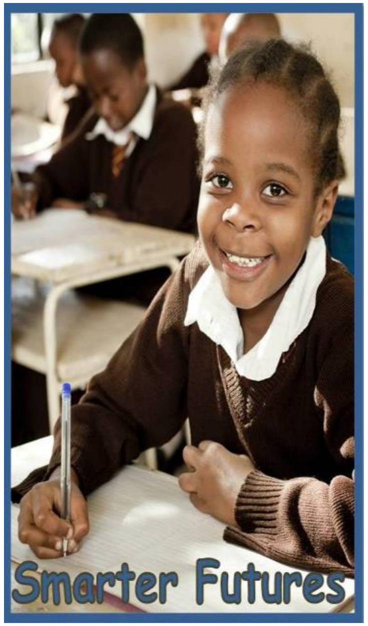
Maize Scoping Study

Key Findings



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Food Fortification Initiative
Enhancing Grains for Healthier Lives

AkzoNobel

Helen Keller INTERNATIONAL

IFSBH

Ministerie van Buitenlandse Zaken

Justification of study

- Maize accounts for 54-65% energy intake
  - ‘chimanya ndi moyo’ meaning ‘maize is life’
- Different processing systems and structures
- Inadequate concrete data on supply and processing of maize & other maize products

Target Countries

Cluster 1: East and Southern Africa (2016)

- South-Africa, Malawi, Zambia, Zimbabwe, Rwanda, Burundi, Tanzania, Kenya, Uganda, Mozambique, Namibia, Botswana and Angola.

Cluster 2: West Africa franc zone (2014)

- Senegal, Guinea-Bissau, Cote d'Ivoire, Togo, Benin, Mali, Niger, and Burkina Faso.
- 10 industries assessed

Goal

- Provide concrete information on the potentials and scope for maize flour fortification initiative

Objectives

- Establish availability of maize as a staple food
  - quantity and the
  - The way maize is processed and consumed as flour or other foods.

The study entailed….

- Tracing the flow of maize grain along the supply chain

Ascertaining

- Consumption patterns and volume of consumption
- Volume of local production
- Volume of internal and external trade in maize grain and flour
- Milling structure and capacities

Methodology

Phase 1: Online review of secondary data

- Identification, collection and review of existing reports and supporting documents

Phase 2: Country visits to validate and fill data gaps

- Tanzania, Kenya, Malawi, Zimbabwe and Uganda

Consumption

- Flour into Thick Porridge

Consumption

Green Roasted Maize

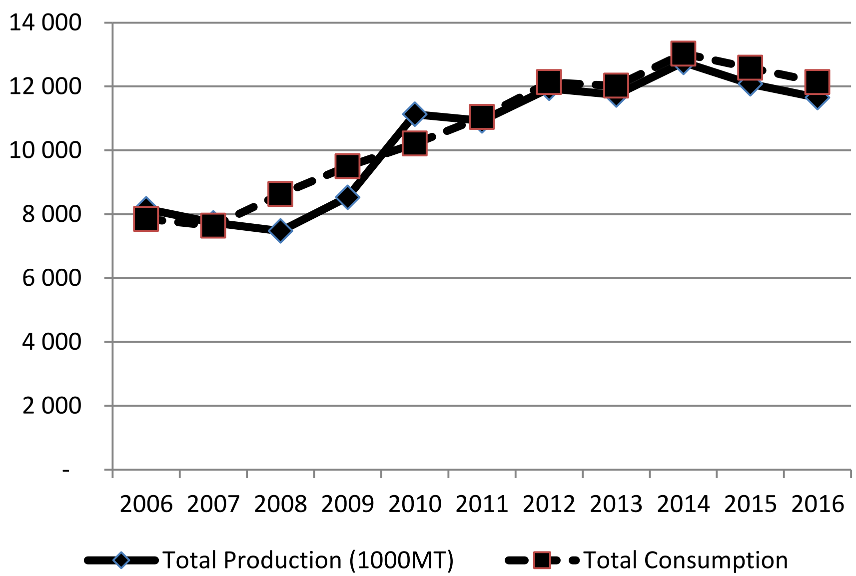
Production

- Over 80% maize is produced by large number of smallholders
- 65-88% of households grow their own maize
- White vs yellow maize
  - 10-30% of white maize for feeds
- Production concentrated in specific ecological and geographic areas in the countries

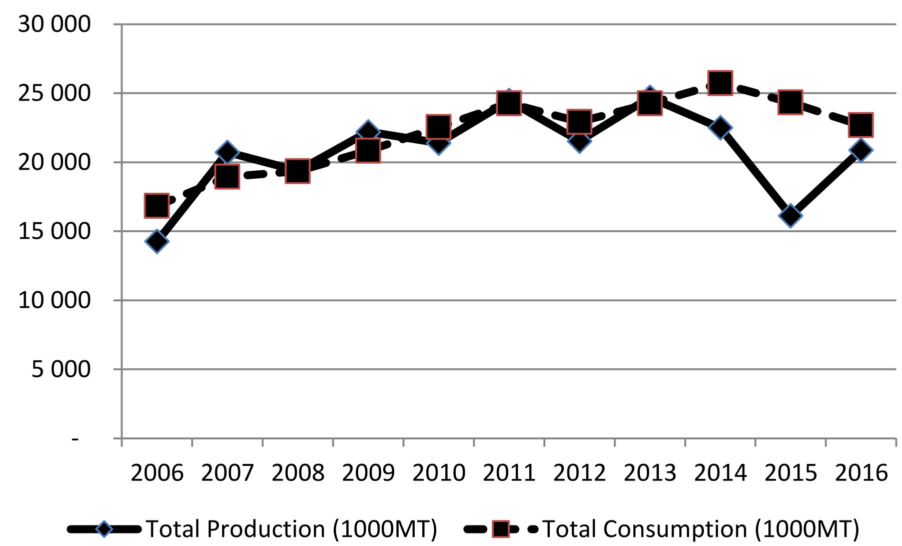
Production

Production and Consumption Trend (2006-2016)

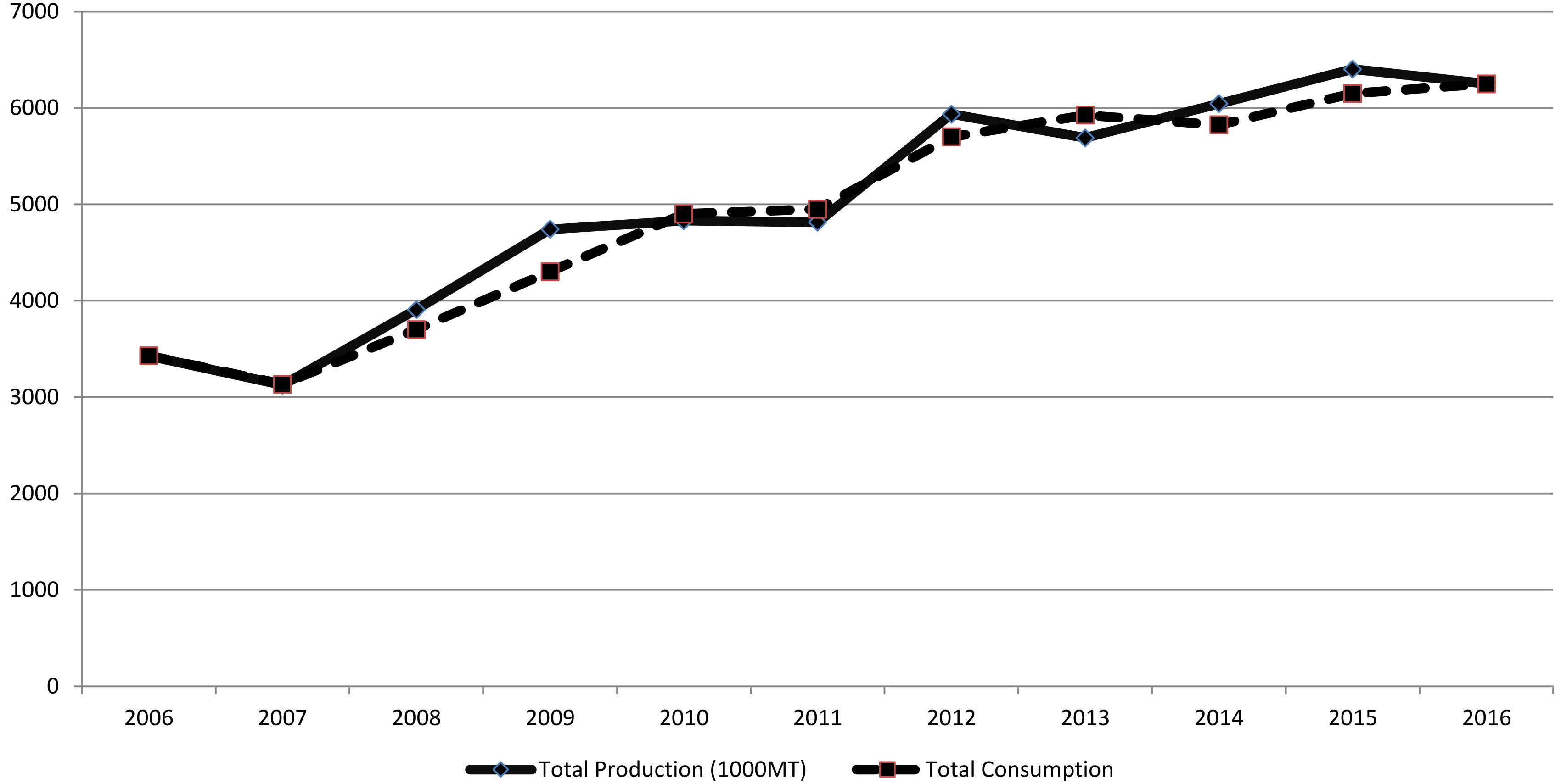
East Africa



Southern Africa



West Africa Production and consumption trend (2006-2016)



- The west African countries do consume their own production with limited exports and imports

Initiatives to increase productivity

- Government input subsidy
- Research and technology in new varieties of seed
- Diversification away from maize dependence

Grain Supply

- Seasonal deficits in months towards new harvest
- Carry-over stocks from the bumper harvest of 2014/15
- Imports mainly through south Africa

Marketing and distribution

- Distribution from areas of surplus to deficit areas
- Farmers tend to sell much more of their harvest at very low farm-gate
- Marketing influenced by own consumption level, efficiency of marketing systems, infrastructure and storage

Internal market channels

- Thin farmers weekly markets
- Middlemen
- Millers buying agents
- Government parastatals
- Farmer associations- joint marketing

Cross boarder trade

- Distribution from surplus to deficit countries
- Formal vs informal trade
- Impact of subsidies in prices of imports
- Ban on imports-
- Policies on import of GMO

Milling

- Over 70-80% of grain end up in small toll hammer mills located in every village
- Issues of quality and GMP
- Large roller mills source grain from far and wide areas
- Distribute flour to far and wide areas
- High transaction costs and high flour prices

Milling

West Africa (2014)

- Milling capacity varied widely among the industries,
- Dominance of small mills
- Overall: 300 to 20,000 metric tons per year,
- 50% producing 300-600 MT/yr and
- 50% around 3,000-6,000 MT/yr.

Flour distribution

- Large/medium mills often ends up in supermarket and exports
- Proximity to the markets plays important role in distribution of flour from millers
- Flour imports are not cost effective and efficient
- Contribution of informal cross boarder trade

Summary of supply chain

Production	Grain Distribution	Milling	Flour Distribution
Own production	No marketing	Small /toll mills	No distribution
Smallholder Surplus production	Village weekly markets	Small/toll mills	No distribution
	Middlemen	Small commercial, medium	Rural/urban market
	Miller buying agents	Medium/large mills	Rural /urban markets
	Government agents	Medium/large mills	Rural/urban markets
	Farmer association	Medium/large mill	Rural/urban markets
Large scale production	Milling buying agents	Medium/large mills	Urban markets

Recommendations

- Country delegates to fill data gaps where appropriate
- For detailed information, future studies should be country specific
- Future studies should be undertaken with direct collaboration with governments
- Map current and potential fortifications initiatives by country