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**Ensuring food security and  
sustainability in Africa**



Organiser



Technical  
Support



Host

# **FACING THE CHALLENGE: Ensuring sustainable food security in Africa**

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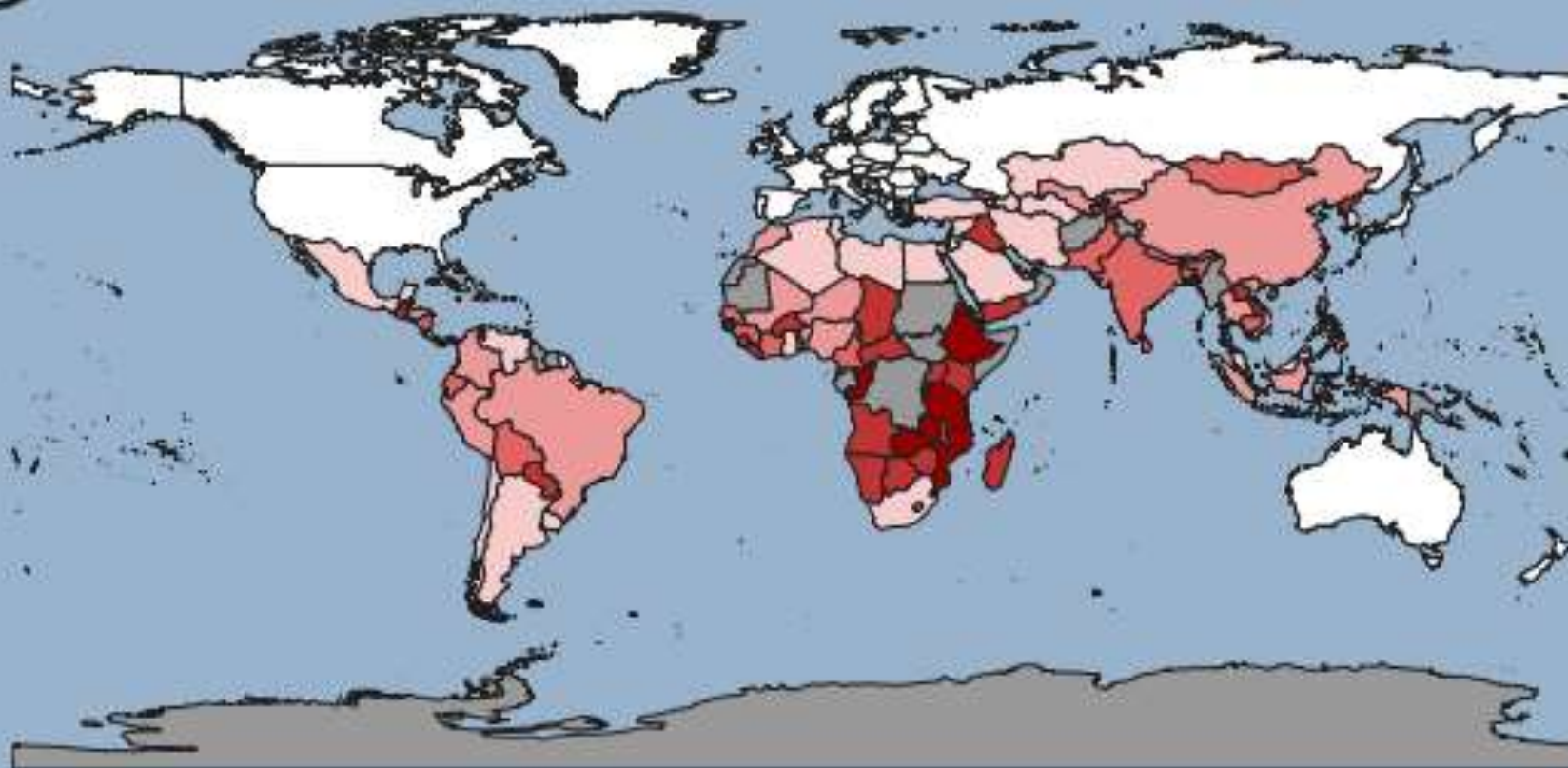
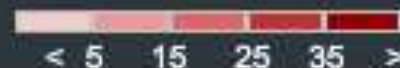
- Overview of malnutrition
- Overview of global livestock sector
- The livestock sector in Africa
- Livestock and food security
- Livestock and environment
- Livestock and human and animal health and welfare
- Policy options and conclusions



# Hunger map



Prevalence of Undernourishment in Total Population (%)



◀ 1990-1992 | 1999-2001 | 2004-2006 | 2007-2009 | **2010-2012** ▶

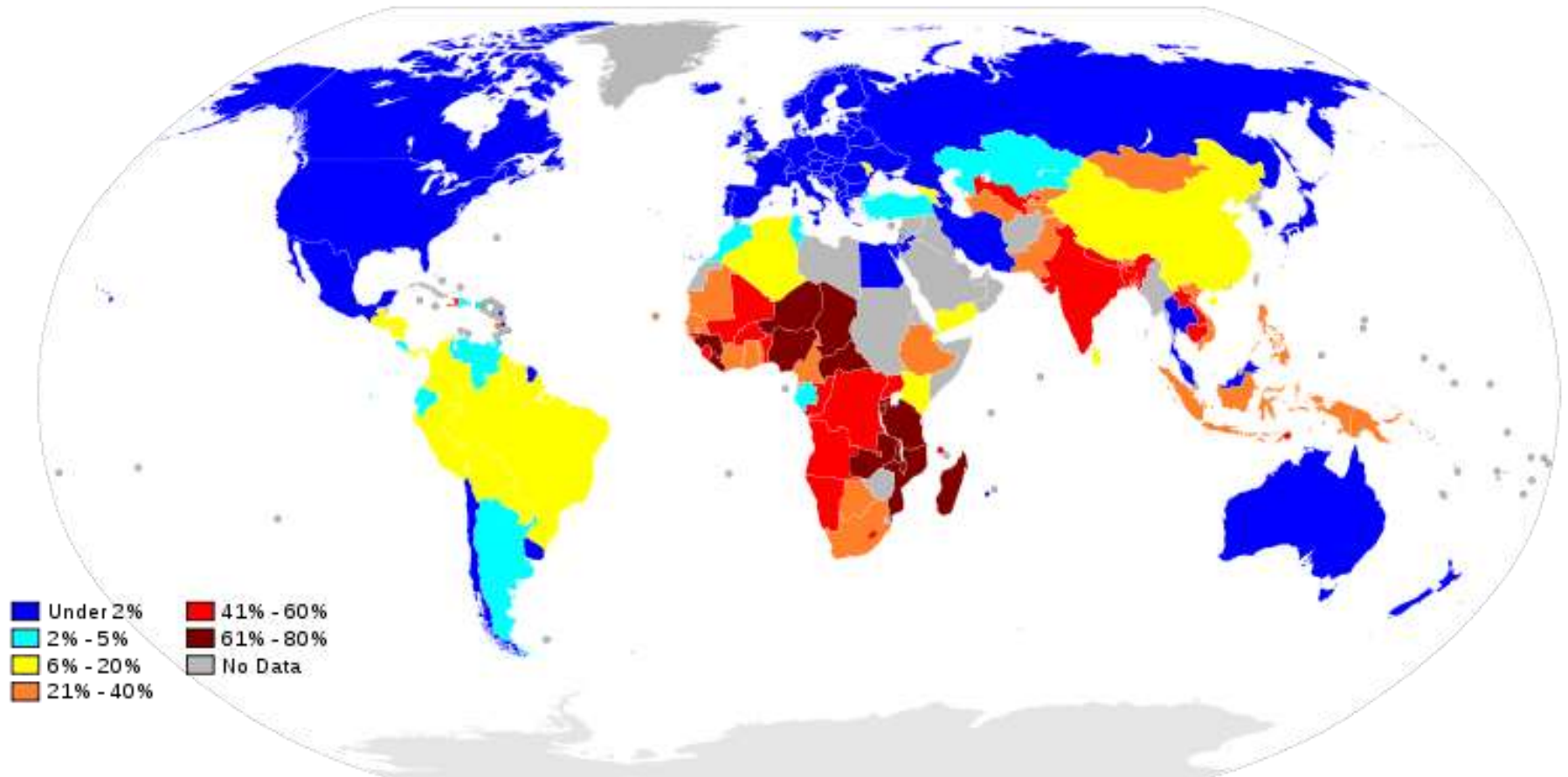


FULL SCREEN



DATA  
-FAO-ORG

# World poverty



Percentage of world population living with less than 1.25 US dollars/day

# Malnutrition

- 868 million undernourished persons in the world, 234 in Sub-Saharan Africa
- worldwide obesity has nearly doubled since 1980. More than 1.4 billion adults, are overweight. Of these over 500 million are obese.
- eliminating malnutrition in all its forms (not just undernutrition, but also obesity) should be set for both rich and poor countries.



# 870 million

hungry people  
worldwide

1000m



There are 130 million fewer hungry people today than there were 20 years ago



Asia and Latin America have reduced the number of hungry people, while the number is on the rise in sub-Saharan Africa



# Livestock Revolution

## What happened so far?

- LR in the US (1950s): hybrid maize, nitrogen fertilizer
- LR in Europe (1960-70s): like US, plus protectionism
- LR in Asia (from 1980, still on-going): rapid economic growth, decline of Soviet Bloc
- LR in Latin America (slow moving): low production costs
- LR in Africa ?



# Supply side

- Production is growing but not keeping pace
- 70% of growth is poultry, ruminants lagging
- High feed prices act as a curb
- Supply infrastructure/chains deficient
- High production costs (despite low labour costs)
- Inadequate or obsolete livestock policies.

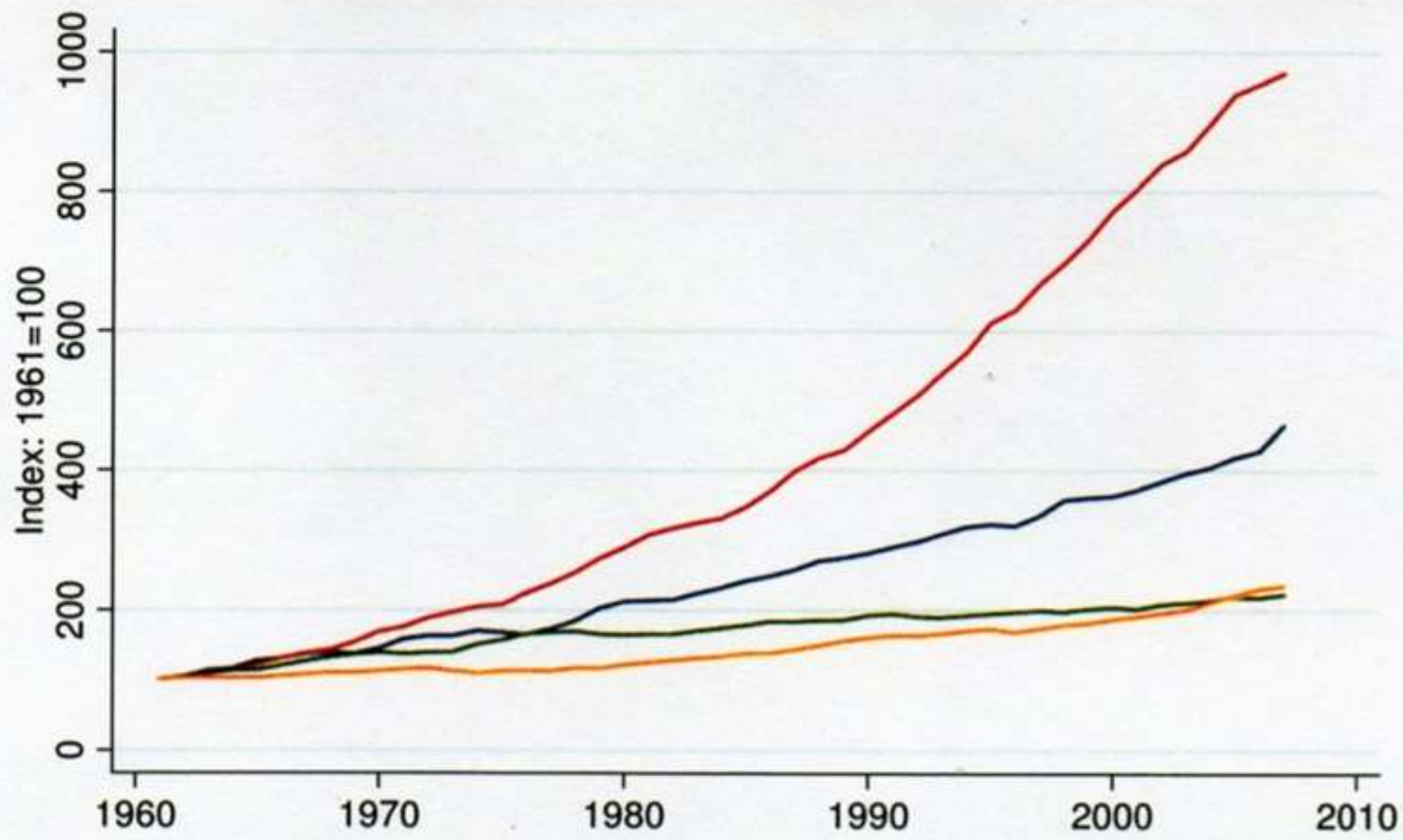


# Livestock in Africa and climate change

- Expected growth in production with high emission intensity in SSA, both for ruminants and monogastrics
- Mitigation through efficiency gains and transfer of technology
- Adaptation to climate change and resilience of livestock production systems



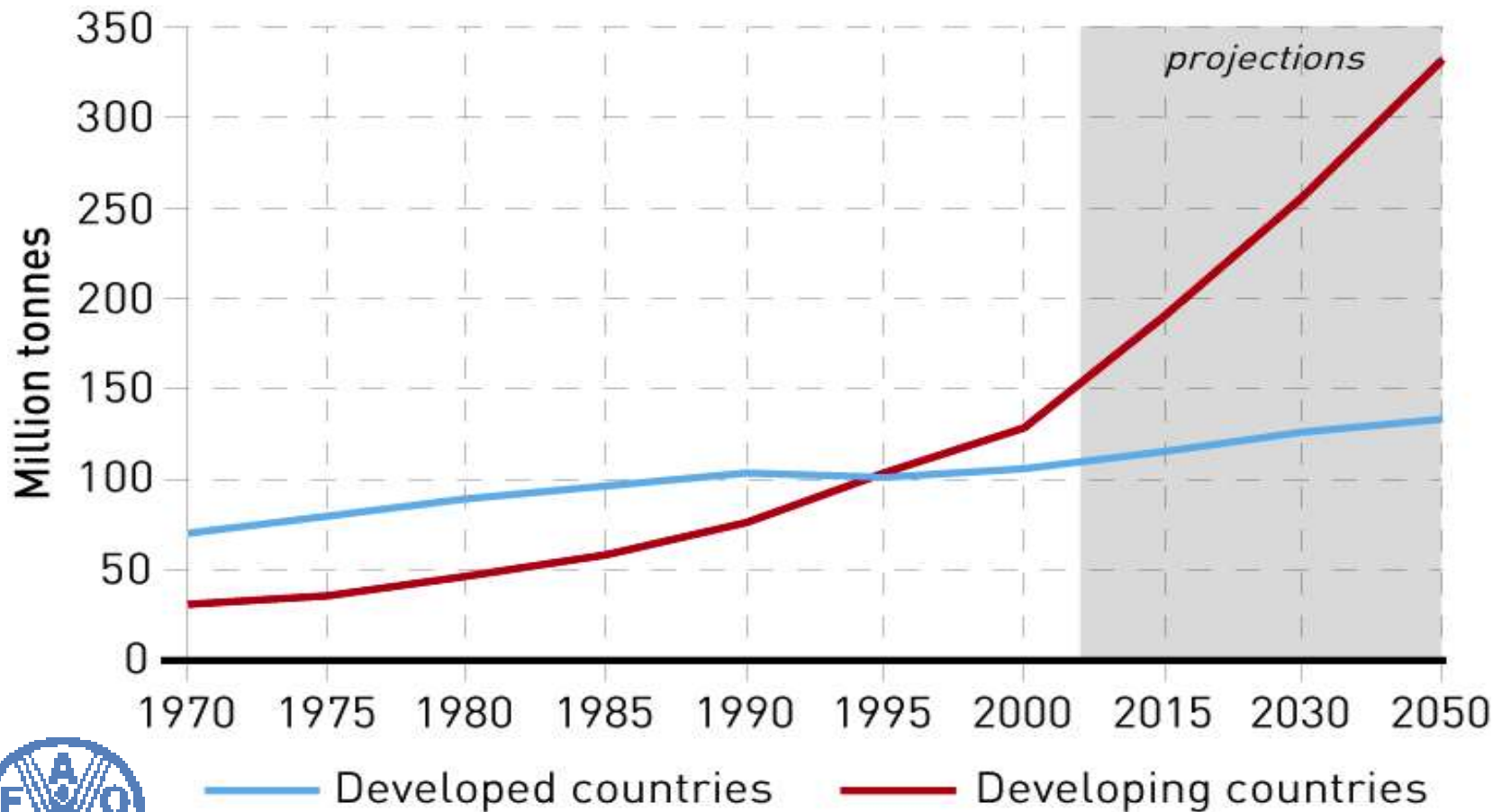
# Production of main categories of meat, 1961 - 2007



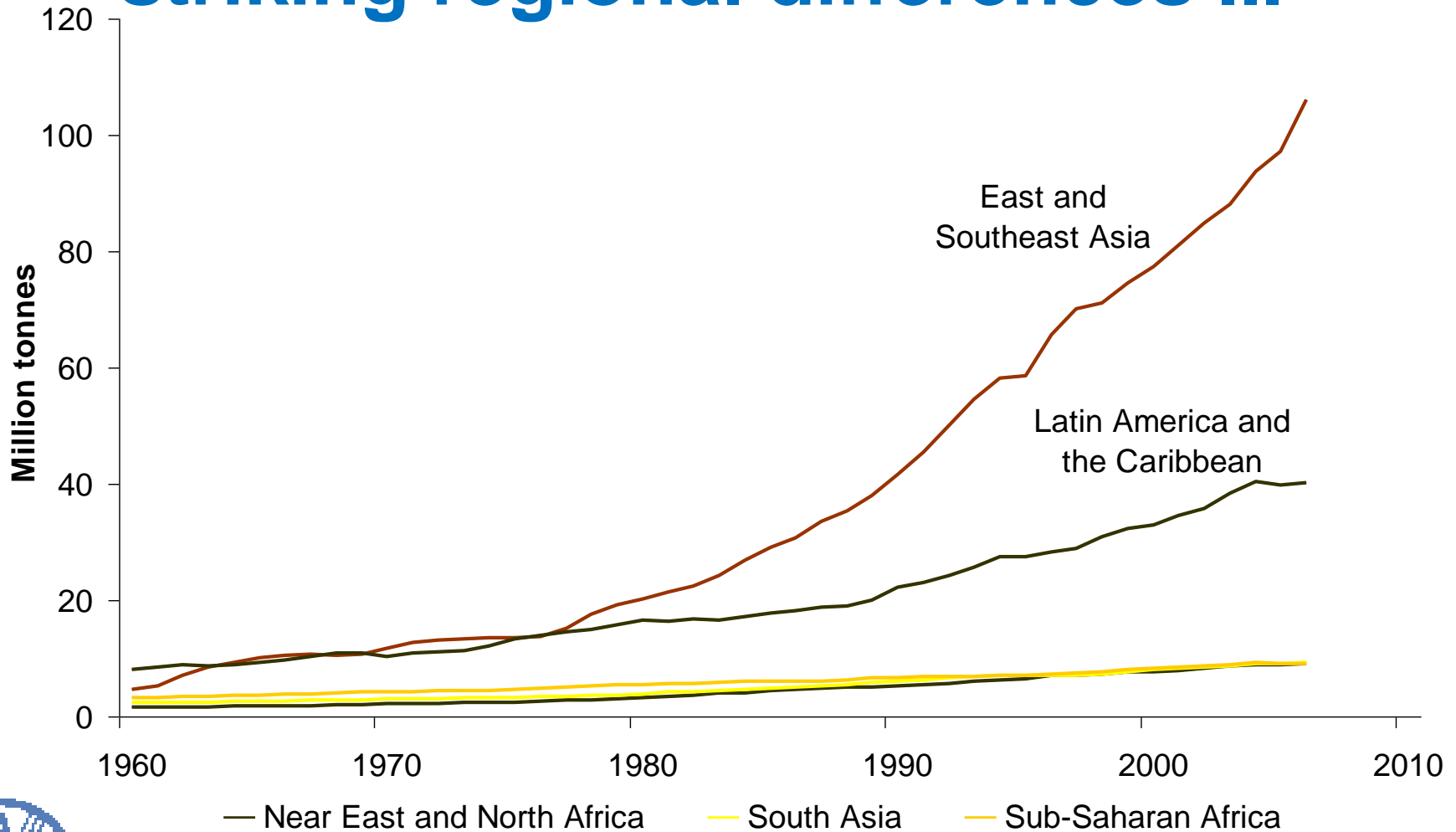
— Pig                      — Poultry  
— Cattle                    — Sheep and Goat

# Production moves south...

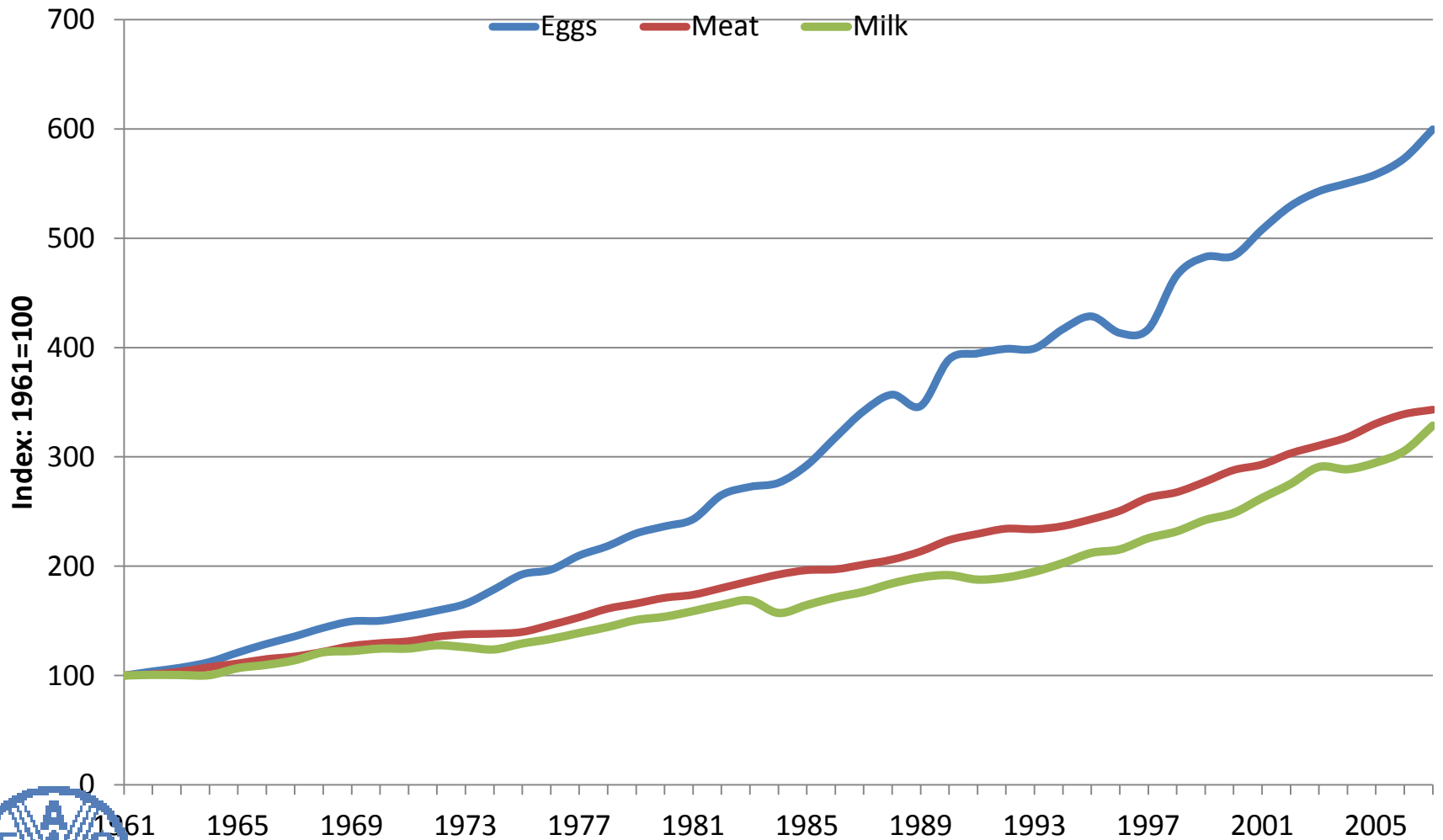
## Meat Production



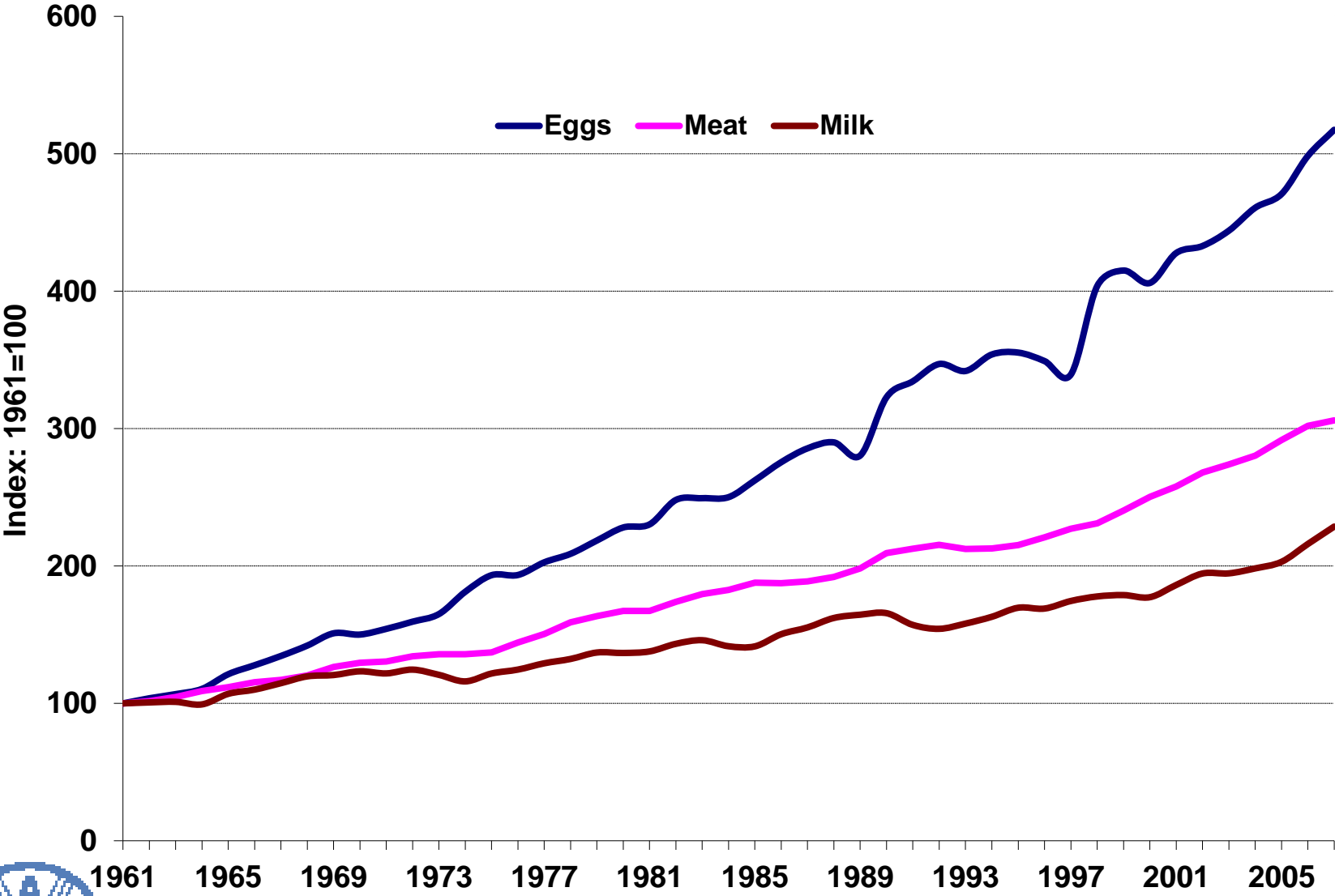
# Meat production is growing, with striking regional differences ...



# Production Trends in Africa

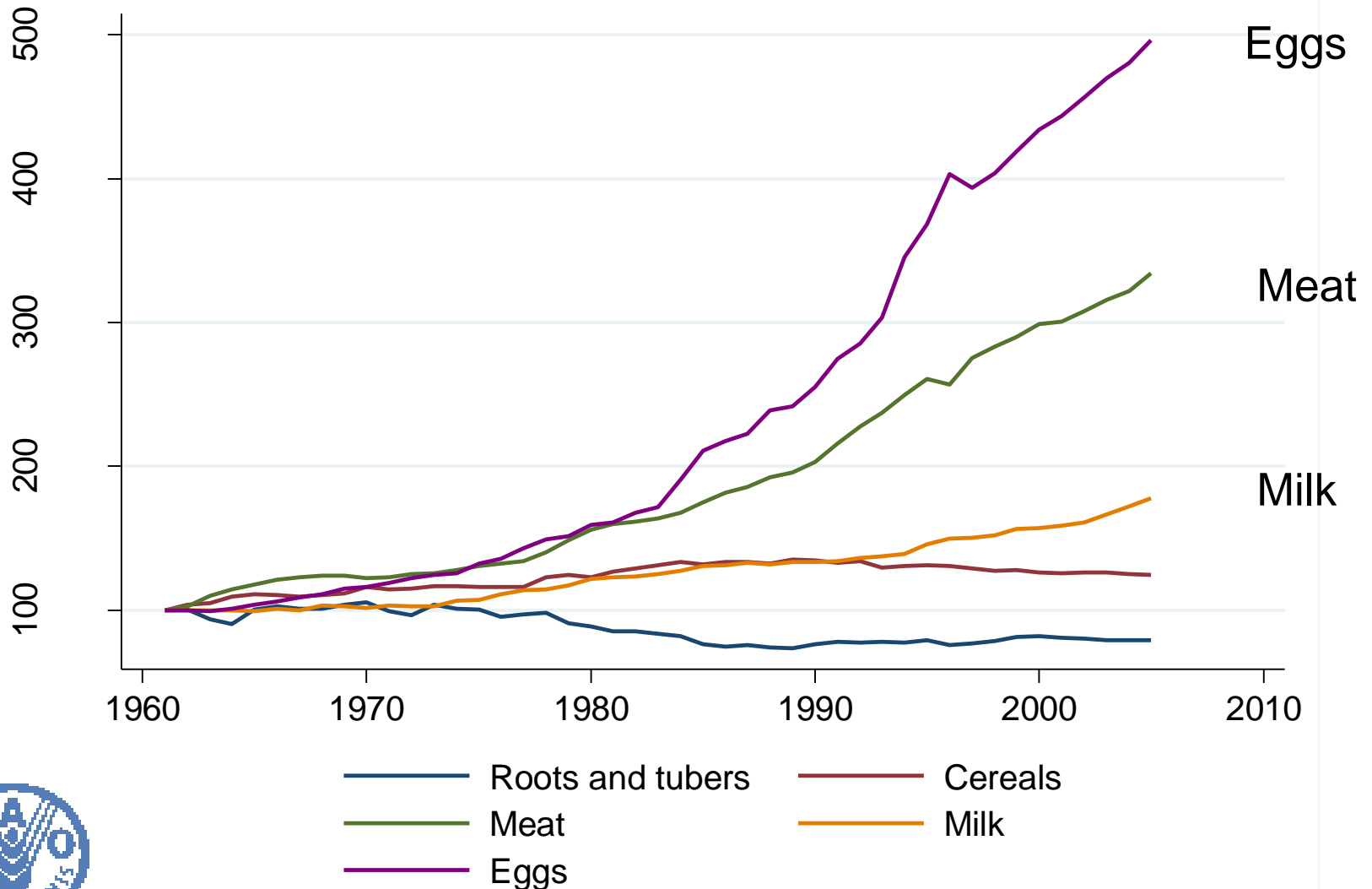


# Production Trends in Sub-Saharan Africa





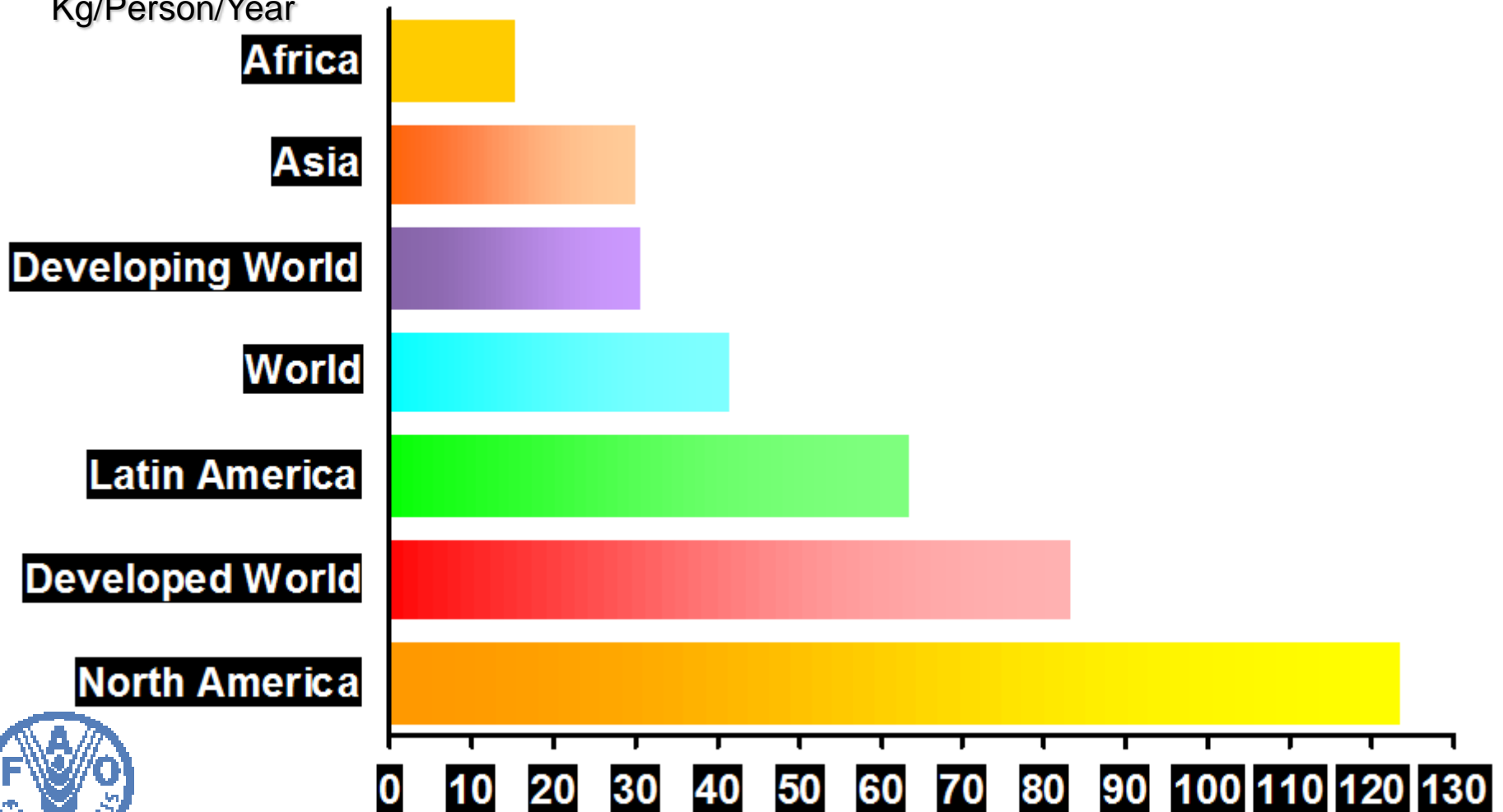
# Consumption is growing rapidly in developing countries ...



Per capita consumption of major food items in developing countries – kg per capita per year (index numbers 1961=100)

# Per capita meat consumption

Kg/Person/Year



## AVERAGE DIETARY PROTEIN AND ENERGY CONSUMPTION AND UNDERNOURISHMENT BY REGION

COUNTRY GROUPS	PROTEIN CONSUMPTION <i>g/day 2003–05</i>	ENERGY CONSUMPTION <i>kcal/day 2005–07</i>	PERCENT OF POPULATION CONSUMING INSUFFICIENT CALORIES 2005–07
World	76	2 780	13
Developed countries	102	3 420	<5
Developing World	70	2 630	16
United States of America	116	3 770	<5
Asia, the Pacific and Oceania	70	2 610	16
Latin America and the Caribbean	79	2 900	8
Near East and North Africa	83	3 130	7
Sub-Saharan Africa	53	2 240	28
Recommended "safe" consumption (adults)	58		
Minimum energy requirement		1 680–1 990	

Sources: FAOSTAT for all except "safe" consumption. Recommended "safe" consumption is estimated as the minimum average plus 2x standard deviation WHO, FAO, UNU (2007).

# Trends

- The share of all animal products in human diets continues to increase in the developing world
- Income growth and population dynamics are major driver of increasing consumption
- Global animal production is shifting from industrial to developing regions
- Production is being sustained by structural changes within the sector



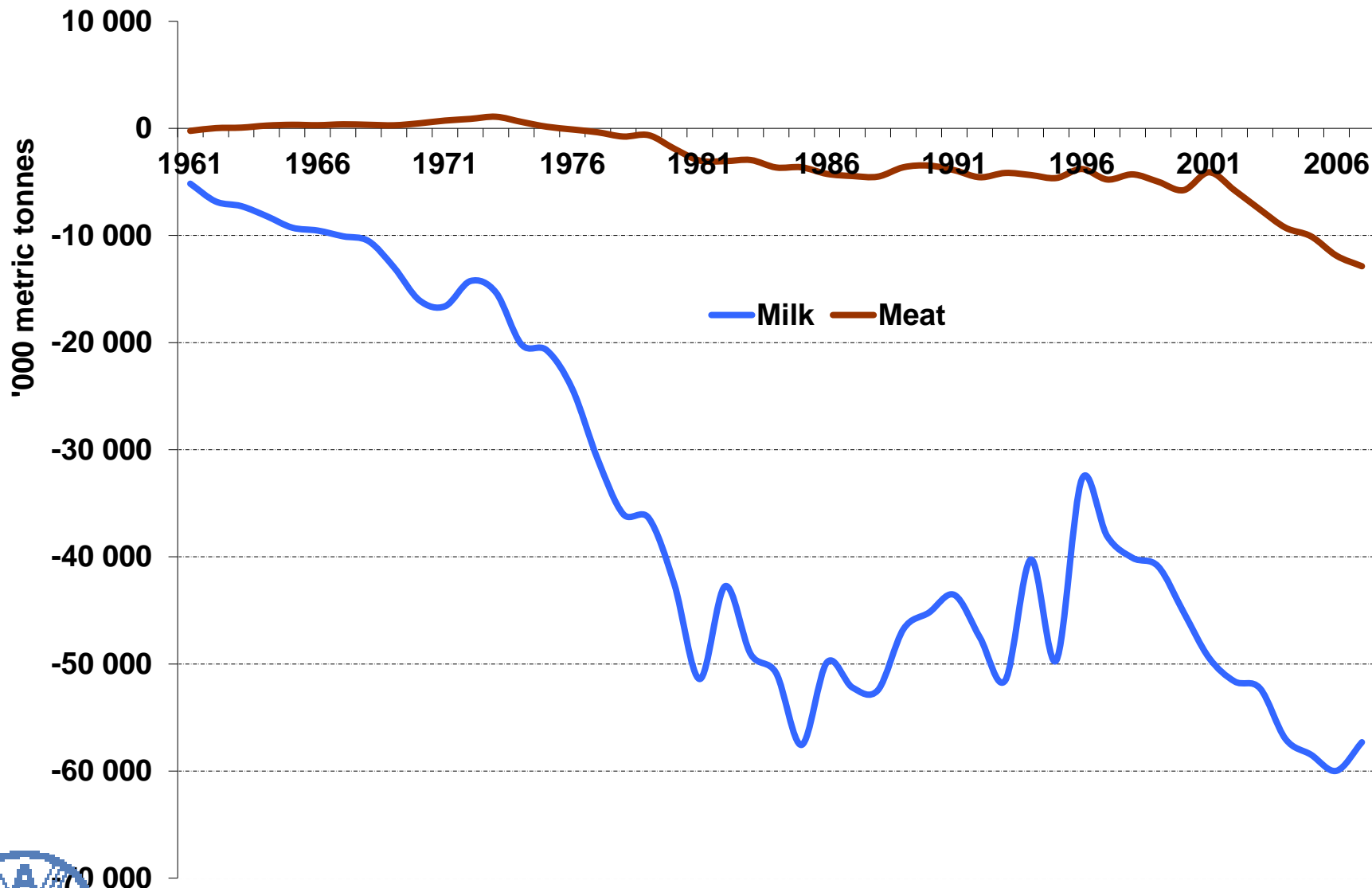
# Structural changes in the livestock sector

*Rapid growth has led to:*

- **Up scaling** : from smallholder mixed farms towards large-scale specialized industrial production systems (80% of sector growth in industrial systems)
- **Technological change**, from breeding, feeding and housing to disease control, processing, transportation and marketing
- **A shift in the geography of demand and supply** to the developing world and peri-urban areas;
- **A shift in species** with production of monogastrics growing rapidly, while the growth of ruminant production slows
- An increasing emphasis on **global sourcing and marketing**



# Net Importer – Africa



**2007: 2.1 and 3.3 billion US\$ for meat and dairy products**



# Livestock and food security

- Livelihoods

- 1 billion people keep livestock

- 350 million in Africa

- 640 million small scale producers, 190 million pastoralists

- 60 % of rural households

- 70 % of rural households

- livestock have multiple functions/  
importance

Source of income, food, traction, transport, wool, manure, biogaz, insurance, banking system, social status, cultural and affective value



# Livestock and food security

## Food supply

15 % of dietary energy

7 % of dietary energy

25 % of protein supply

16 % of total protein supply

Food of animal origin is a major source of highly valuable protein, micronutrients such as iron, zinc, calcium, vitamins B12, A and riboflavin, and fat – which is important for poorly nourished people and especially infants in developing countries.





# Food Security: what can we do?

- Support smallholders with policy and institutional reform, capacity development, technological innovation and investment to enable them to take advantage of market opportunities.
- Recognize and protect the safety-net role played by livestock.
- Decrease food and feed wastes and losses.
- Ease the transition out of the sector.



# Livestock Revolution In Africa?

Increases in the demand for animal-sourced food are estimated extraordinarily high in Africa over the coming decades.

By 2050, the meat market is projected at 34.8 million tones and that of milk about 82.6 million tones (an increase of 145 and 155 % over 2005/07 levels).

Over this period, Africa's increase in volume of meat consumed will be on a par with that of the developed world and that of Latin America.

Annual growth rates in both meat and milk consumption are projected to be higher in Africa than in other regions, with the exception of meat in South Asia (from a very low base).

Within Africa, beef, milk and poultry are anticipated to provide favorable business opportunities for livestock producers, in both volume and value terms.



# Cont..

This report further states:

Africa is anticipated to increasingly become a net importer of animal-sourced foods.

This represents a missed development opportunity, given the widespread societal benefits that inclusive growth of livestock can generate.

Investments, and policy and institutional reforms that target African livestock markets are required.

Formulating effective livestock sector policies and institutional changes require a flow of information on market conditions and on the constraints to market entry.

Investments in data collection and in data collection systems should be given appropriate priority, as the basis for supportive policies and investment.



# Cont..

- Out of 15 different livestock data types
- Data on livestock feeds: Ranked fourth in importance behind animal health, meat production, and livestock population.
- Milk production was fifth.
- Respondents also ranked various data types according to needs for improvements in data quantity and quality
- **Livestock feed data** was ranked third in needs for improved data

Source:

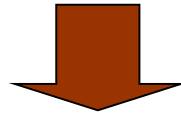
*Core livestock data and indicators: Results of a stakeholder survey. A paper of the World Bank, FAO/ILRI Livestock Data Innovation in Africa Project, with support from the Gates Foundation (2012).*

Available at:

[http://www.fao.org/aq/aqainfo/home/documents/2012\\_PAP\\_Core\\_Livestock\\_Indicators\\_120](http://www.fao.org/aq/aqainfo/home/documents/2012_PAP_Core_Livestock_Indicators_120)



# ANIMAL HEALTH & WELFARE



## Economic risks

- productivity
- markets
- livelihoods

## Human health

- pandemic disease
- endemic disease
- food borne illness



Human well-being



# Animal health and food safety

- Food borne diseases cause every year 2.2 million deaths. In less economically developed countries most of them are children.
- At least half of the 1700 known causes of disease in human have a reservoir in animals
- Many new infections are zoonotic diseases. Over 200 zoonoses have been described
- 75% of new diseases over the past 10 years have been caused by pathogens origination from animals or products of animal origin



# Animal and human health and welfare: what can we do?

- Manage the location of livestock
- Early warning systems
- Engage the poor
- Multi-disciplinary integration of approaches (eg. One Health)
- Adequate nutrition and feeding
- Use of adapted breeds
- Strengthen competent authorities
- Avoid that proliferation of standards become an excessive burden for smallholders, but instead help them to benefit from them



# Balancing objectives

- Livelihoods
- Food security
- Environment and natural resources
- Human health





# What can we do?

- Increase innovative partnerships
- Include and engage the poor and the smallholders with a special attention to gender issues
- Multi-disciplinary integration
- Develop human and institutional capacities
- Adopt right based approaches
- Invest in technology
- Reduce wastes and losses
- Increase product quality and safety.



# What FAO will do as its future plan?

## FAO Strategic Objectives

1. Contribute to eradication of hunger, food insecurity and malnutrition
2. Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner
3. Reduce rural poverty
4. Enable more inclusive and efficient agricultural and food systems at local, national and international levels
5. Increase the resilience of livelihoods to threats and crises

In addition there are two cross-cutting themes:

- a) Gender
- b) Governance



# Wrap up

- Africa will likely have its own Livestock Revolution
- Adverse factors: high feed, energy, fertilizer costs
- But readily available technology in some sub-sectors
- Some smallholders can benefit, most marginal producers will not
- Poultry will dominate growth, followed by dairy, small ruminants
- High political commitment and strong policy frameworks may bring a positive impact.
- The Public Private Partnership (PPP) as a strong wing of governments should bring attitudinal change.
- Growth stimulus for agriculture and rural areas
- Uncertainty of climate change.





***for a world without hunger***