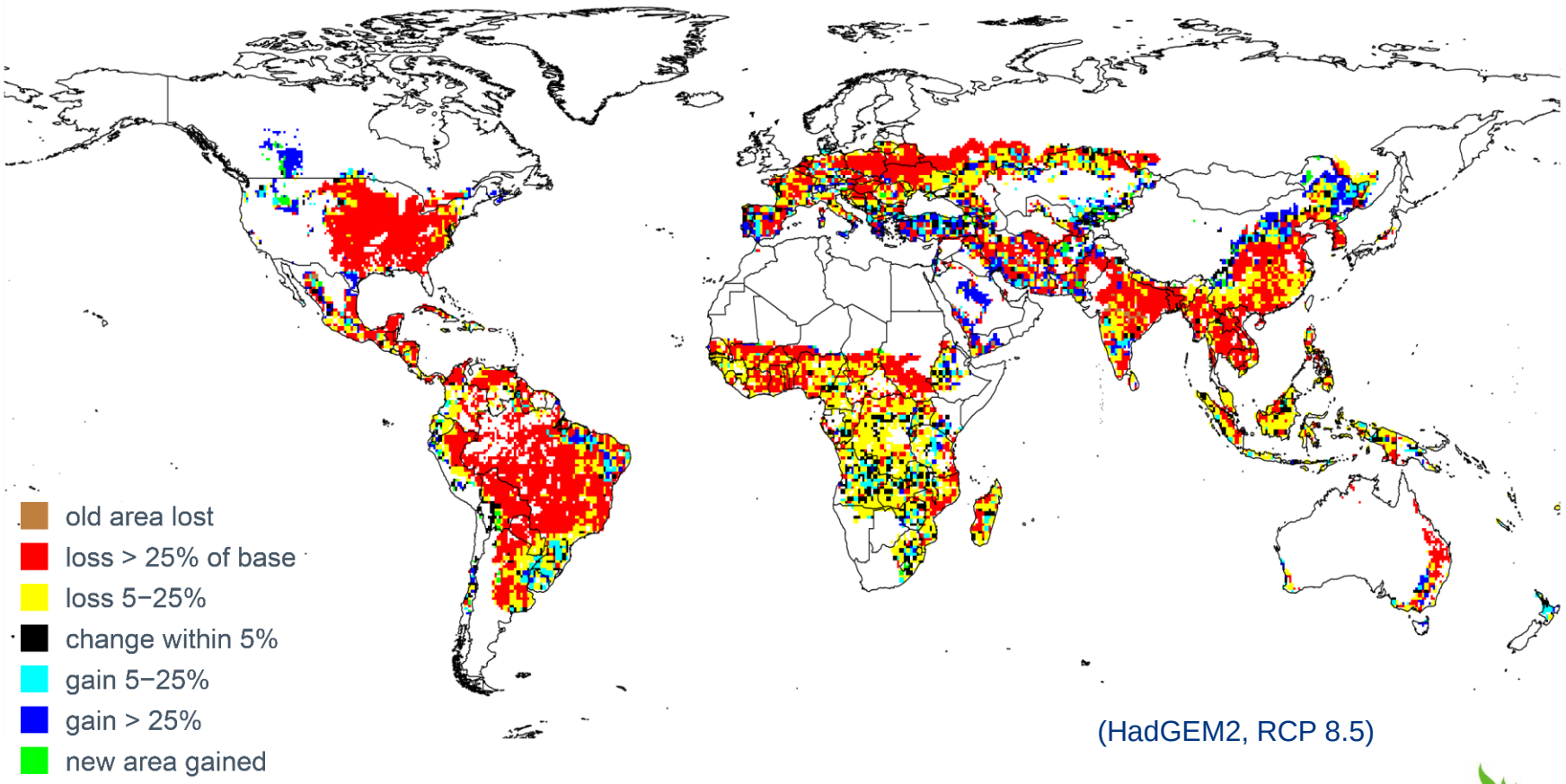
NET CEREAL EXPORTS, SUB-SAHARAN AFRICA



Source: FAOSTAT, 2016

HEAVY TOLL ON RAINFED MAIZE WITH CLIMATE CHANGE

Global yields projected **30% lower** in 2050
compared to no climate change



(HadGEM2, RCP 8.5)

Source: IFPRI IMPACT simulations

SKEPTICS OF FOOD SELF-SUFFICIENCY

- Myopic view of food self-sufficiency (focusing more on staple cereals). Grain is 50% of calories, with less attention to overall FSS on other commodities such as meat, fruits and vegetables
- Food security more broad (a visit to the supermarkets suggest otherwise)
- Consumption patterns changing hence, so FSS in most SSA is limiting, inefficient, not maximizing income
- Trade restrictions hurt mostly the poor -risk of insufficient supply response of local farmers

May not be achievable without big gains in productivity and radical agriculture policy changes that take into account changing consumption patterns

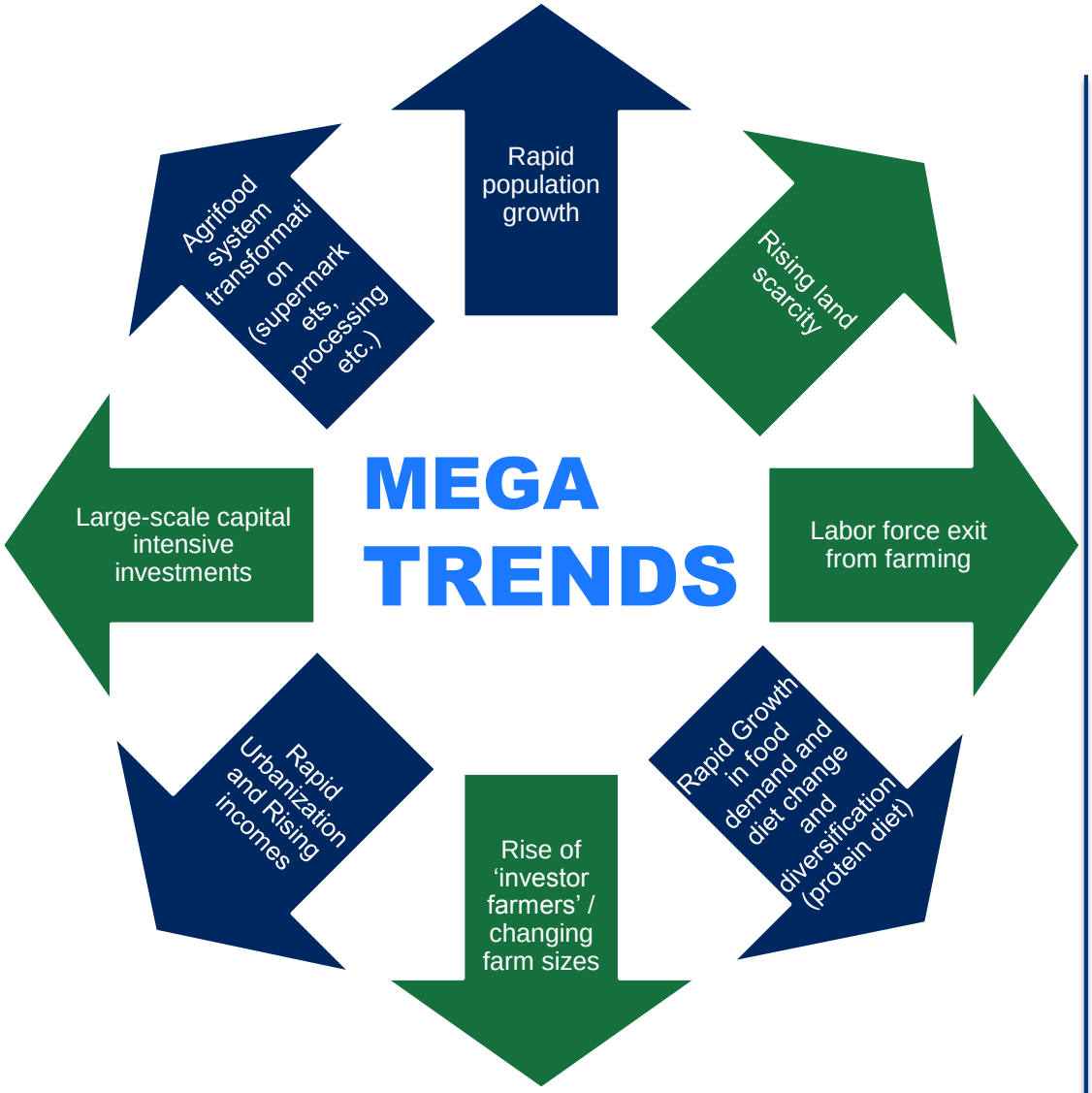
HALF TRUTH ???

Nigeria: rice imports are but 6% of grain consumption, but fiscally sensitive

Senegal: rice imports are a third of grains, and 80% of rice consumption: politically & fiscally sensitive

Zambia: Past 5 years country has been self-sufficient in maize and requires less than 10% of wheat: politically & fiscally sensitive

Zimbabwe: Implementing 'command agriculture' to become self-sufficient in maize, soya beans and wheat: : politically & fiscally sensitive

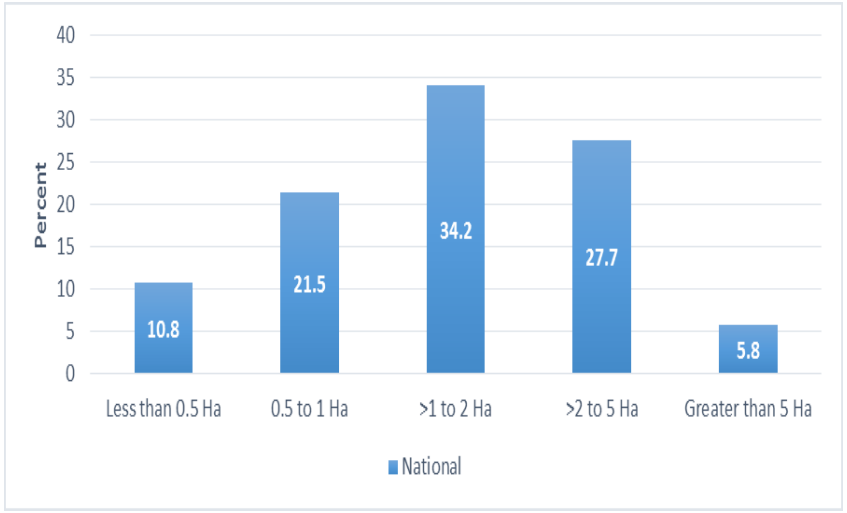


Creates opportunities as well as challenges for smallholder farmers

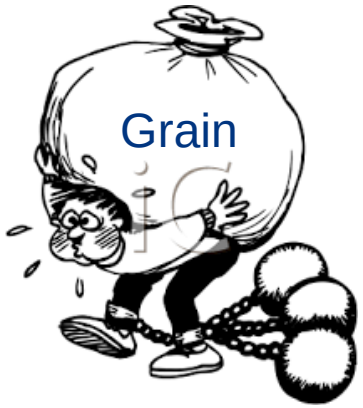
- Share of purchased food in rural diets increasing averages 60%
- Share of cereals in urban & rural diets averages 35% (fruit, veg, meat, fish, dairy, oil, 65%)

Tom Reardon, 2018 (Breakthrough dialogue, California)

SMALLHOLDER FARMERS IN SSA



Source: Zambia, RALS 2015

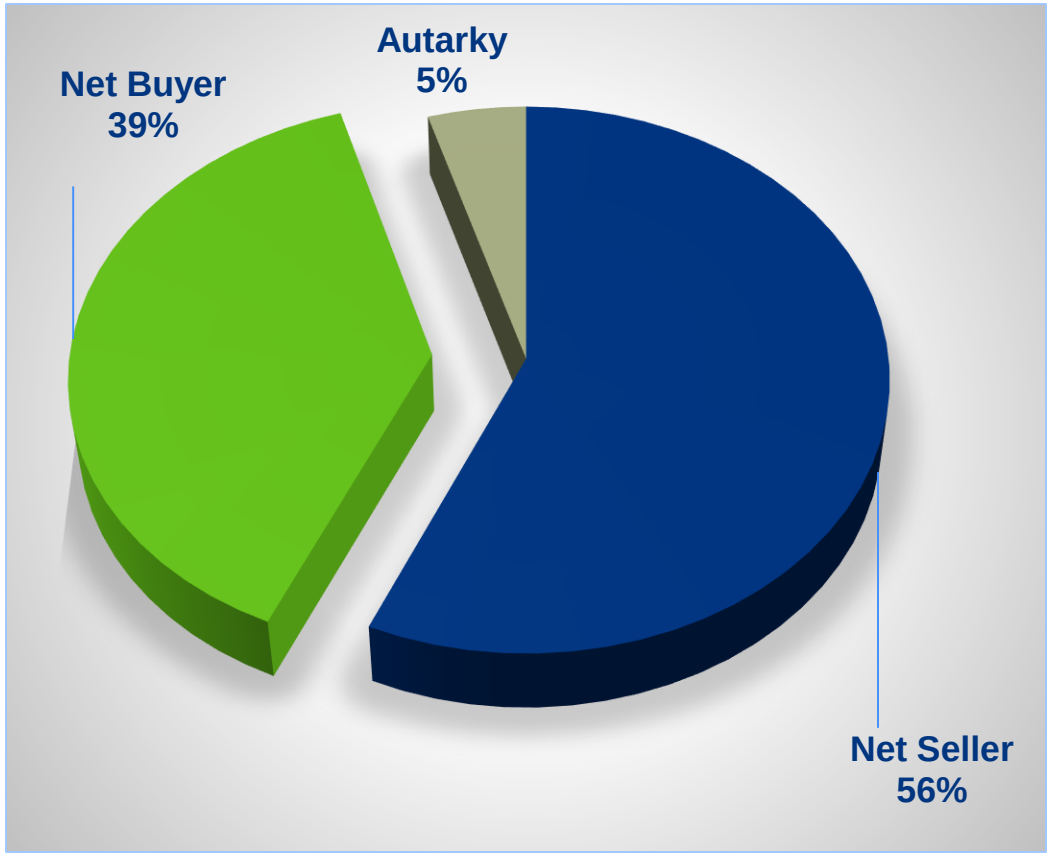


- Millions of small family households cultivate less than 2ha
  - ✓ Not a homogenous group but cultivate small parcels, majority remain poor, malnourished and less educated
  - ✓ +90% grow maize

Hindrances to change and growth:

- Not so progressive agricultural policies
- Low productivity
- Land degradation
- Education and skills of the majority of farmers
- Failure to fully embrace new technology
- Price Volatility
- Trade barriers
- Climate Change, etc.

MORE THAN 30% OF RURAL FARM HHS ARE NET BUYERS OF MAIZE (ZAMBIA)

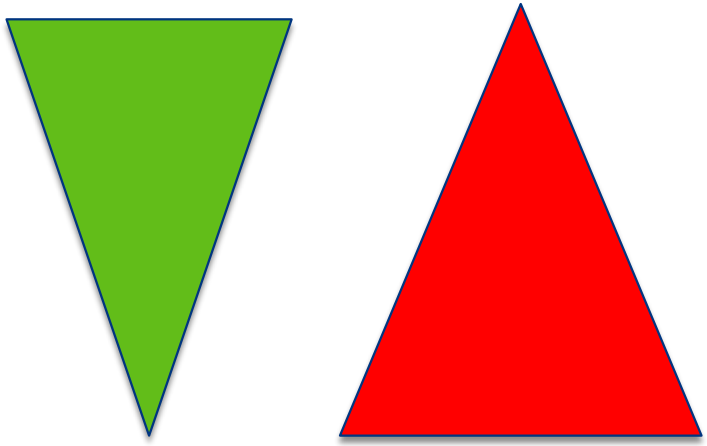


- Nearly 39% of rural farm HHs are net buyers of maize
  - More than 50% of rural farmers do not sell maize

Source: RALS 2015

2-5% OF SMALLHOLDER FARM HOUSEHOLDS ACCOUNT FOR 50% OF MARKETED MAIZE (ZAMBIA)

Farm Size	Production	Sales
Small		
Medium		
Large		



Maize market Highly concentrated

A REVOLUTIONARY CHANGE IN FARMLAND OWNERSHIP

African governments' past policy attention to "land grabs" by international investors. Diverting attention away from two other processes that may be affecting Africa's economic development trajectory

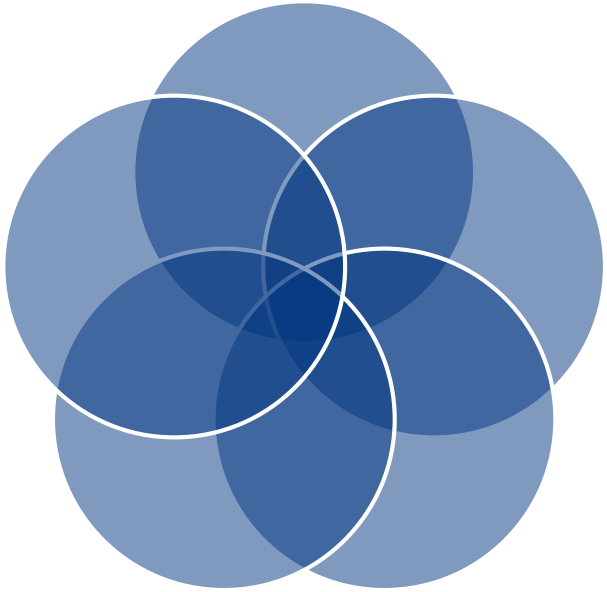
The pace of land acquisitions by medium-scale African investors, who now control more land than large-scale foreign investors

The overall impact of land transactions on the viability of smallholder-led agricultural development strategies

FARM SIZES ARE CHANGING WITH THE RISE OF EMERGENT / MEDIUM-SCALE FARMERS

Seeing more medium scale farms of between five and 100 hectares.

Mostly educated, average age 40, acquire farms using non-farm jobs (roughly 60%)



Account for 20 percent of farms in Kenya, about a third of farms in Ghana and Tanzania, and half the farms in Zambia.

Not at the centre of most government agricultural policies (at times classified as small-scale)

Home Grown Indigenous Farmers with farm sizes 5-100 (at least)

CHANGES IN FARM STRUCTURE IN ZAMBIA (2001-2012)

Farm size category	Number of farms		% growth in number of farms	% of total cultivated area	
	2001	2012		2001	2012
0 – 2 ha	638,118	748,771	17.3	34.1	16.2
2 – 5 ha	159,039	418,544	163.2	45	31.7
5 – 10 ha	20,832	165,129	692.6	14.3	25.0
10 – 20 ha	2,352	53,454	2272.7	6.6	15.0
20 – 100 ha	--	13,839	na	--	12.1
Total	**820,341**	**1,399,737**		**100**	**100**

-39%

+91%

Source: Zambia MAL Crop Forecast Surveys, 2001 and 2012

CHANGES IN FARM STRUCTURE IN TANZANIA (2008-2012)

Farm size category	Number of farms		% growth in number of farms	% of total cultivated area	
	2008	2012		2008	2012
0 – 5 ha	5,454,961	6,151,035	12.8	62.4	56.3
5 – 10 ha	300,511	406,947	35.4	15.9	18.0
10 – 20 ha	77,668	109,960	41.6	7.9	9.7
20 – 100 ha	45,700	64,588	41.3	13.8	16.0
Total	5,878,840)	6,732,530	14.5	100.0	100.0

-6.1%

+6.1 %

LSMS/National Panel Surveys, 2008 and 2012

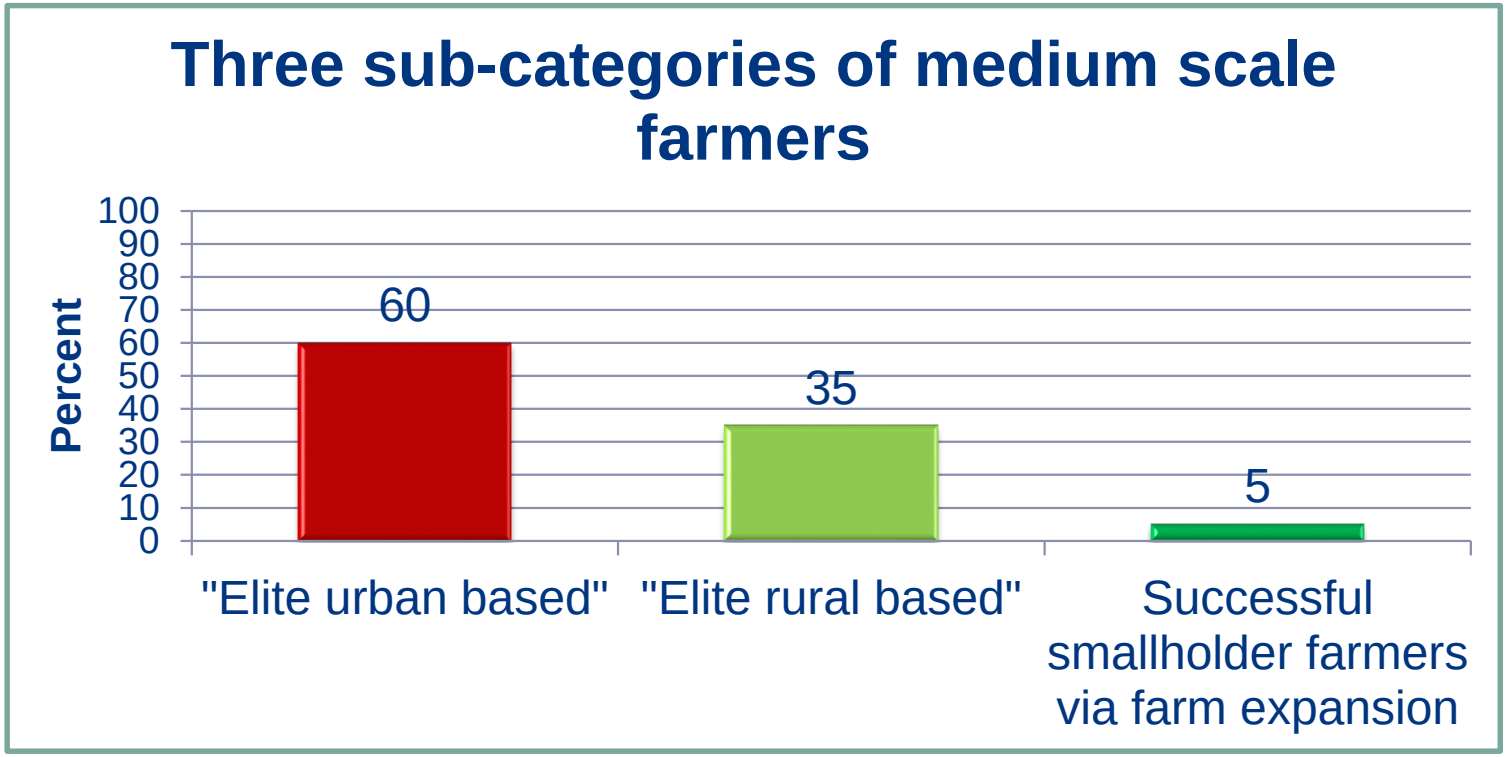
CHANGES IN FARM STRUCTURE IN GHANA (1992-2013)

Ghana	Number of farms		% growth in number of farms	% of total cultivated area	
	1992	2013		1992	2013
0-2 ha	1,458,540	1,582,034	8.5	25.1	14.2
2-5 ha	578,890	998,651	72.5	35.6	31.3
5-10 ha	116,800	320,411	174.3	17.2	22.8
10-20 ha	38,690	117,722	204.3	11.0	16.1
20-100 ha	18,980	37,421	97.2	11.1	12.2
>100 ha	--	1,740	-	--	3.5
Total	**2,211,900**	**3,057,978**	**38.3**	**100**	**100**

51% of total farm-land

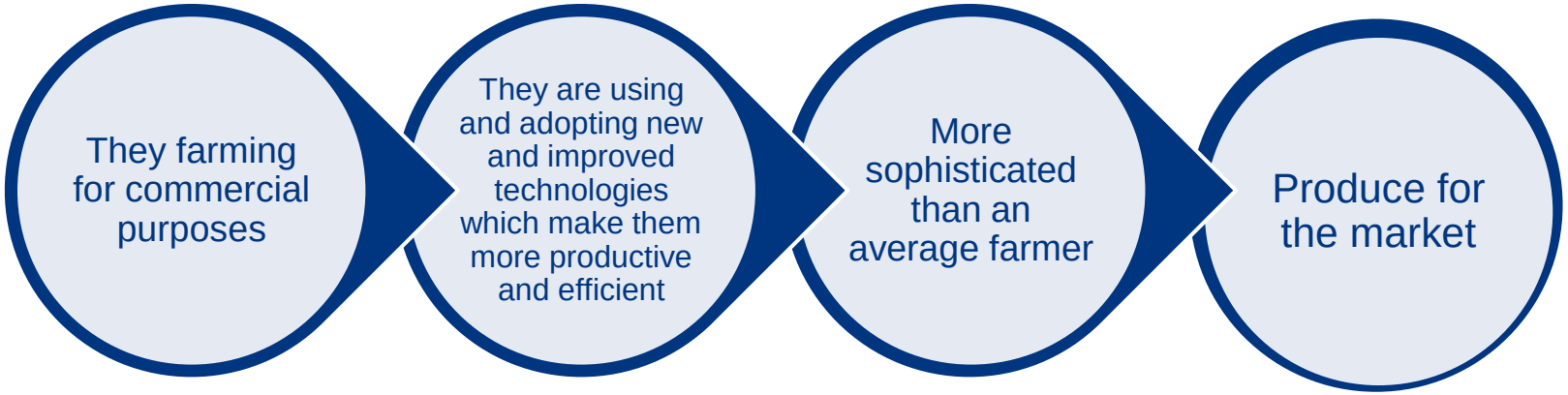
Source: Ghana GLSS Surveys, 1992, 2013

RISE OF THE MEDIUM-SCALE FARMERS



Estimates from three countries (Zambia, Kenya and Southern Ghana)

ELITE FARMERS



- On average (over countries) only “the top” 20% of farms supply the food for the 75-80% of demand not met by own-farming
- The 20-30% are the “elite farmers” on which an average country must depend for SS (in grains & non-grains!)

…ELITE FARMERS

E.g. Zambia, farmers climbed value ladder from maize to horticulture

- **farmers earn much more from non-food grains**
- **FSS (staple grains) may be hindered because more successful farmers target more lucrative, high-value markets**

For households cultivating 2 hectares or less, horticulture increases income by 164% compared to 26% for the same type of farmers growing maize (RALS 2012)

Trace the trajectories of successful commercial smallholders operating under differing sets of market institutions.

Maize receives intensive government input and marketing support.

Cotton relies primarily on private contract farming schemes

Horticulture enjoys no large-scale institutional support from either the public or private sectors.

Source: **Institutional Models for Accelerating Agricultural Commercialization: Evidence from Maize, Cotton and Horticulture in Zambia, 1965 to 2012**. By Antony Chapoto, Steven Haggblade et al. In Ellen Hillbom and Patrick Svensson, editors Agricultural Transformation in a Global History Perspective, Routledge Press

TOP TIER COMMERCIAL PRODUCERS

	Maize	Cotton	Horticulture
Top tier commercial producers	3%	20%	1%
Bottom half of sales	36%	80%	46%
Growers with no sales	62%	0%	53%

Smallholder farmers

PRODUCTIVITY DIFFERENCES ACROSS SELLER GROUPS IN ZAMBIA

Seller category	Area Planted (ha/crop)	Yield (kg/ha)	Value (US$/ha)	Fertilizer (kg/ha)	Hybrid seed
Maize					
Top half of sales	4.8	3,393	571	247	97%
Bottom half of sales	1.1	2,074	413	175	56%
Growers with no sales	0.8	1.161	197	64	31%
Cotton					
Top half of sales	1.5	1,581	481	2	n.a
Bottom half of sales	0.8	822	179	0	n.a
Growers with no sales	0.9	975	240	0	n.a
Horticulture					
Top half of sales	0.6	n.a	6,979	0	n.a
Bottom half of sales	0.2	n.a	683	0	n.a
Growers with no sales	0.0	n.a	79	0	n.a

WHAT COUNTRIES IN SSA NEED TO DO TO MOVE TOWARDS SELF-SUFFICIENCY?

SHORT TO MEDIUM-TERM POLICIES

Embrace Market-Based Hedging Strategies for coping with excessive volatility

Invest in targeted cash transfers (conditional or unconditional) for the most vulnerable groups

Invest in effective measures to increase productivity, sustainability and resilience of agriculture

Create conditions for the farmers and supply chain actors to want to and be able to meet the complex local demands

- **farmers earn much more from non-food grains**
- **FSS (staple grains) may be hindered because more successful farmers target more lucrative, high-value markets**

Medium and long term policies

Pro-trade policies:

- Improve availability of food products (quantity) at low prices and quality.
- Use redistributive policies and safety nets to deal with winners and losers of trade openness.

Implement policies to increase agricultural productivity and resilience

- Input subsidies – Transitory, smart and well targeted input subsidies
- Increase competition in the input industry
- Investment in R&D and Extension
- Investment in infrastructure – irrigation and roads
- Implement policies to reduce post-harvest losses, including improved handling of harvests and storage practices, information systems and rural roads

Two sets of institutions are crucial for stimulating agricultural growth

- **those that affect farm productivity**
- **those that govern market development.**

One component without the other will not suffice

Productivity gains without markets lead to temporary production surges and price collapses.

Markets without increased farm productivity remain moribund, with farm households unable to generate surpluses for sale at competitive prices.

PARTING SHOTS

We should not expect food self sufficiency in sub-Saharan Africa ……without also making progress on:

- Measures to increase productivity, sustainability and resilience of agriculture
- Increasing public funding on agriculture key drivers including agricultural research and development, rural infrastructure, irrigation and extension
- Improving midstream policies of supply chain infrastructure development to develop the “Hidden Middle”
- Policy stability – to attract private sector investment. Government funds alone are not enough to meet the rising demand
- Openness to trade in food and investments led by the private sector (especially food staples)

THANK YOU

ABOUT IAPRI

Incorporated on 5 October 2011 under the Companies Act of Laws of Zambia as a **private company limited by guarantee** with a local Board of Directors drawn from Public and Private Sector.

- Indigenous Agricultural Policy Think-tank
- Serves both Public and Private Sector

A Zambia free of hunger, malnutrition and poverty through sustainable agricultural transformation

To provide evidence-based policy solutions through high quality research and outreach services for the transformation of Zambia's agricultural sector to achieve sustainable broad-based pro-poor growth

Integrity: in how the Institute conducts itself

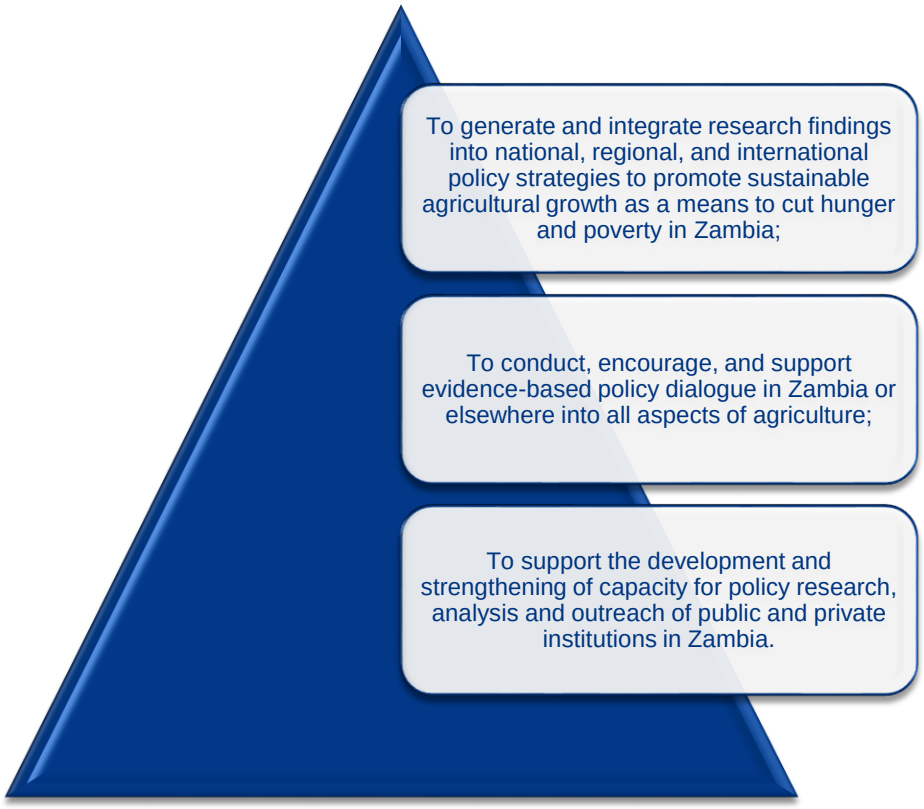
Dedication: to achieving the Vision and Mission

Excellence: In the quality of work

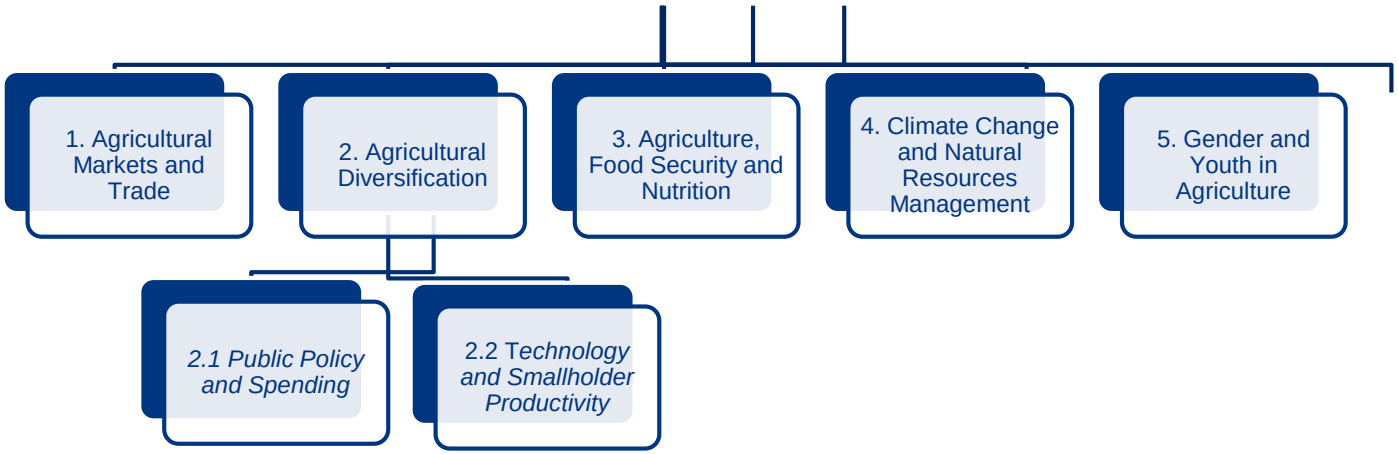
Accountability in the actions and results delivered

Sensitivity: to the needs of the poor in the agricultural sector

CORE OPERATIONAL ACTIVITIES



IAPRI THEMATIC AREAS



Great appreciation to the Embassy of Sweden and USAID/Zambia mission for long-term financial support to IAPRI

EMBASSY OF SWEDEN

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