



Organización de las Naciones Unidas  
para la Alimentación y la Agricultura

# World Livestock

Advancing Livestock towards the 2030 Agenda  
for Sustainable Development

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29 de noviembre de 2017

XIV CODEGALAC Mesoamérica

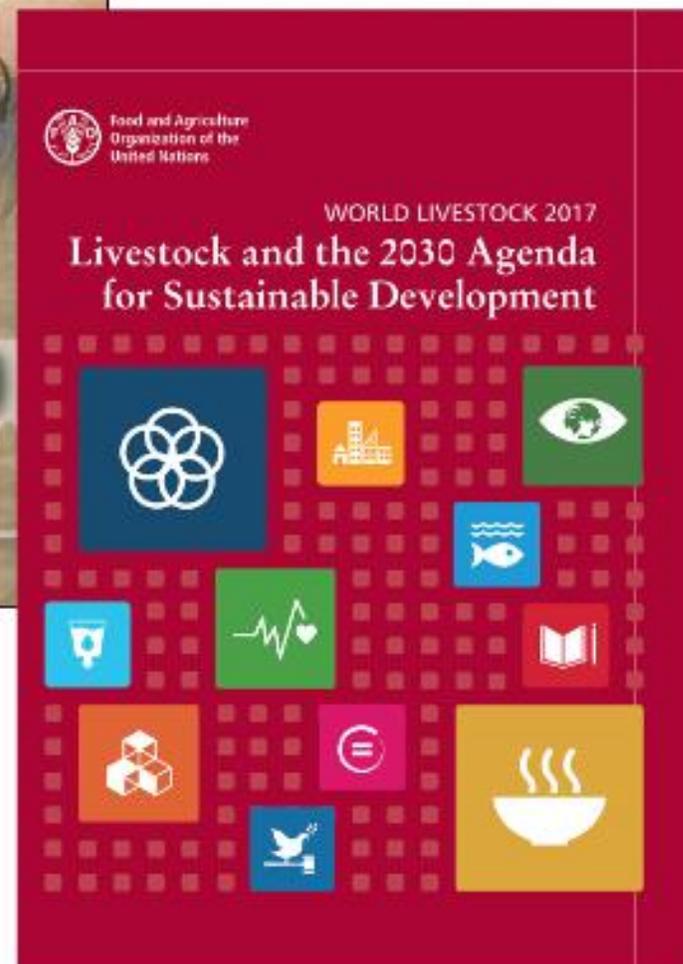
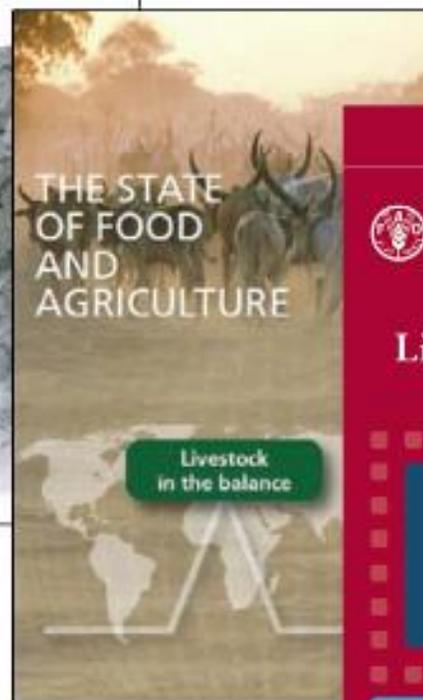
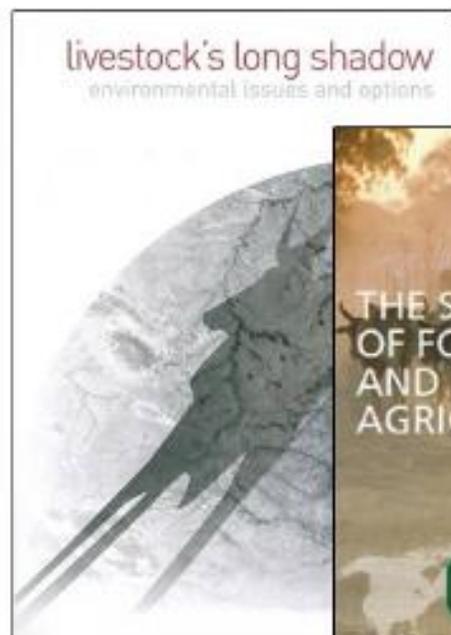
San José, Costa Rica



# WoLi

## World Livestock

*Livestock and the 2030  
Agenda for Sustainable  
Development*





HIGH-LEVEL  
EXPERT  
FORUM

Rome 12-13 October 2009

*During the last decade the food policy debate focused its attention on **how to increase production in a sustainable manner** to feed 9 billion people by 2050*

*The adoption of the Agenda 2030 added a new and broader dimension to the debate....*



*It shifted the focus from fostering sustainable production per se, to enhancing the contribution of the sector to the SGDs*

# World Livestock

Advancing Livestock towards the 2030 Agenda for Sustainable Development



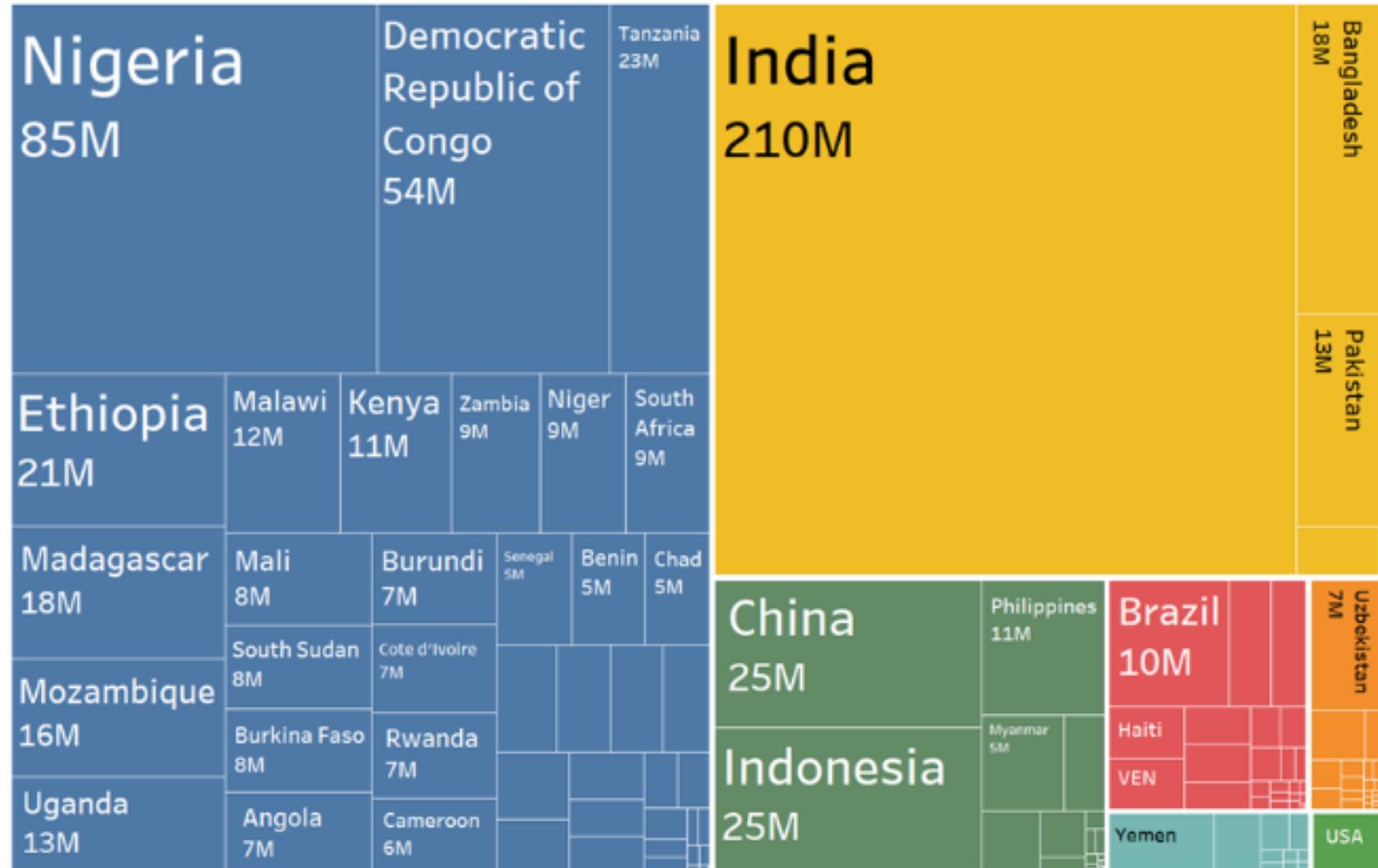
# **PRESSING ISSUES**



# Globally there are 746 million people in extreme poverty (in 2013)

## Sub-Saharan Africa (390 M)

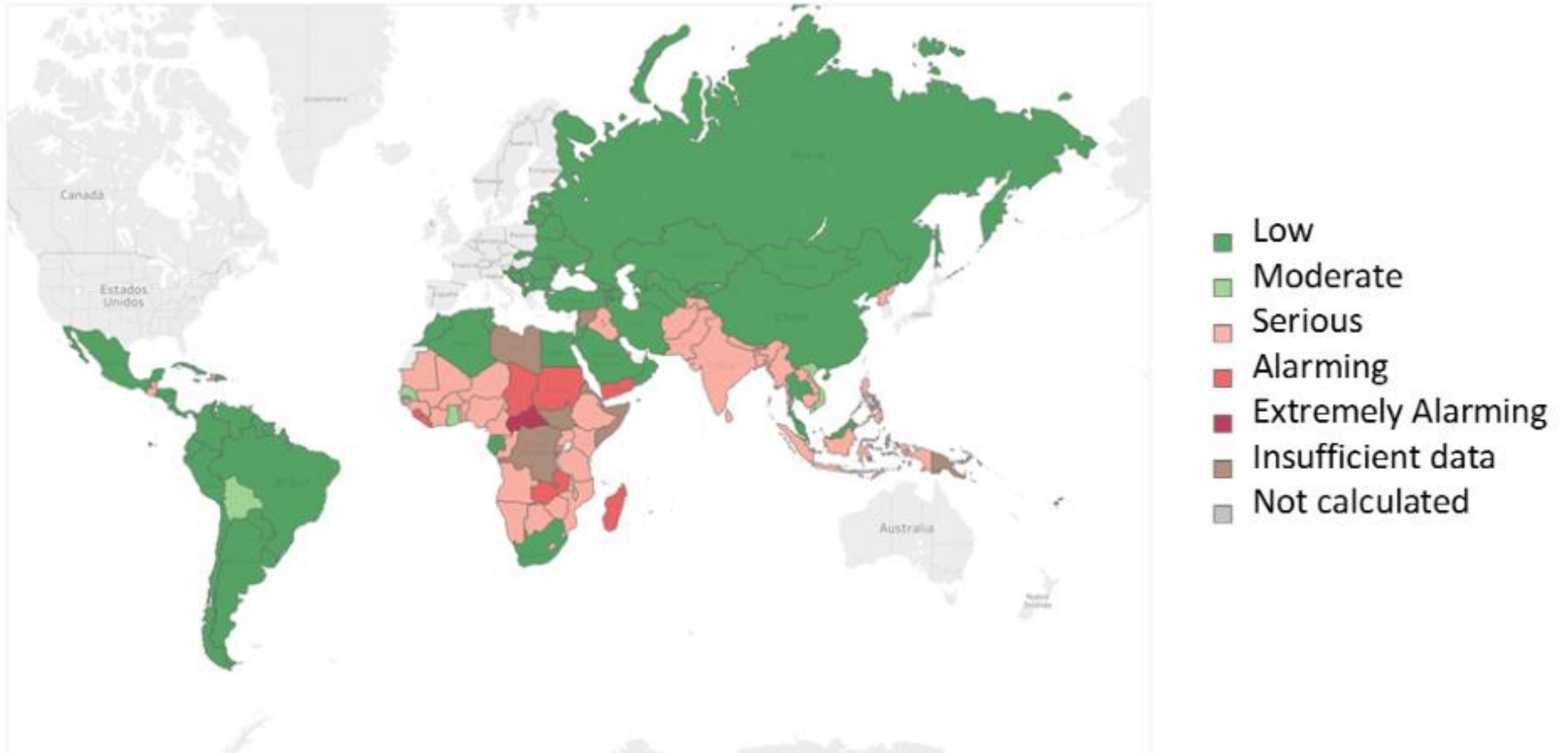
## South Asia (249 M)



## East Asia & Pacific (74 M)

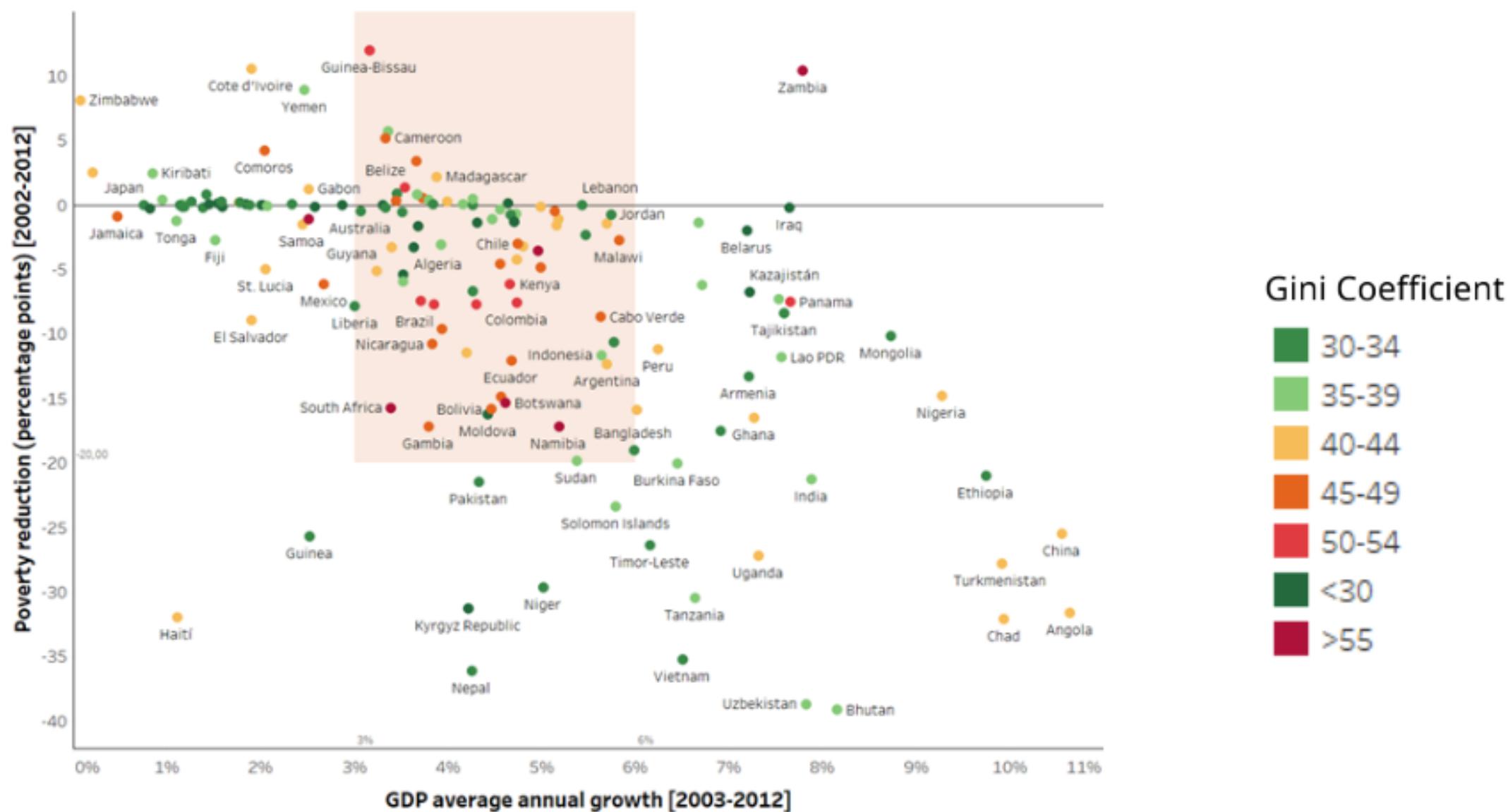
Source: Livestock Policy Lab (LPL) based on data obtained from World Bank (2017)

## One in nine people suffer from hunger worldwide (in 2013)



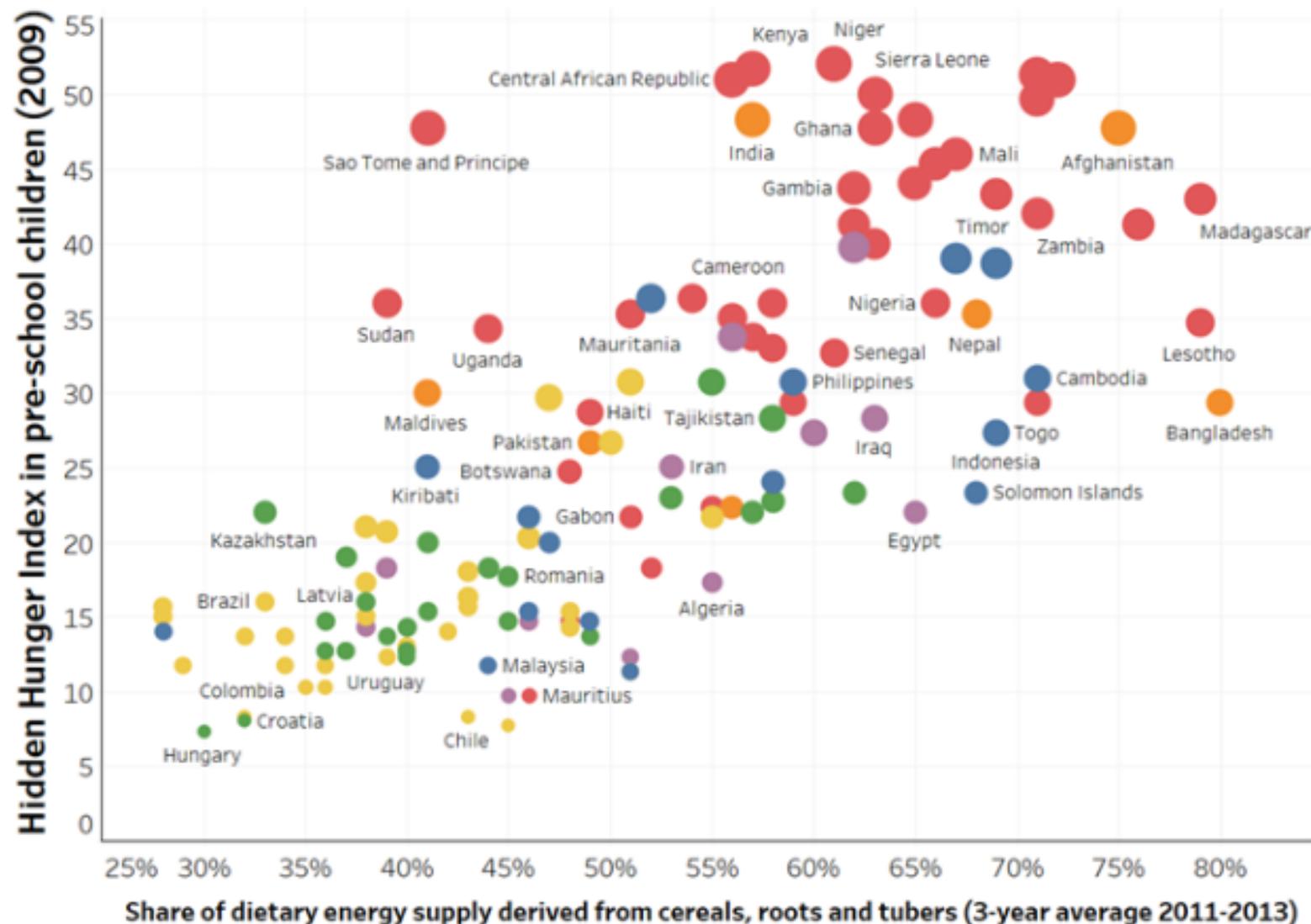
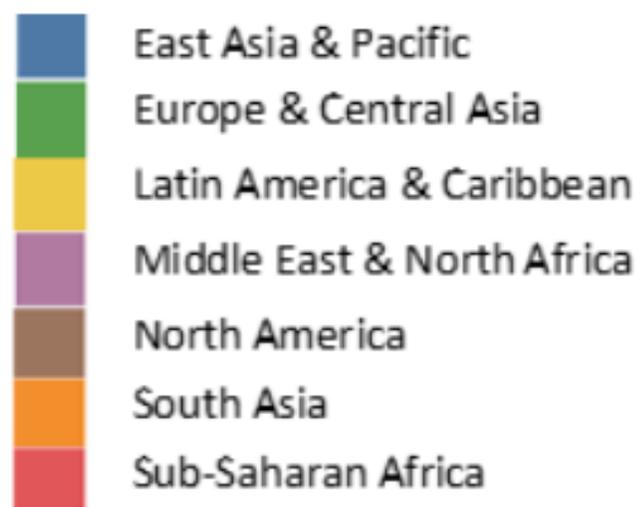
Source: Livestock Policy Lab (LPL) based on data obtained from IFPRI (2017)

# Fast economic growth is important but not sufficient



Source: FAO, AGAL, Livestock Policy Lab (LPL) based on data from the World Bank (2017)

# The hidden hunger



Source: Livestock Policy Lab (LPL) based on data obtained from Muthayya et al. (2013) and FAOSTAT (2017)

# World Livestock

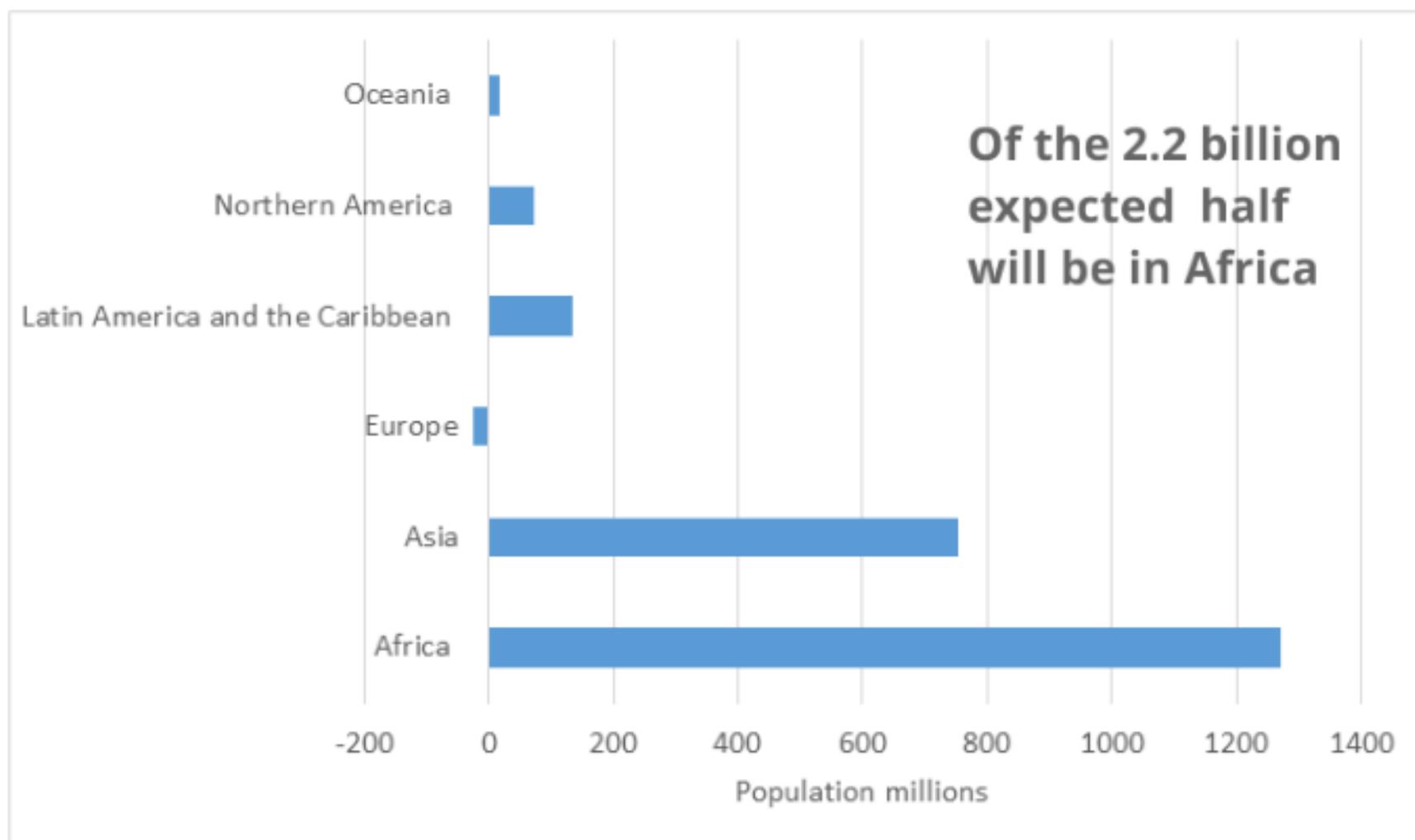
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# GLOBAL TRENDS IMPACTING THE SECTOR

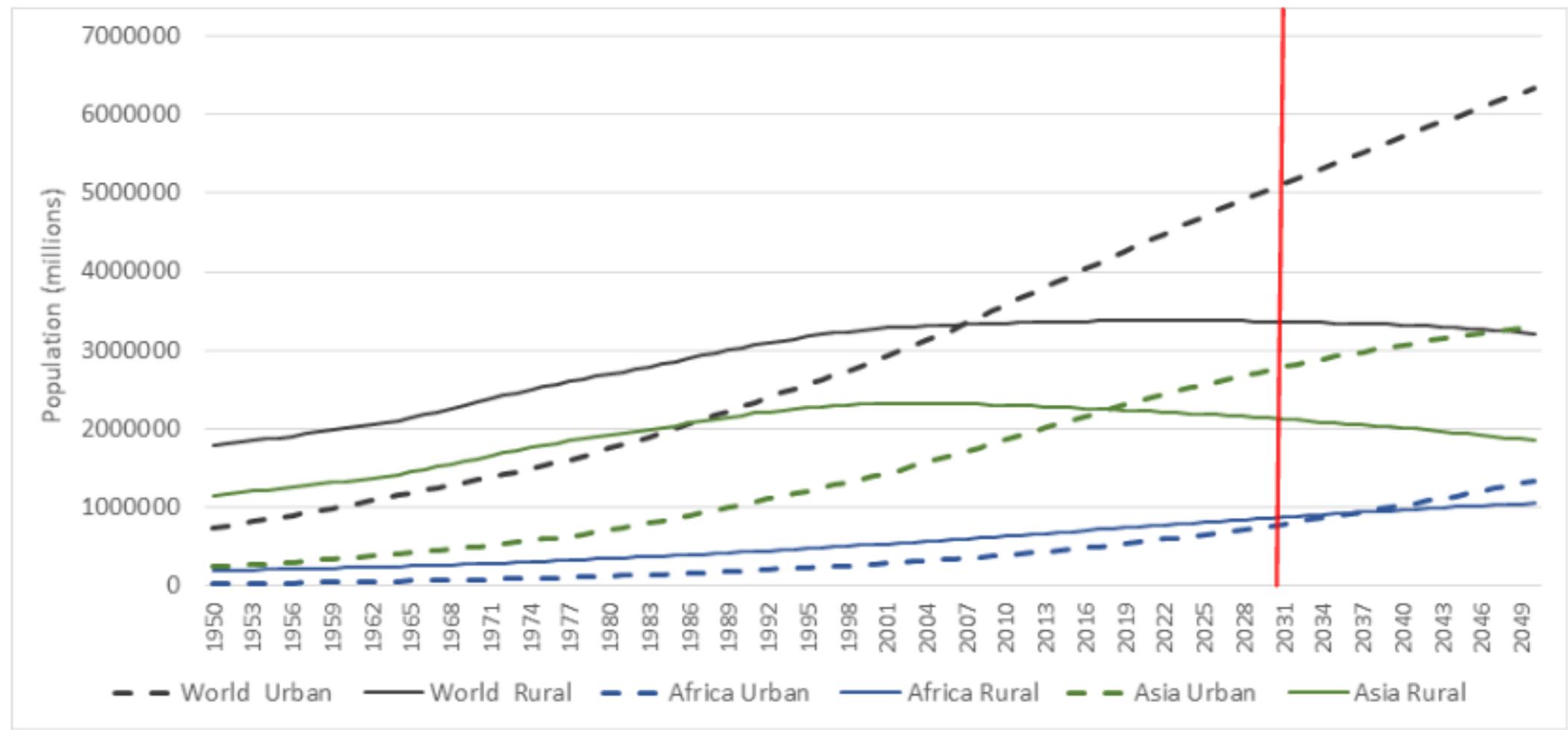


## By 2050 the world's population will reach 9.8 billion



As we struggle to fight poverty, 200 million people remain unemployed and an additional 600 million new jobs will be needed over the next 15 years.

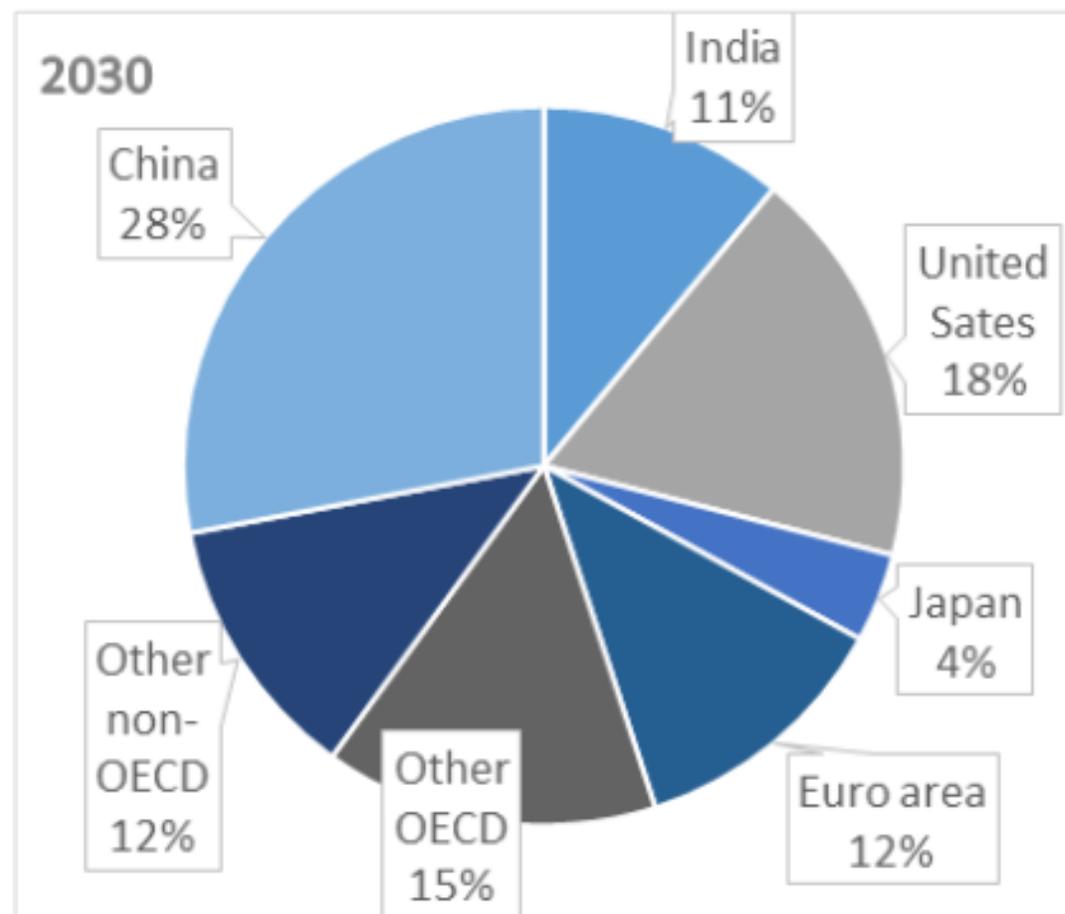
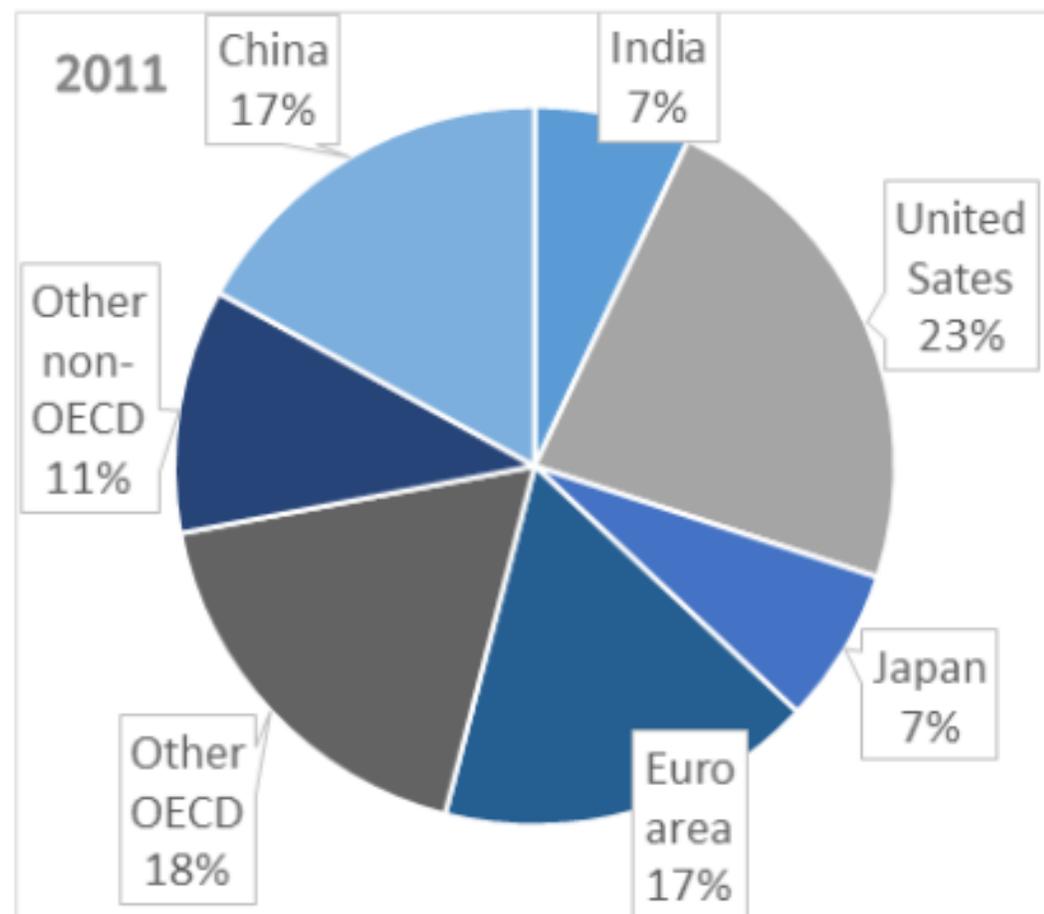
# By 2030 the world's population will be 60% urban and 40% rural



Source: World Urbanization Prospects  
Data visualization: FAO, AGAL, Livestock Policy Lab (LPL)

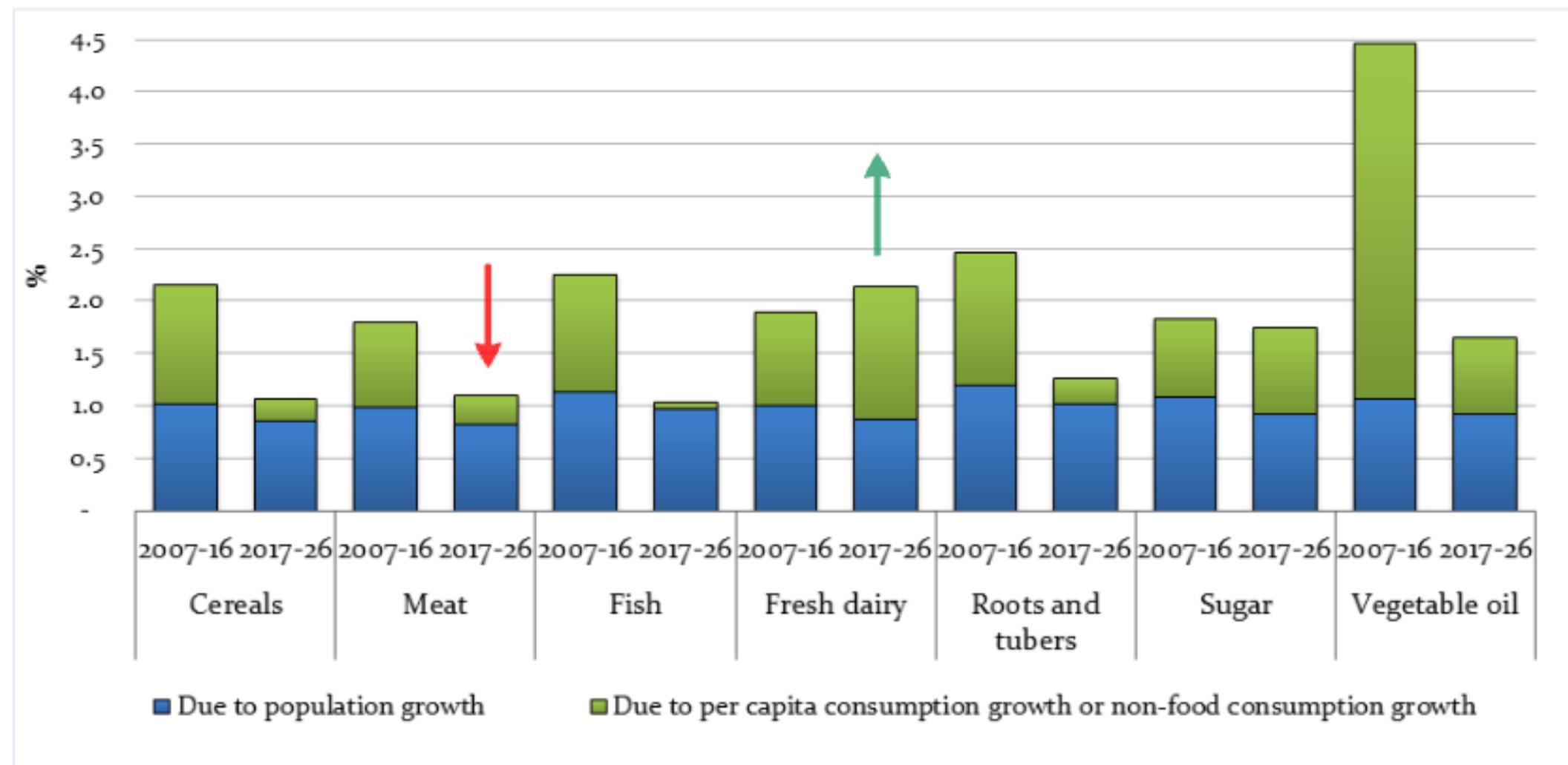


## The next years will see major changes in countries' shares of global GDP



Source: OECD, 2012

## The demand for animal source foods is expected to increase by 2026



Source: OECD-FAO Outlook, 2017

# World Livestock

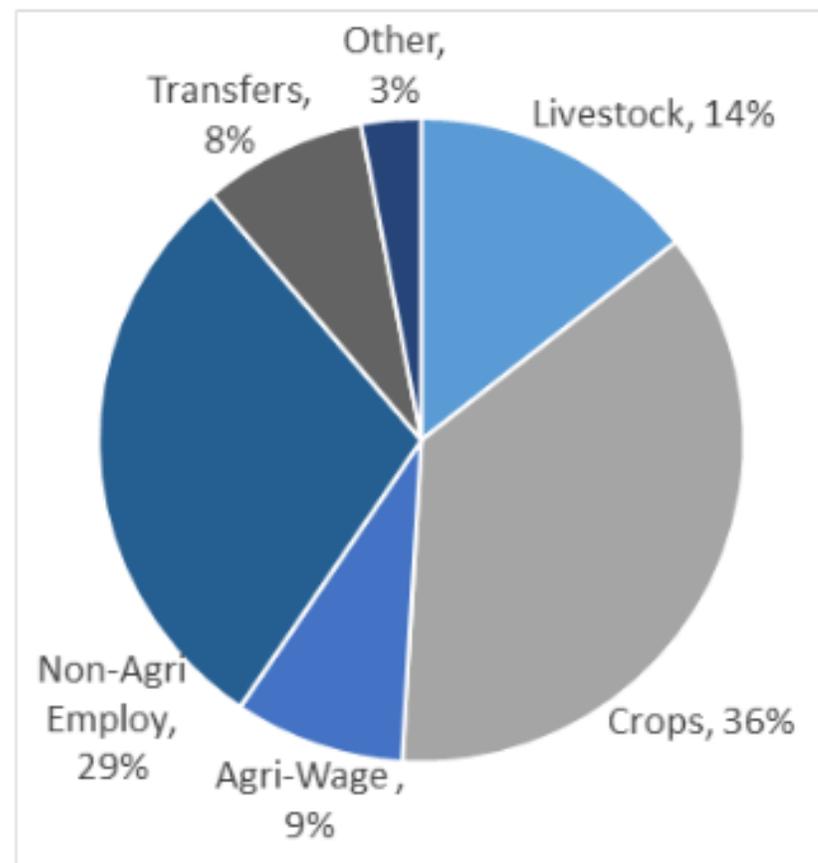
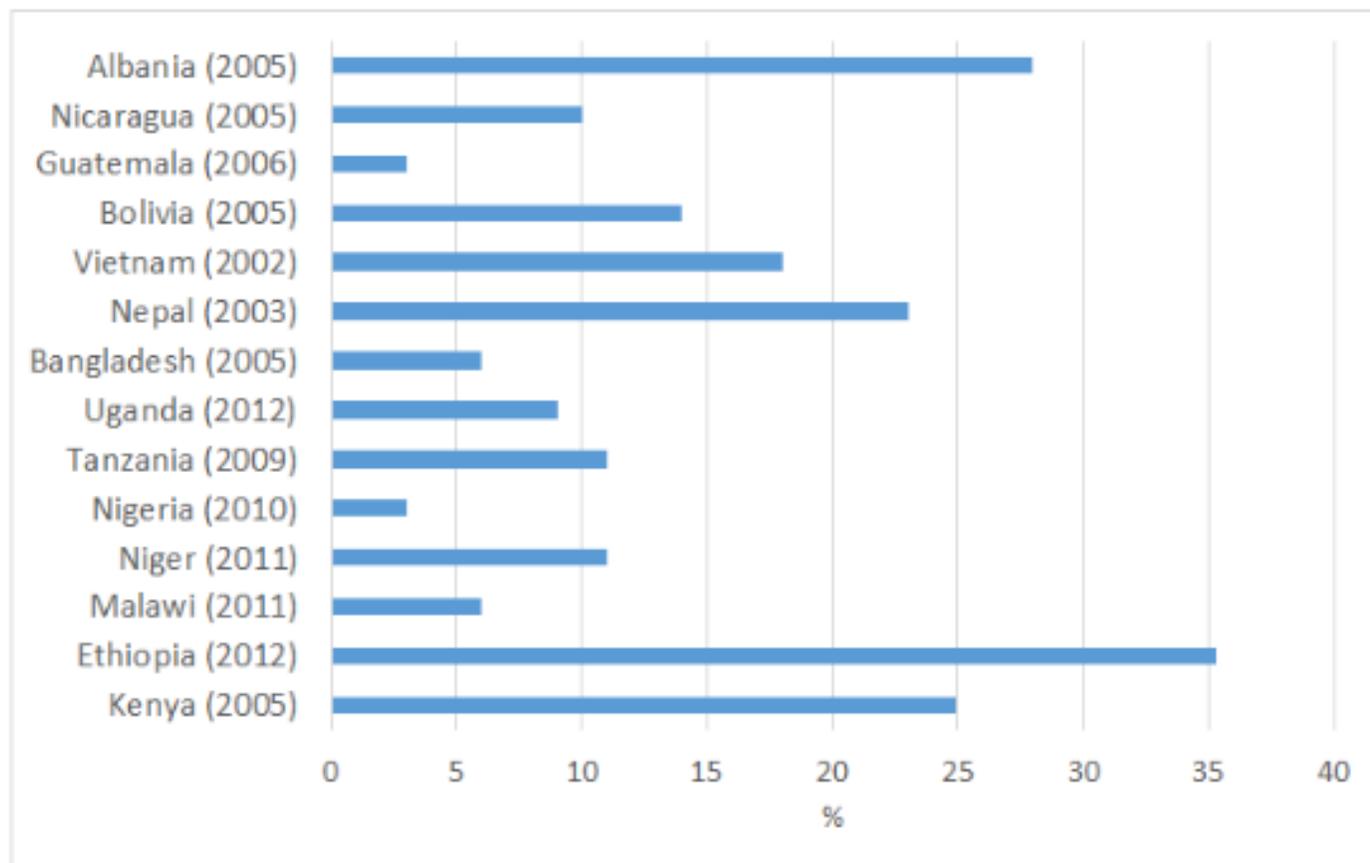
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# 1 NO POVERTY



## SDG1: The catalytic role of livestock in strengthening household livelihoods



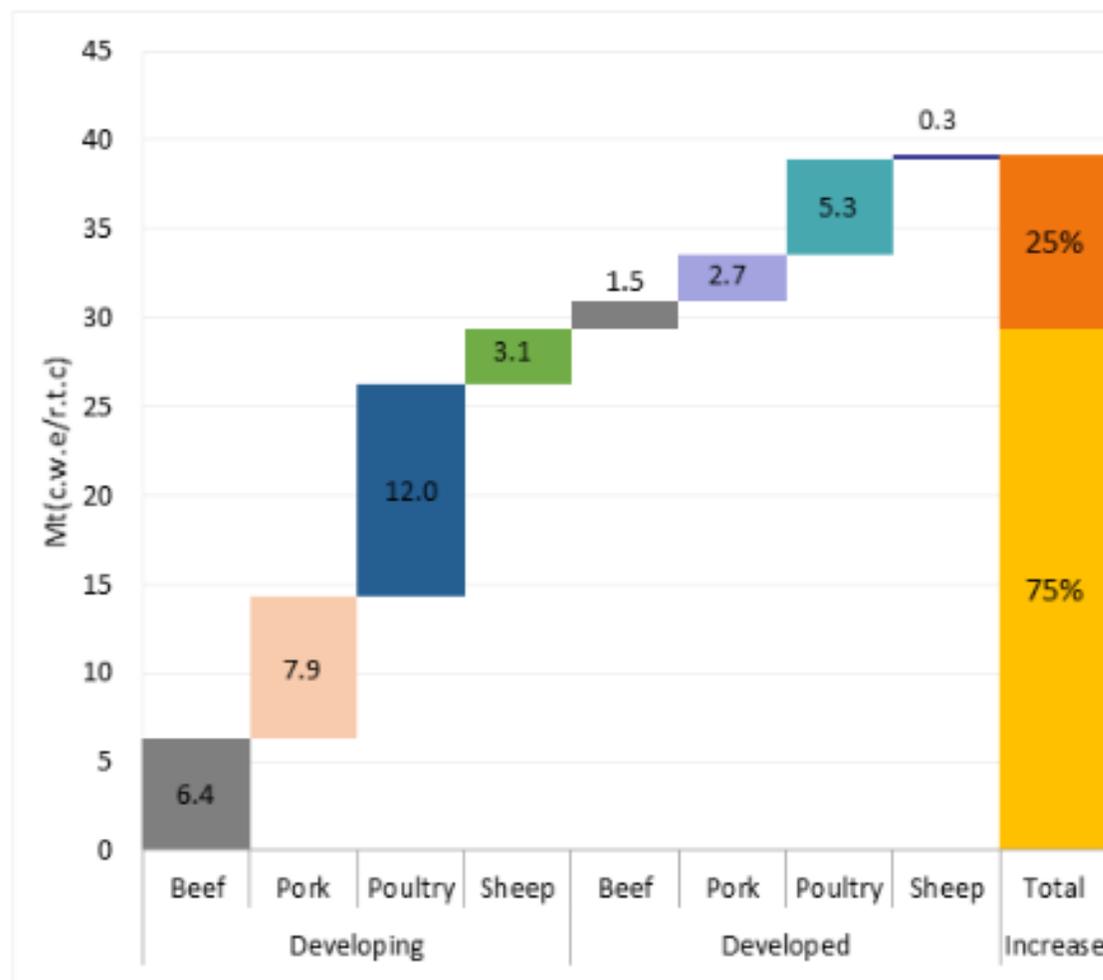
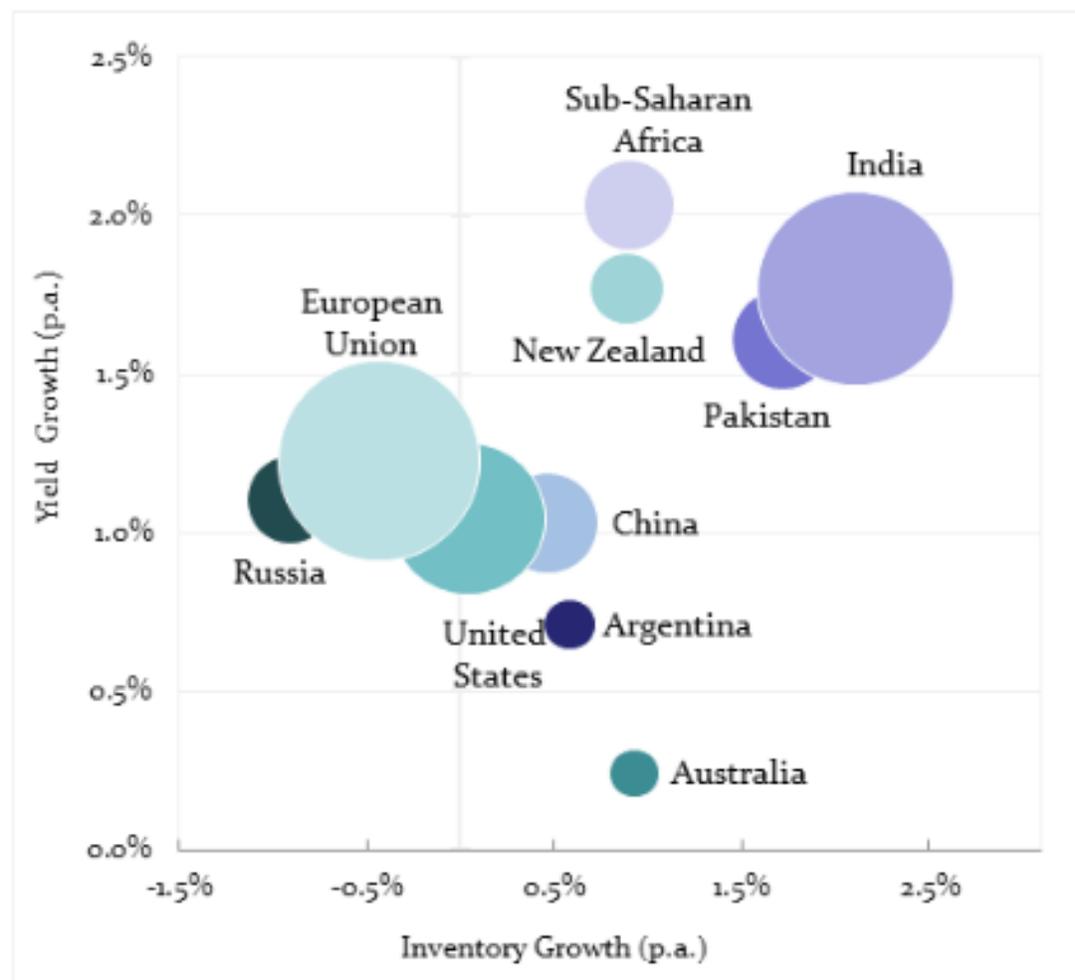
Source: FAO, 2017

Data visualization: FAO, AGAL, Livestock Policy Lab (LPL)

**2** NO  
HUNGER



## SDG2: Global milk and meat production will need to increase in 22% and 13%



Source: OECD-FAO Outlook, 2017

## SDG2: Major micronutrients (per 100 g) contained in animal source foods

Animal source food (ASF)	Iron (mg)	Zinc (mg)	Vitamin B <sub>12</sub> (µg)	Vitamin A <sup>b</sup> (µg RAE <sup>c</sup> )	Calcium (mg)
Meat					
Beef, medium fat, cooked	0.32	2.05	1.87	15	8
Goat meat (moderately fat)	2.3	4.0	1.13	0	11
Liver, beef	10	4.9	52.7	1500	8
Mutton	2	2.9	2.2	10	10
Pork	1.8	4.4	5.5	2	11
Poultry	1.1	4.0	0.10	85	10
Milk Whole, unfortified	0.01	0.18	0.39	55	119
Hen's eggs, cooked	3.2	0.9 (raw)	2.0 (raw)	500	61

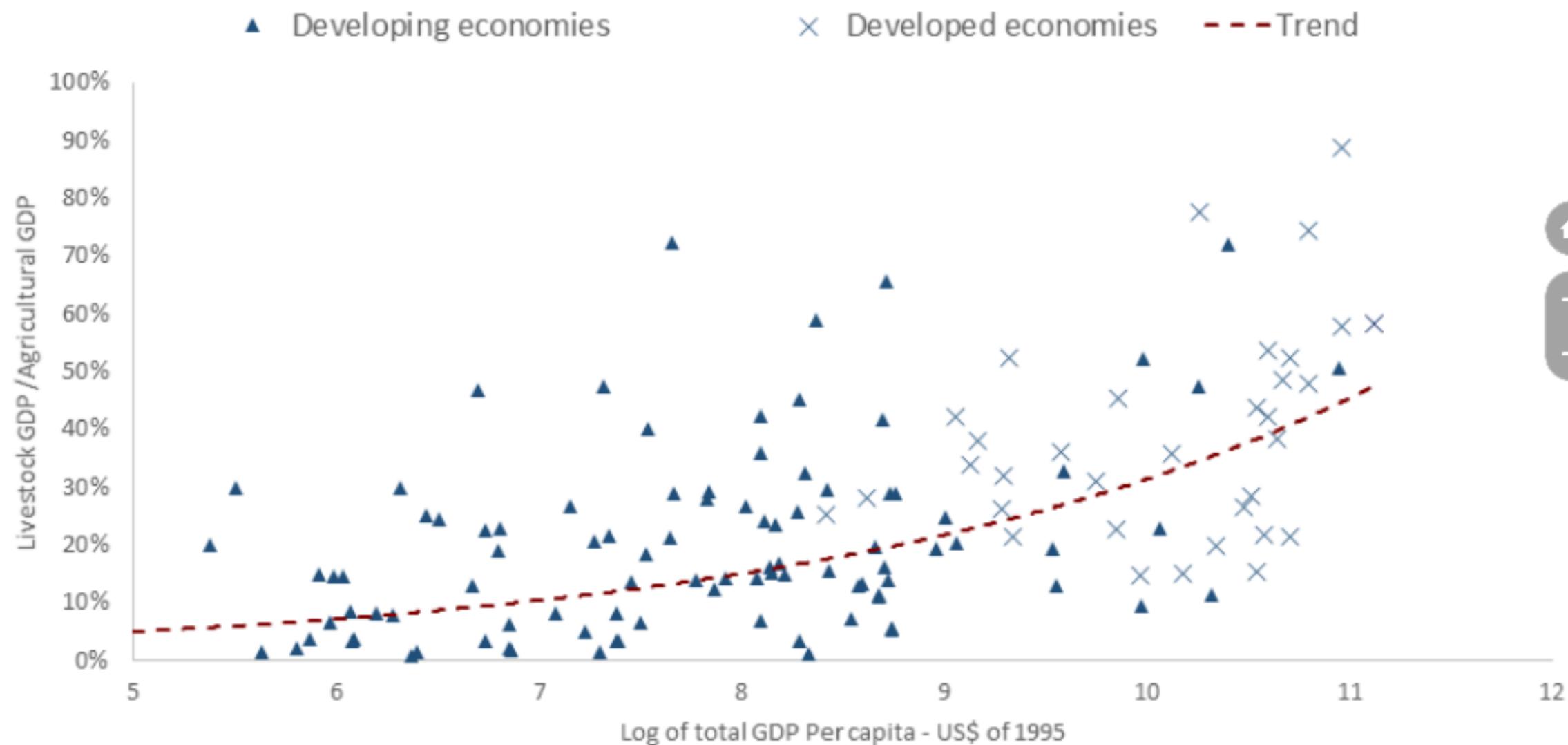
Source: Neumann et al., 2013

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# DECENT WORK AND ECONOMIC GROWTH



## SDG 8: Contribution of livestock to the economy



Source: Livestock Policy Lab (LPL)

## SDG 8: Multiplier economic effects of livestock growth

Economy classification	$\frac{\Delta \% \text{ Crop GDP}}{\Delta \% \text{ Livestock GDP}}$
High income	0.5
Upper middle income	0.9
Lower middle income	0.9
Low income	1.2

Economy classification	$\frac{\Delta \% \text{ Non - Agricultural GDP}}{\Delta \% \text{ Livestock GDP}}$
High income	2.6
Upper middle income	1.5
Lower middle income	1.3
Low income	1.1

*Countries with higher income levels have a more elastic economic response from non-agricultural sector to changes in livestock production*

**Source: Livestock Policy Lab, 2017**

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# 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



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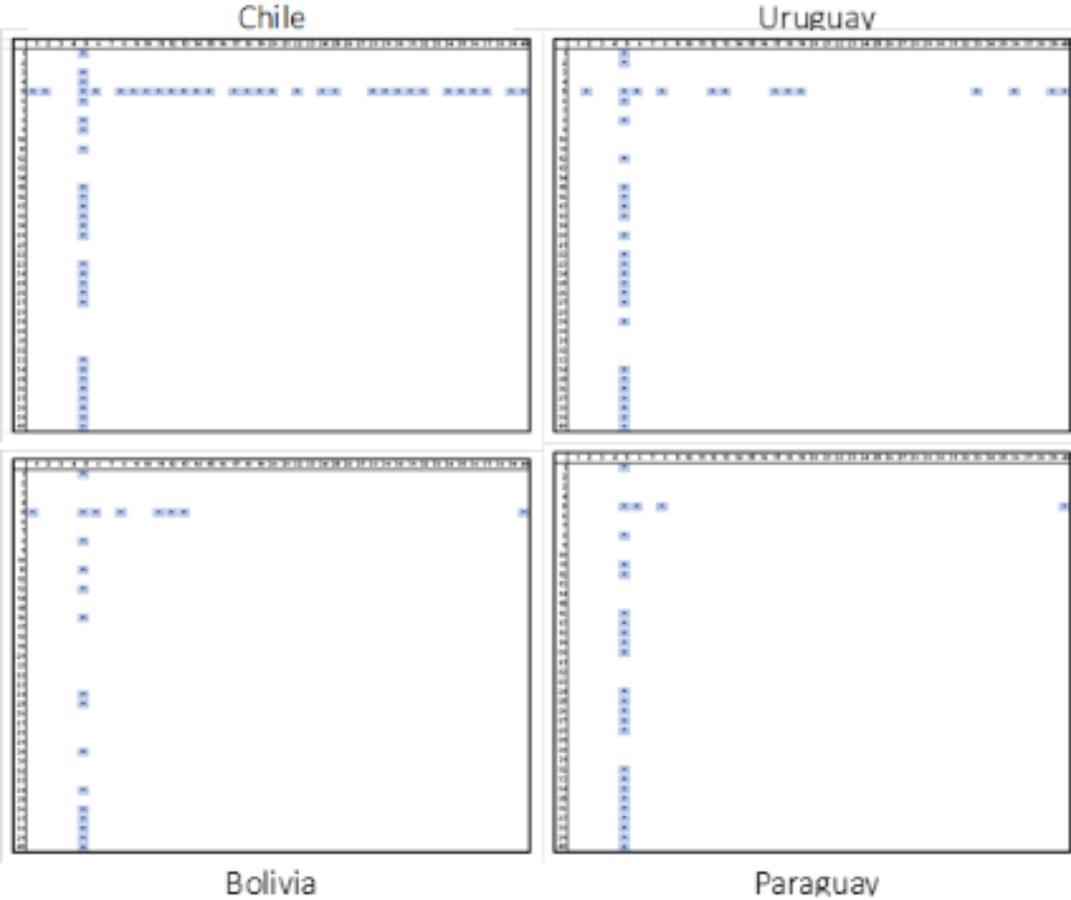
## SDG 9: The need to increase livestock industrialization and processing

Country	Product	Share in agro-processing gross output (%)
South Africa (2009)	Crop processed	21.5
	Livestock processed	0.2
Tanzania (2009)	Crop processed	3.9
	Livestock processed	0.0
Egypt (2010)	Crop processed	19.1
	Livestock processed	0.8
Tunisia (2012)	Crop processed	11.6
	Livestock processed	1.3
Bolivia (2012)	Crop processed	15.0
	Livestock processed	2.1

Source: Santos, Acosta, and Tibbo, 2007

Product	PCI	Import Share (%)	Export Share (%)
1. Meat, edible meat offal, salted, dried;	0.424	0.16	0.14
2. Cheese and curd	0.171	3.32	6.33
3. Meat, edible, prepared, and preserved	0.103	1.45	0.99
4. Manufactures of leather	0.075	0.50	1.05
5. Butter and other fats and oils from milk	0.022	3.17	0.32
6. Milk, cream and milk products	-0.128	25.48	5.29
7. Edible products and preparations,	-0.142	22.92	14.70
8. Furskins, tanned or dressed	-0.148	0.02	0.23
9. Other meat and edible meat offal	-0.271	10.84	5.45
10. Birds' eggs, and eggs' yolks; egg albumin	-0.289	0.91	0.74
11. Furskins, raw, other than hides	-0.434	0.03	0.20
12. Margarine and shortening	-0.498	2.60	2.39
13. Meat of bovine animals, fresh, or frozen	-0.570	7.23	5.58
14. Animal oils and fats	-0.753	1.71	1.41
15. Live animals	-0.772	4.70	14.51
16. Animal or veg. oils & fats, processed	-0.787	4.85	2.73
17. Leather	-0.841	6.80	20.79
18. Wool and other animal hair	-0.899	0.71	7.24
19. Crude animal materials	-1.054	1.96	3.21
20. Hides and skins	-1.173	0.65	6.71
<b>Average livestock PCI</b>	<b>-0.3982</b>		

# SDG 9: Forward and backward linkages of the meat and dairy sector



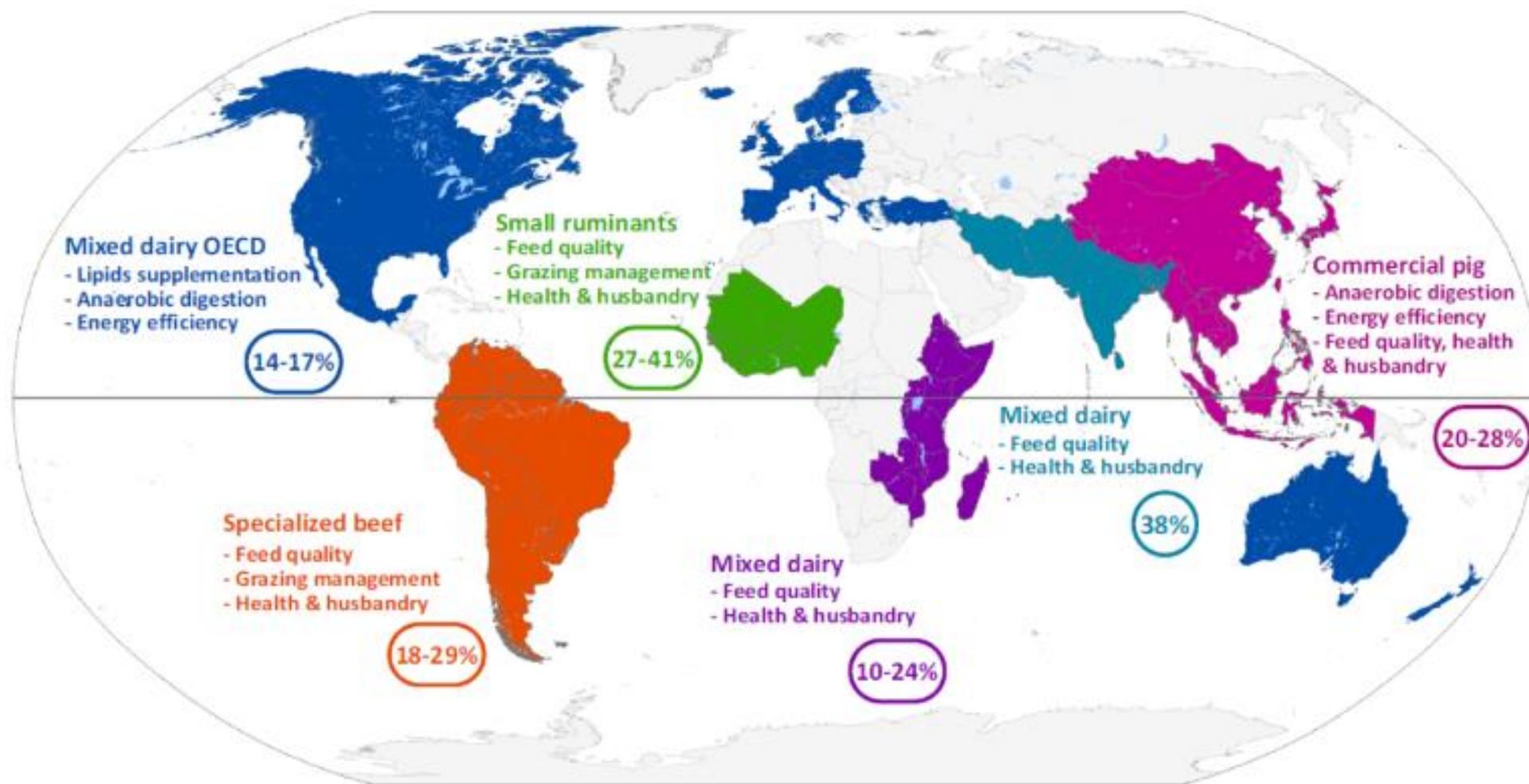
The potential of the sector to promote economic growth will be highly determined by the level of industrial transformation

Source: Livestock Policy Lab, 2017

# 13 CLIMATE ACTION



# SDG 13: Mitigation options and potential for greenhouse gas emission reduction



Source: Mottet, 2017

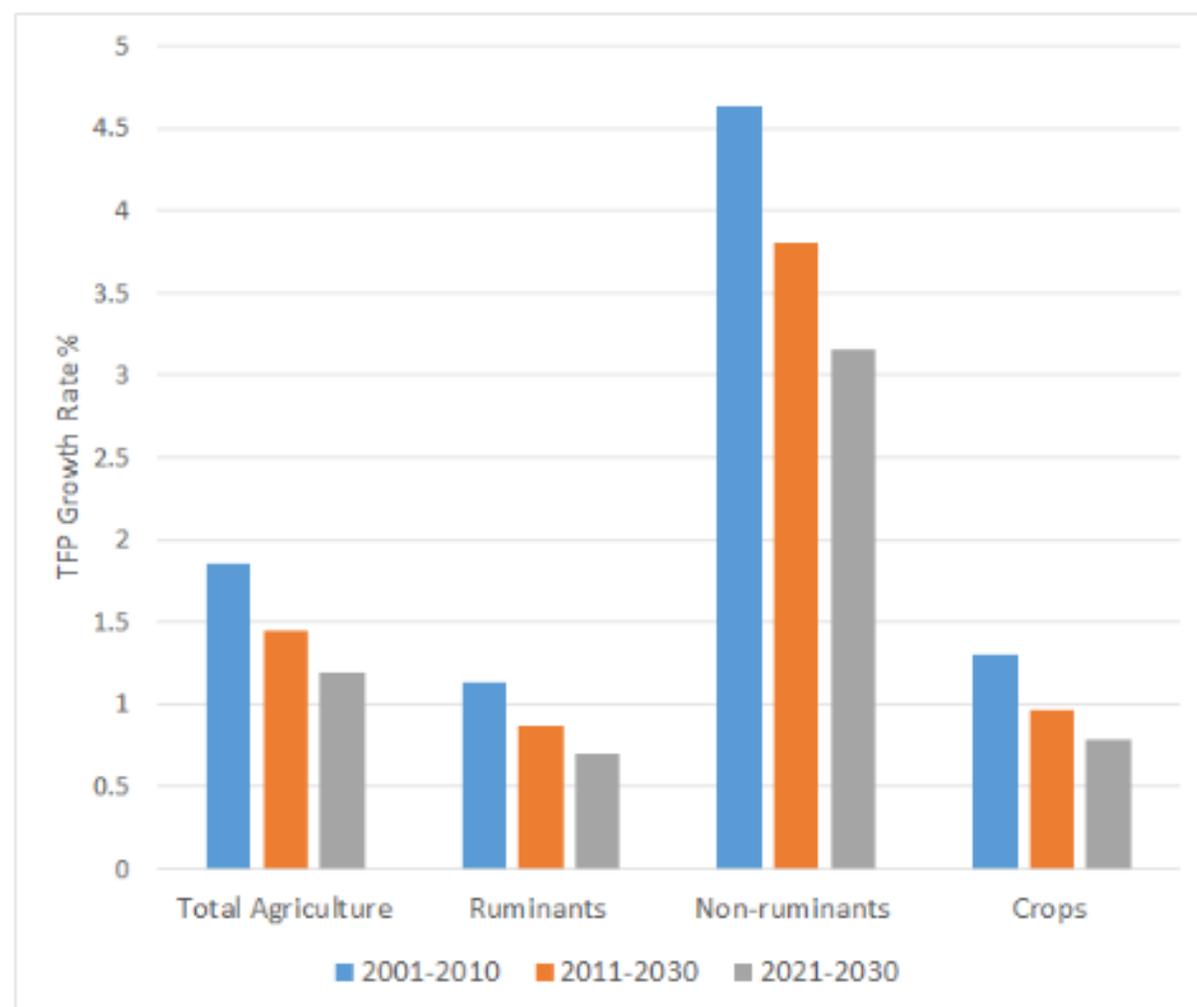
# 17 PARTNERSHIPS FOR THE GOALS



# CHALLENGES



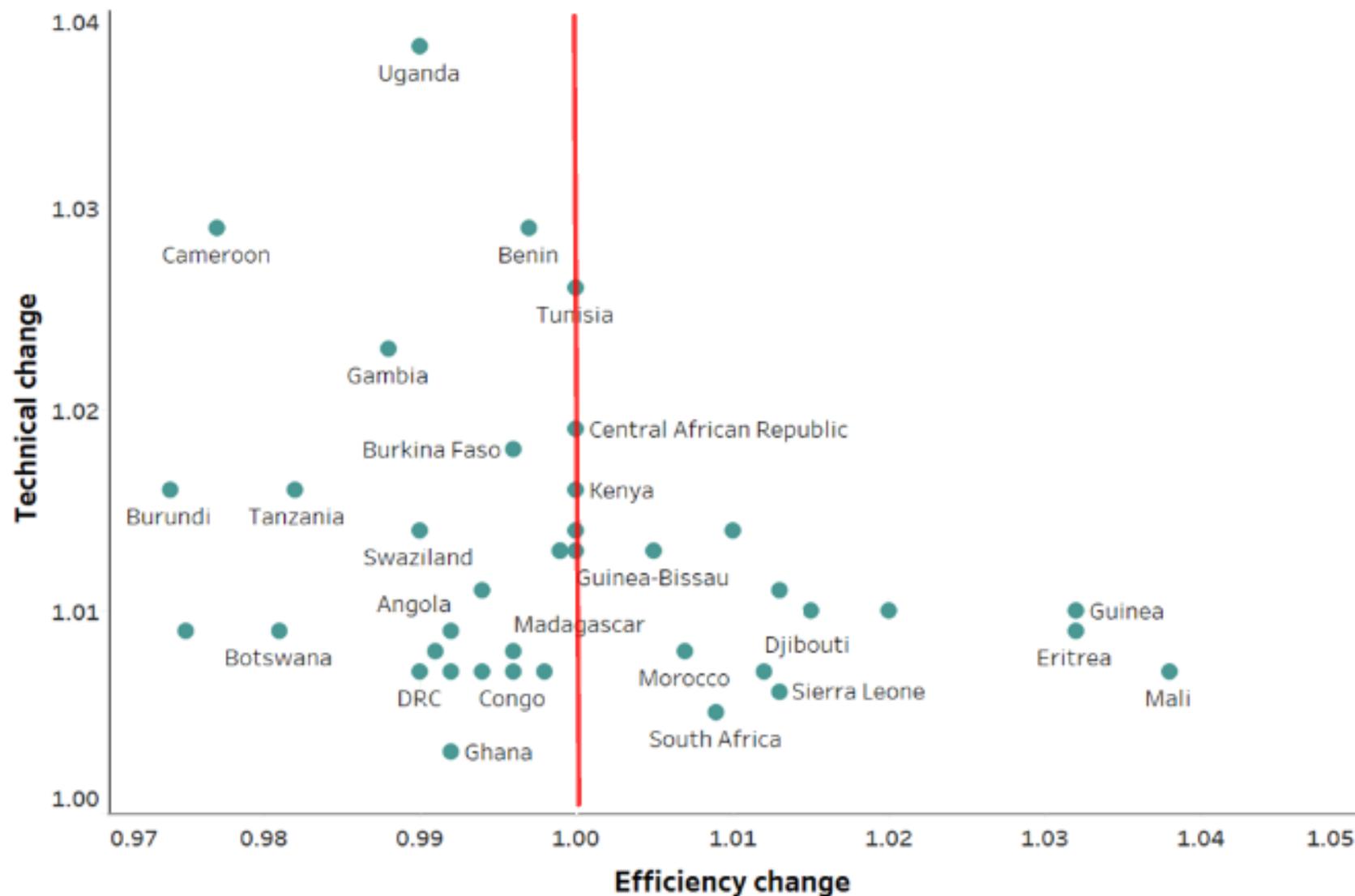
## Historical and projected global Total Factor Productivity growth



*Increasing partial productivity, through factor substitution, is a reasonable goal. However, increasing total factor productivity (TFP), meaning simultaneously increasing the productivity of land, capital, labour, water, and energy will be a major challenge.*

Source: Ludena et al, 2005

# Determinantes del Nivel de Productividad Total Factores



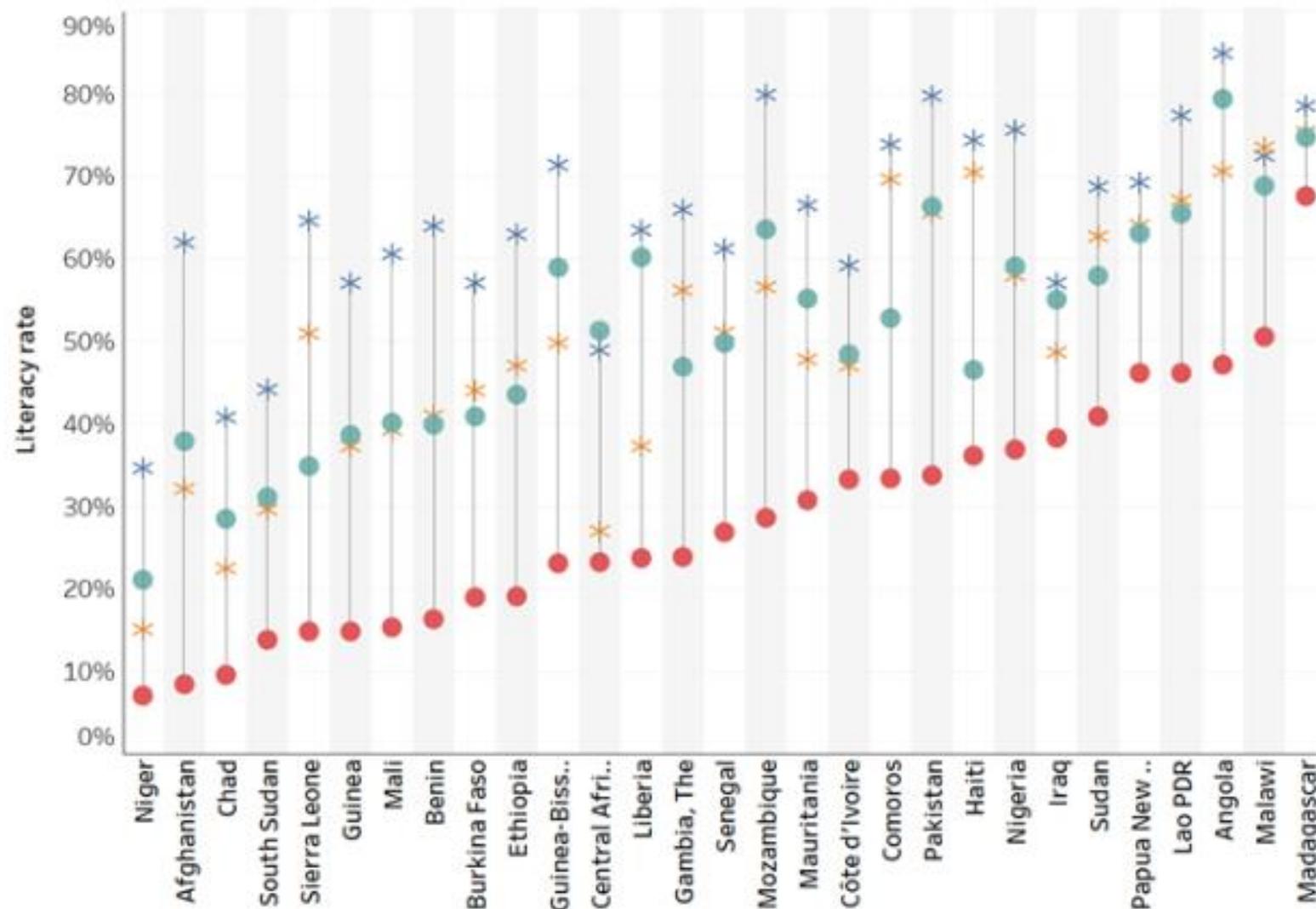
Source: Livestock Policy Lab (LPL)

Efforts to increase productivity have traditionally focused on the development and transfer of new technologies.

Increasing the level of efficiency in the use of existing technologies and available resources will be one of the main challenges.



# 103 million youth worldwide lack basic literacy skills



Access to basic education is fundamental to help farmers improve their.

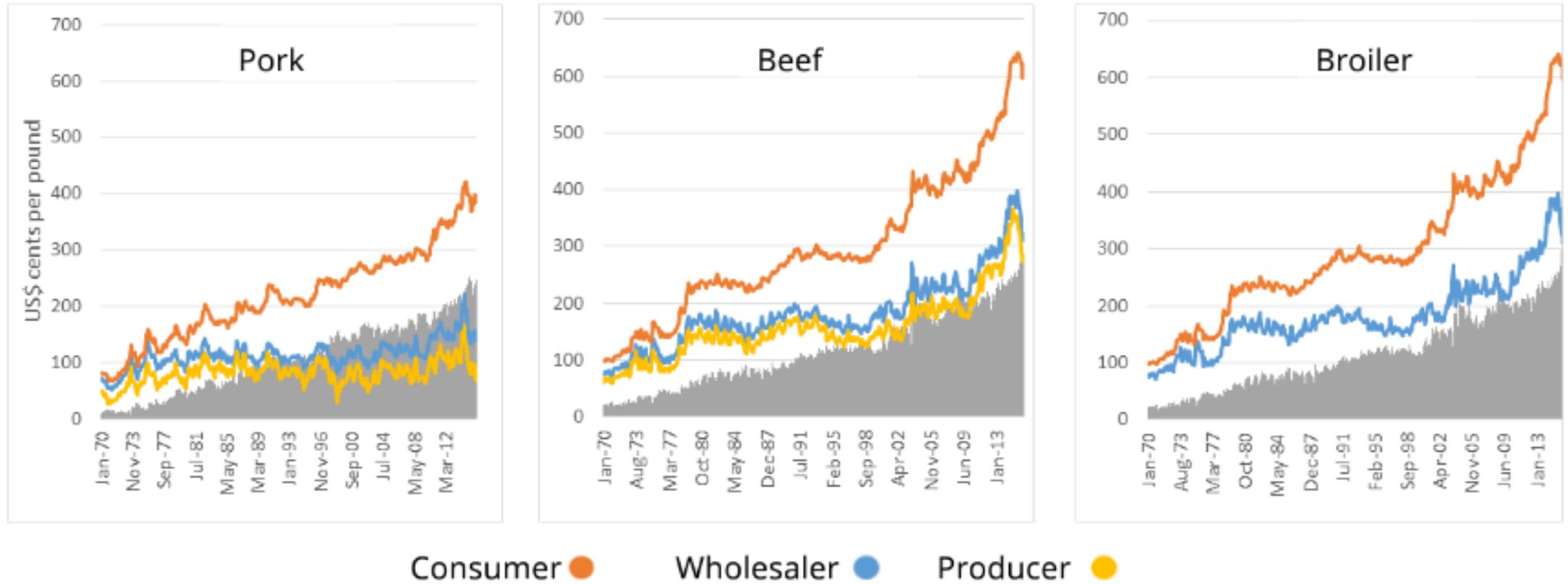
However, in many developing countries the literacy rate is extremely low

Source: UNESCO, 2016

Data visualization: FAO, AGAL, Livestock Policy Lab (LPL)

# Who would benefit from the rapid transformation of livestock markets?

Price spread evolution in US livestock markets (1970 - 2015)



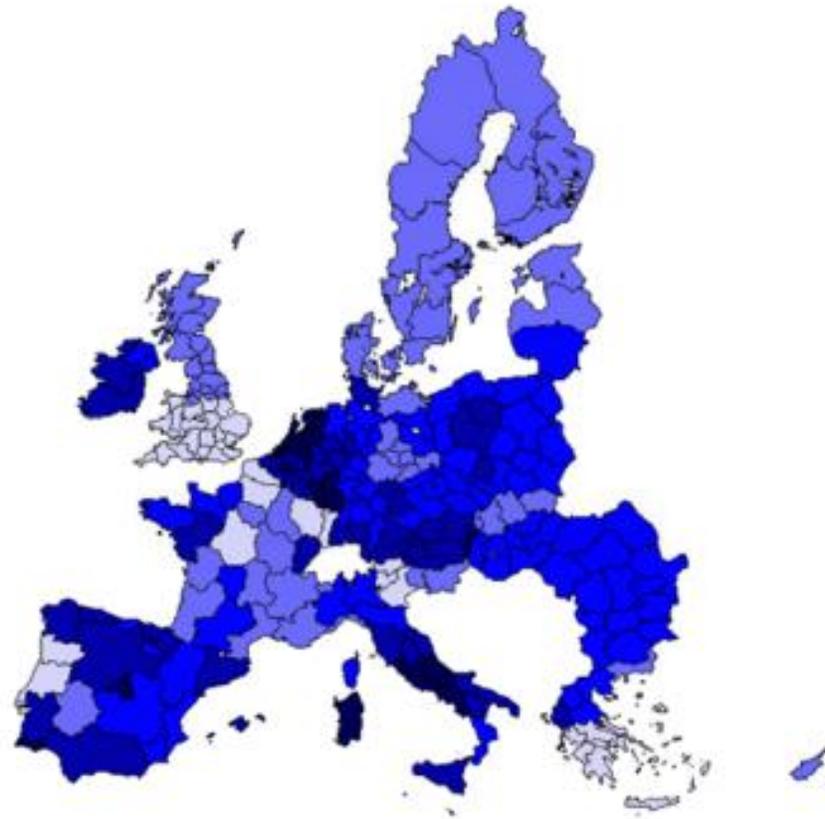
Source: Acosta and Boettcher, 2017; based on USDA-ERS, 2016  
Data visualization: FAO, AGAL, Livestock Policy Lab (LPL)

Is the distribution between the farm and the fork too big?

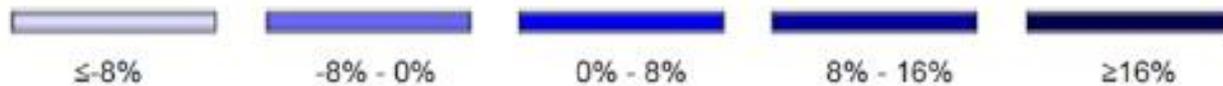


Source: Acosta and Boettcher, 2017 based on USDA-ERS, 2016  
Data visualization: FAO, AGAL, Livestock Policy Lab (LPL)

The pursuit of policy goals in one region can interact with the goals of others

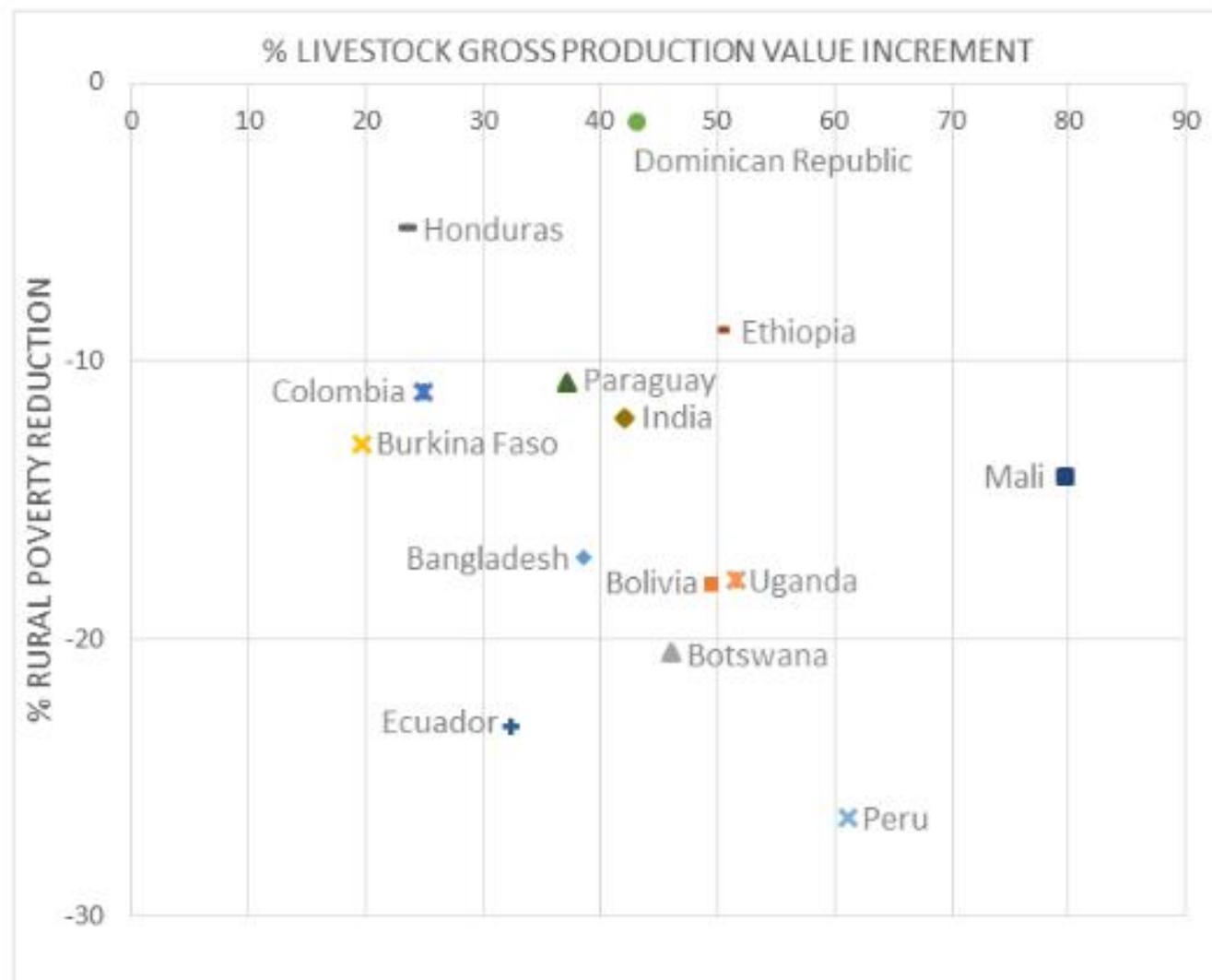


*By 2020 the abolition of milk quotas in the European Union will lead to an increase in milk output, and a decrease in milk prices.*



Source: Witzke et al, 2009

## Livestock economic performance and poverty reduction (2000-2004/2009-20013)



*Fast livestock growth per se may not automatically translate into benefits for the poor.*

Source: Acosta and Ankers , 2017

Data visualization: FAO, AGAL, Livestock Policy Lab (LPL)

## SDG 17: Partnerships in support of SDGs Implementaiton



### AU-IBAR ALIVE

Partnership for Livestock Development, Poverty Alleviation and Sustainable Economic Growth in Africa

Pastoralist  
Knowledge Hub



**CODEGALAC**

Comisión de Desarrollo Ganadero  
para América Latina y el Caribe



**FEPALE**

Federación  
Panamericana  
de Lechería

Global Agenda for  
Sustainable Livestock



RESEARCH PROGRAM ON  
Climate Change,  
Agriculture and  
Food Security





# **LIVESTOCK POLICY LAB (LPL)**

*Potencializando la contribución  
del sector pecuario a los ODS.*

**Proyectos**

## Proyectos

- Africa Sustainable Livestock 2050 (ASL2050)
- Livestock Total Factor Productivity: A Global Indicator
- El Costo Económico de la Influenza Aviar
- World Livestock (WoLi)

**ASL 2050**

**L-TFP**

**HPAI**

**WoLi**



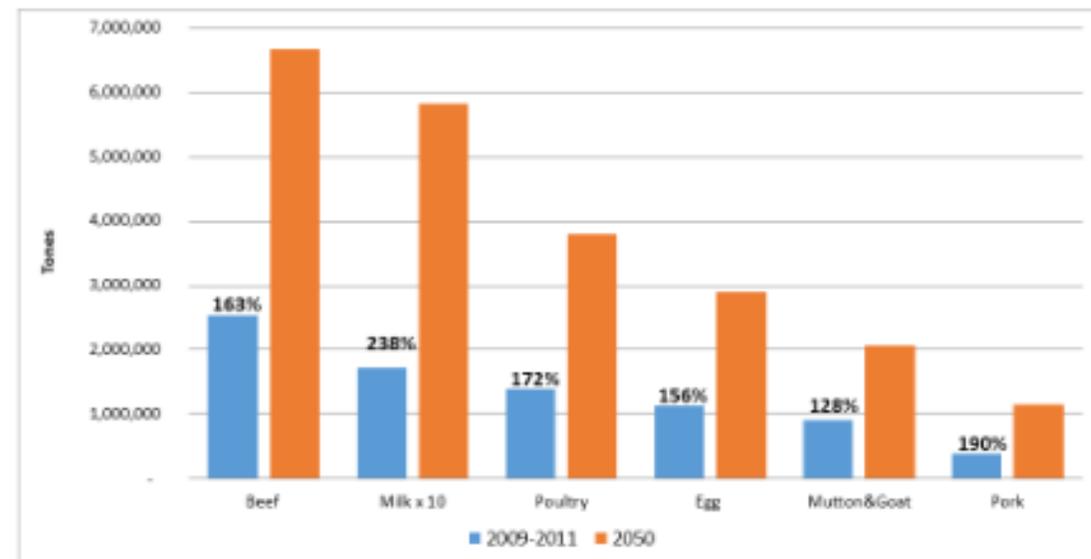
# ASL 2050

## Africa Sustainable Livestock 2050

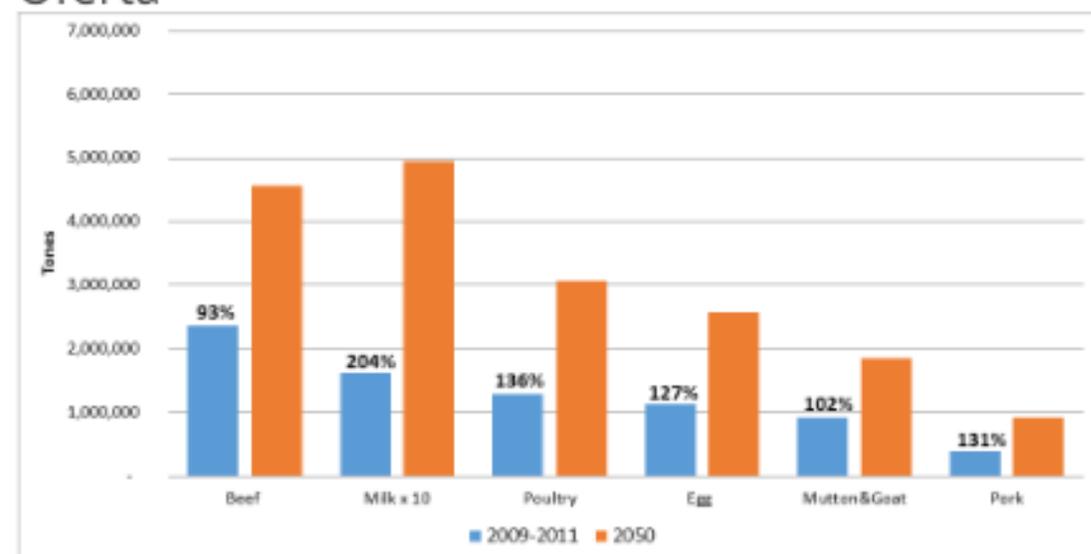
Proyección sobre el crecimiento de la demanda y oferta de productos pecuarios en 6 países Africanos :

- Burkina Faso
- Egipto
- Etiopia
- Kenia
- Nigeria
- Uganda

### Demanda



### Oferta

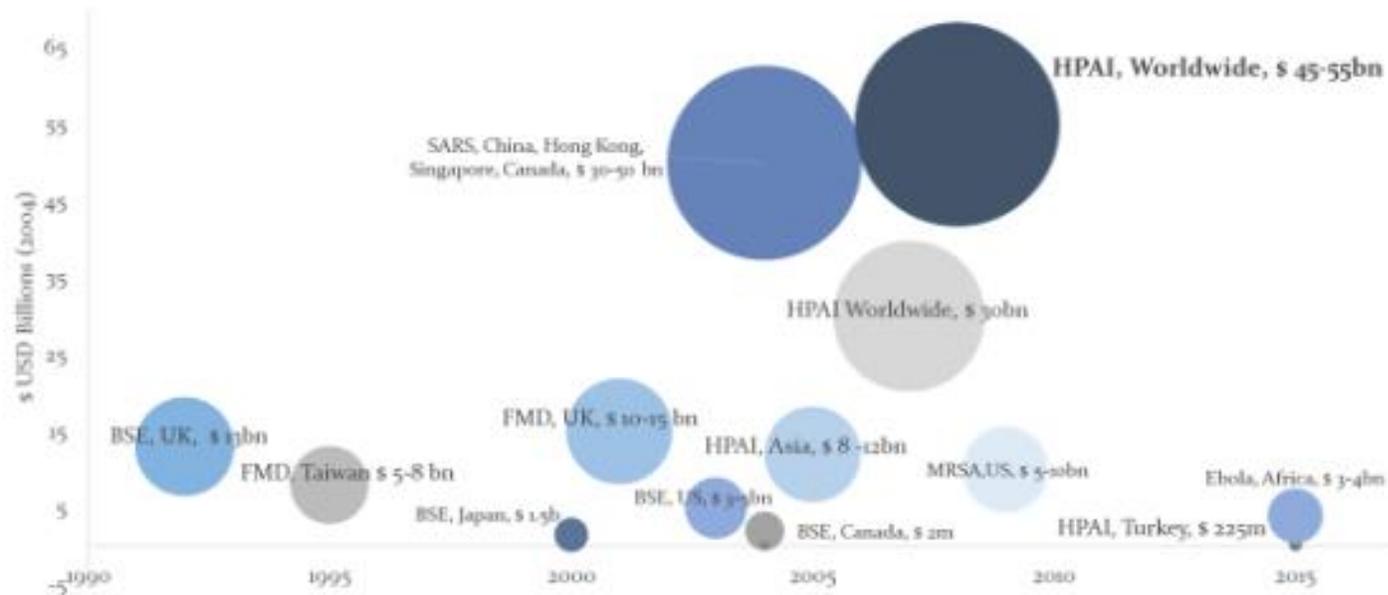




# HPAI

## The economic cost of HPAI in G7 countries

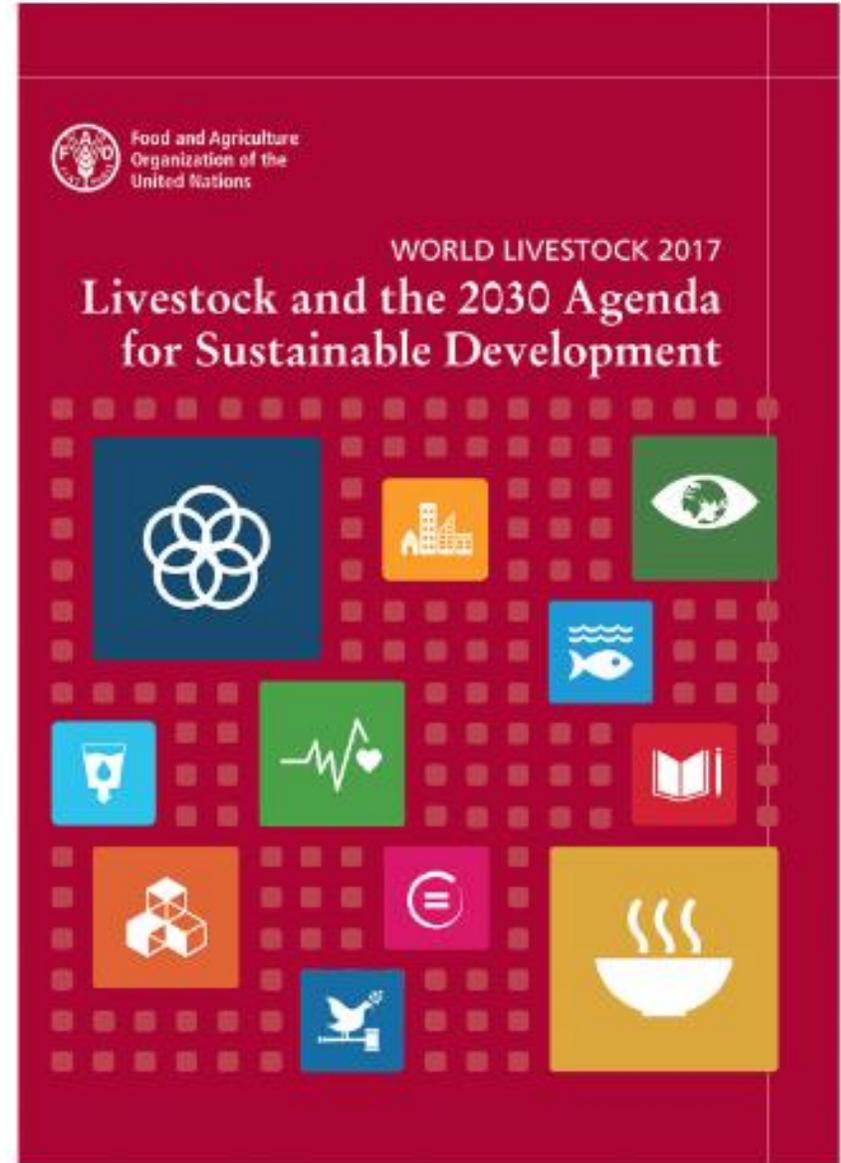
El costo economico  
(directo en indirecto) de la  
Influenza Aviar en países  
seleccionados del G7



# WoLi

## World Livestock

*Conduciendo al sector pecuario hacia lograr los objetivos de la Agenda 2030 para el Desarrollo Sostenible*



# World Livestock

Advancing Livestock towards the 2030 Agenda for Sustainable Development



## Mensajes de Política

- Rápido crecimiento económico es importante pero no suficiente. El potencial del sector de reducir pobreza va a estar determinada por la capacidad de distribuir riqueza. Es decir, que el proceso de desarrollo del sector sea más incluyente.
- Por décadas el indicador principal de desempeño del sector pecuario ha sido el crecimiento económico y la contribución al PIB. No obstante, uno de los indicadores a futuro más importantes será la capacidad del sector de generar empleo y absorber mano de obra.
- El potencial del sector de pecuario de generar desarrollo económico va a depender de la capacidad de transformación de productos y agregación de valor lo cual estará determinado no solo por el nivel de industrialización sino por el establecimiento vínculos con otras industrias.

## Mensajes de Política

- La tasa de crecimiento de productividad total está disminuyendo. El aumento de la productividad parcial, a través de la sustitución de factores, es un objetivo razonable. Sin embargo, aumentar la productividad total de los factores económicos de producción será un desafío mayor.
- Los esfuerzos para incrementar productividad se han focalizado tradicionalmente en el desarrollo y transferencia de nuevas tecnologías. Acompañar este esfuerzo, incrementando el nivel de eficiencia en el uso de tecnologías existentes y recursos disponibles será uno de los principales retos.
- Incrementar el nivel de educación básica y analfabetismo será un factor fundamental para incrementar el nivel de productividad de pequeños productores en países en vía de desarrollo.

## Mensajes de Política

- Durante las últimas décadas los incrementos en ingreso y productividad se han traducido en un mayor nivel de márgenes de comercialización. De no mejorar el nivel de eficiencia de las cadenas, será difícil que las señales de mercado se traduzcan en incrementos en productividad.
- La liberalización comercial no afectará a todos los países y grupos dentro de la sociedad de la misma manera. Es probable que haya diferencias significativas entre países desarrollados y en desarrollo, países exportadores e importadores, y entre los agricultores de pequeña escala y comerciales.
- Un rápido crecimiento no se traducirá automáticamente en una mayor contribución a los ODS. Mucho dependerá del patrón y la composición del crecimiento, de la capacidad de generación de empleo, del perfil del sistema de producción, así como de la estructura del mercado y del nivel de participación de los pobres.

## Mensajes de Política

- Las plataformas multi-actores jugaran un papel fundamental en ayudar entender y abordar gran parte de estos desafíos. Sin embargo, existen conflictos complejos entre quienes se beneficiarán de unas u otras medidas de política. El fortalecimiento del rol y capacidad de los gobiernos para analizar y diseñar instrumentos de política publica que generen mayor nivel de bienestar social será un paso fundamental en el logro de la Agenda 2030.



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