



# The livestock sector and global food security

Trends, issues and opportunities

**Samuel C. Jutzi**

**FAO / Rome**



# Outline

1. SOFA 2009 – livestock in the balance
2. Livestock, poverty and food security
3. Guidance instruments
4. Core messages



# Outline

1. **SOFA 2009 – livestock in the balance**
2. Livestock, poverty and food security
3. Guidance instruments
4. Core messages



# THE STATE OF FOOD AND AGRICULTURE 2009

## Livestock in the balance

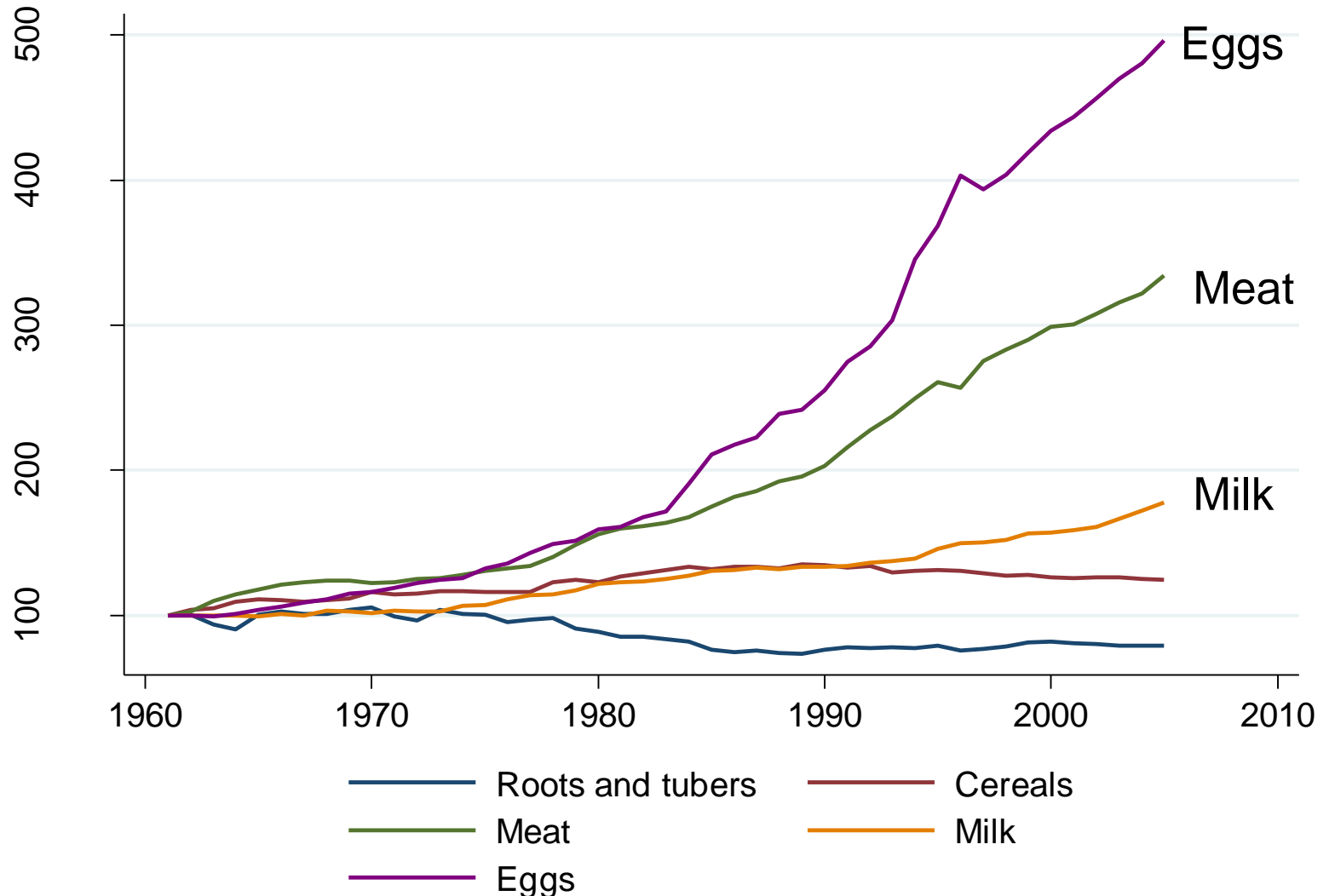
Food and Agriculture Organization  
of the United Nations (FAO)



# Importance of livestock

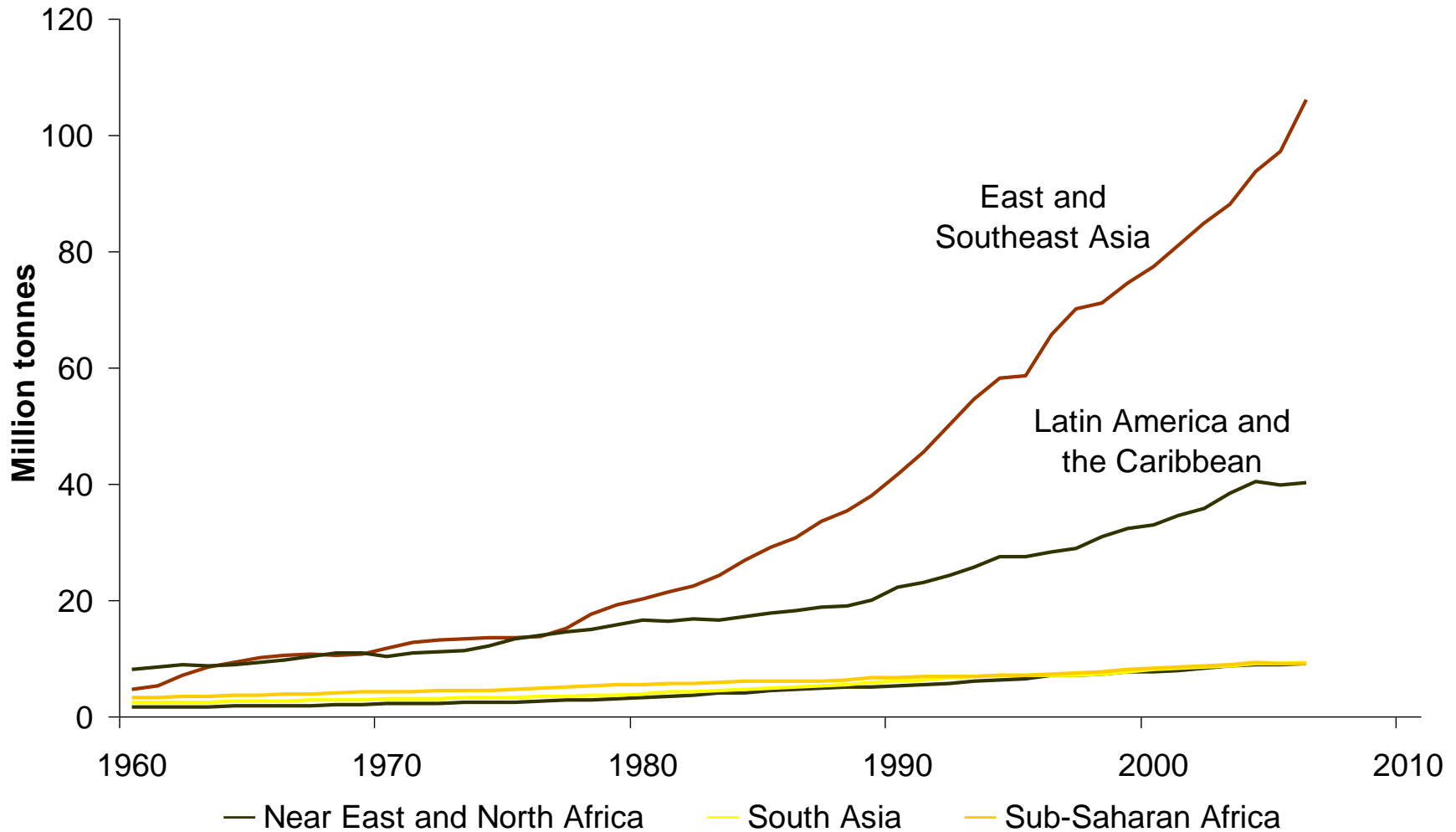
- Large, growing, dynamic sector
- Needs better policies, institutions and regulations
  - Livelihoods and food security
  - Natural resources and the environment
  - Animal diseases and human well-being
- Requires balancing objectives

# Consumption of livestock products is growing rapidly...



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

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



# Livelihoods and food security

- Livelihoods
  - 1 billion people keep livestock
  - 60 percent of rural households
- Food supply
  - 13 percent of dietary energy
  - 28 percent of protein supply

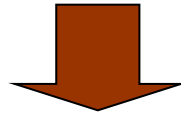


# Natural resources and the environment

- Livestock use 80 percent of agricultural land resources
- Livestock consume 8 percent of global freshwater resources
- Livestock produce 18 percent of GHG emissions



# ANIMAL DISEASES



## Economic risks

- productivity
- markets
- livelihoods

## Human health

- pandemic disease
- endemic disease
- food borne illness



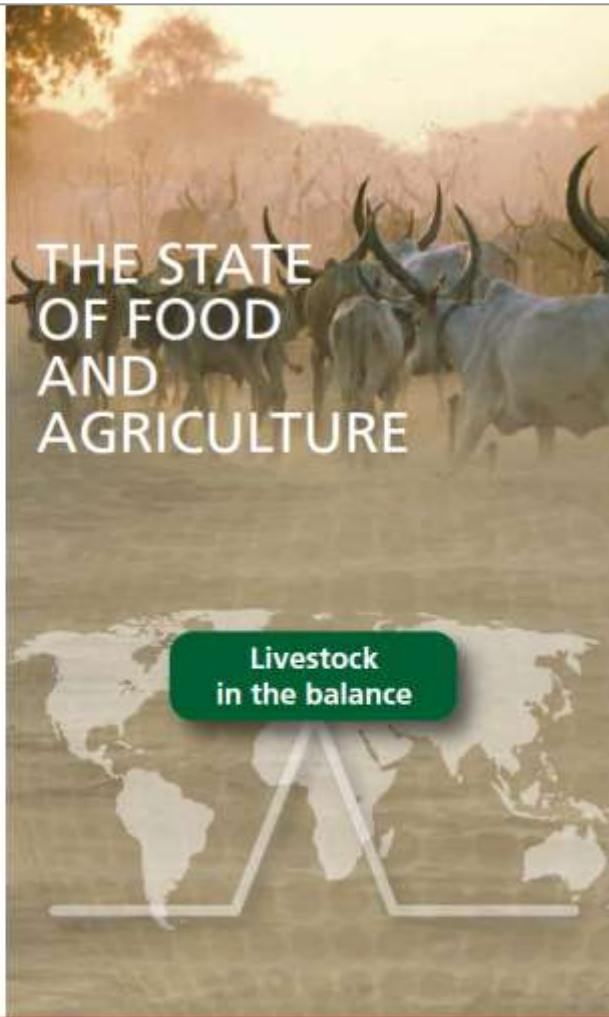
Human well-being



# Balancing different objectives for the sector

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

2009



# The State of Food and Agriculture Livestock in the balance

FAO's major annual flagship publication.

Available in English, French, Spanish, Russian,  
Arabic and Chinese

[www.fao.org/publications/sofa](http://www.fao.org/publications/sofa)





# Outline

1. SOFA 2009 – livestock in the balance
- 2. Livestock, poverty and food security**
3. Guidance instruments
4. Core messages



# Livestock, poverty and food security

---

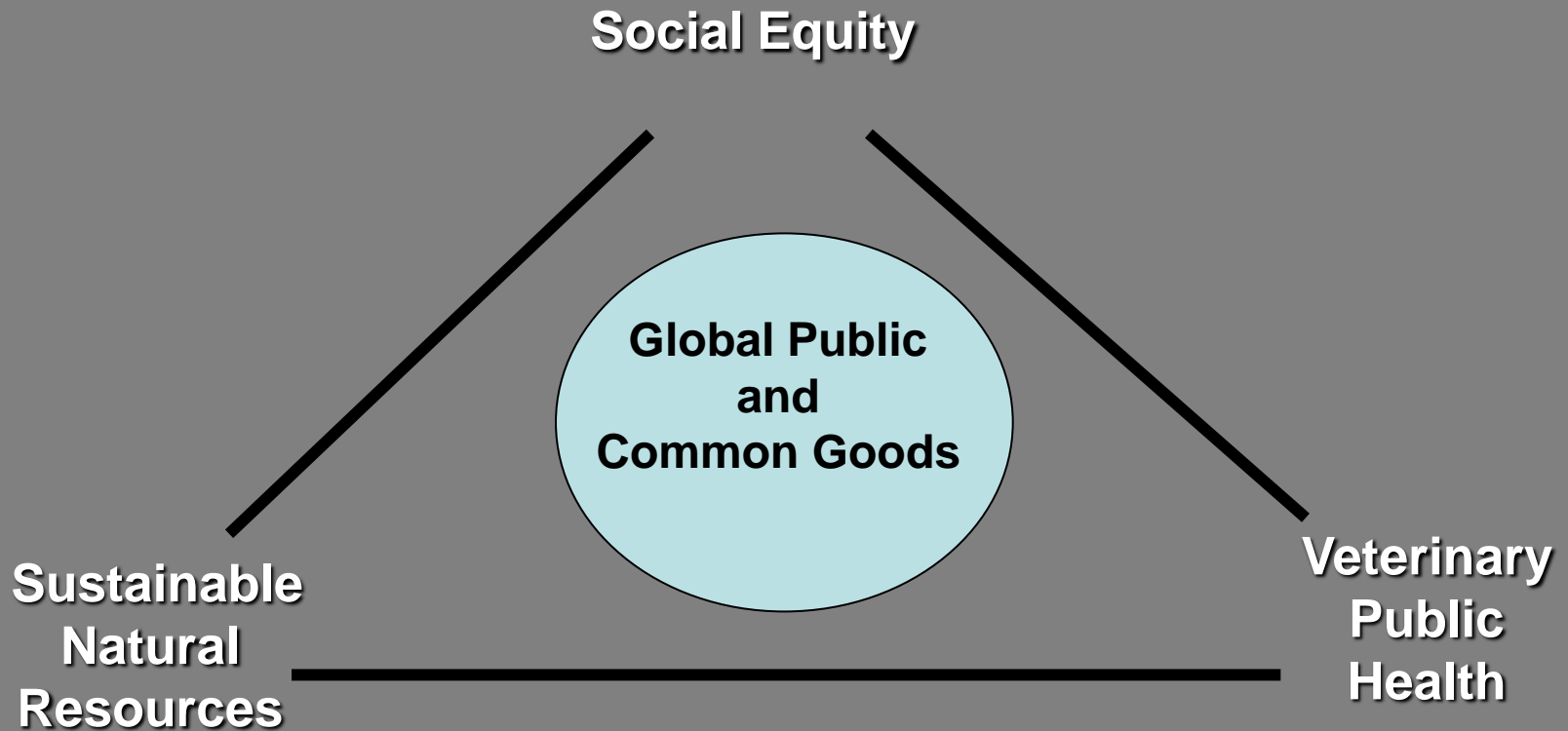
one of three Global Public Goods dimensions of the sector

---

## FAO's strategy

# Livestock Sector and Public Goods

animals and food security & livelihoods



# Livestock in global food security (1)

- 12.9 % of global calorie consumption and growing
- 27.9 % of protein consumption and growing
- 43% of global agricultural GDP
- Home consumption of milk, meat and eggs by about 700 million people at the poverty line
- Household income from livestock – from a few % to almost 100% (e.g. pastoral areas)
- Power, asset, transport, manure – work animals increasing in some areas, reducing in others

# Livestock in global food security (2)

- Most households worldwide choose to eat some form of livestock product when given the opportunity to do so – for taste, diversity and convenience.
- Protein with a wide range of amino acids that matches human needs.
- Bio-available micro-nutrients (iron, zinc, calcium, vit A, vit B12).
- Iron deficiency affects approx. 2 billion people worldwide (WHO) and impairs the mental development of 40-60% of children in developing countries (UNICEF).
- 684,000 child deaths a year might be prevented by increasing intake of vitamin A and zinc (WFP).

# Scenario 1

## Livestock dependent societies

- Pastoralists and ranchers.
- For approx 200 million pastoralist households livestock are (or were) food security. In the Horn of Africa pastoralists use ownership of livestock as the basis for their descriptions of wealth and poverty.
- Pakistan's small ruminants: approx 50% of national meat supply. Mongolian livestock: approx 30% of GDP, 21% of export earnings. Kenyan pastoralists: approx 10% of GDP. Rangelands of Morocco: approx 25% of agricultural GDP.
- Livestock crucial to food security for the communities involved and contributing to regional / global food availability and protein balance.
- Well adapted to environmental niches but under pressure and at the ceiling in terms of production.
- Substantial potential for involvement in CO<sub>2</sub> market (C-sequestration potential) – payment for environmental services.

# Scenario 2

## Mixed farming societies

- Small (family-based)-scale, mixture of crops, livestock, fish and off-farm enterprises.
- For millions of households in rural and peri-urban areas livestock have various tasks – available when needed for many different functions: food, income smoothing, consumption smoothing, asset generation, women's income, input to crops, transport, etc.
- Livestock are important to household food security esp. in rural areas, contribute to regional / global food availability and protein balance (primarily dairy).
- Well adapted to local economic niches, but hitting a ceiling in natural resource availability, facing market barriers, accelerated exits.
- Need help for some to stay afloat, some to connect to markets, some to get more efficient with suitable technology, women to get involved in more lucrative areas, some to exit agriculture.

# Scenario 3(a)

## Transition Systems Feeding Cities

- 70% of the world will be urban in 2050 (many in mega-cities). Consumption of livestock products increases when people move into cities, earn more income, have less available time, eat more diverse diets and demand convenience foods.
- Bringing horticulture into cities and keeping livestock out of cities (each for good reasons).
- Separation of (most) consumers from livestock production. Market chains becoming longer and coming from a wide geographic range (peri-urban, rural and international). Intensive and mixed farming systems contribute to supply but as cities grow, scaled-up and intensive and vertically integrated production becomes increasingly important.

# Scenario 3(b)

## Transition Systems Feeding Cities

- Livestock is important to nutritional quality and diversity. Income from processing and retail more than from production. Stability a big challenge - food safety problems, just-in-time supply chains, international markets. Livestock a potential source of environmental pollution.
- Pressure on small producers facing increasing competition – varies with species and place (e.g. dairy intensifying and scaling up slower than poultry).
- Need innovative solutions to balance interests of producers and consumers, and the concerns of worried wealthy and underfed poor. Intensive systems essential to feed cities but they need to be made more sustainable – environment, welfare, water use, production efficiency, food waste [ $\gg$  **“intensify, but do not concentrate”** for **resource use efficiency, welfare and sustainability**’].

# Feeding 9.2 billion people in 2050

- Projections: 1.3 times as many as now, consuming 1.7 times as much animal protein. Poultry meat x 2.3, small ruminant meat x 1.8, bovine meat x 1.5, dairy products x 1.5, pig meat x 1.4.
- Figures will be reduced if livestock foods become more expensive (not good for the poor) and/or there is a significant shift in attitude towards eating ASF.
- At any rate, it will be important to increase efficiency of resource use in production, reduce pollution where possible in livestock systems, reduce wastage in food chains.
- No one magic bullet, no simple solution. Progress on several fronts with different approaches for livestock dependent / mixed farming / transition systems. The public sector, corporations, individuals have roles to play.
- FAO's role: contribute to agreements for the strengthening of public goods at stake (sector guidance/governance).



# Outline

1. SOFA 2009 – livestock in the balance
2. Livestock, poverty and food security
- 3. Guidance instruments**
4. Core messages

# Policy process

## **Committee on Agriculture (FAO), 22<sup>nd</sup> Session**

- **COAG/2010/5** Guidance of the livestock sector – Issues and options
- **CoAG Report:**
  - that FAO “actively engage in consultations to continue the global dialogue with a wide range of stakeholders to sharpen definition of the sector’s objectives, taking into account the disparities between production systems, the proliferation of private standards, countries’ economic development, role of smallholders, importance of export, and status of natural resources.”
  - that FAO should “address in a balanced and holistic manner the complex social, economic and environmental issues and trade-offs associated with the sector”.

# Information dissemination and assessment

- [Gateway on Governance in the livestock sector](#)
- Study: Livestock sector governance – A mapping exercise in progress to be published in December 2010, on
  - WTO with Codex & OIE
  - WIPO
  - FAO
  - MEA with CBD, UNFCCC
  - Civil society and private sector

# Consultations by sectors

- FAO-WPSA-Poultry breeding industry: Global Poultry Think-Tank, June 2009
  - [http://www.wpsa.com/newsletter/2009\\_september.html](http://www.wpsa.com/newsletter/2009_september.html)
- Agreed follow-up
- Joint FAO-WPSA Symposium on Guidance of the Poultry Sector - Issues and Options at European Poultry Congress, August 2010
- Pig, feed, dairy and meat industry interested

# Consultations by stakeholder group

- Global development and animal related NGO meeting, November 2009
- Global survey on standards, codes of conduct & guidelines in the livestock sector
- Global livestock related industries meeting, October 2010



# Outline

1. SOFA 2009 – livestock in the balance
2. Livestock, poverty and food security
3. Guidance instruments
4. **Core messages**

## **Message # 1:**

The strongly increasing demand for animal-source food in the world's most rapidly growing economies has been met mostly by commercial livestock production and associated commodity chains.

The modern livestock sector has dynamically up-scaled and globalized its operations and has made enormous progress in resource use efficiency.

It is more competitive than ever before in producing quality food items for a rapidly growing, more affluent and increasingly urbanized global population.

**It is important, however, that this impressive performance is supported carefully by comprehensive commodity chain guidance which considers principles of environmental sustainability, socio-economic compatibility, product safety, and ethics.**

## **Message # 2:**

At the same time, many millions of rural people continue to keep livestock in traditional animal production systems - a situation which is not likely to change much any time soon.

Livestock perform multiple functions in these systems; the most important ones relate to supporting rural livelihoods and household food security. Livestock also have important asset, security and cultural functions and contribute synergistically to crop agriculture in mixed farming systems.

**Because of the close linkage between poverty and hunger, the removal of the main technical, institutional and policy constraints to livestock productivity, production and marketing in traditional livestock systems requires priority attention. For those who exit the sector, adequate opportunities are required and/or effective safety nets to avoid destitution.**

### **Message # 3:**

The rapidly widening dichotomy of the livestock sector into a dynamic modern and a static traditional dimension, with many unstable and vulnerable interfaces, has often outpaced the capacity of governments to provide the necessary policy and regulatory framework to ensure an appropriate balance in the provision of private and public goods.

The results of this sector neglect have been systemic failures and institutional voids, apparent in social exclusion, environmental damage, and increased threats to animal and human health and welfare.

**The livestock sector can efficiently, safely and sustainably contribute to human food security and to socially equitable economic development only if all relevant stakeholders, public and private, take synergistic action to address better governance, more inclusive development pathways, and levels of investment in line with the importance of the sector and the challenges it faces.**

## **Message # 4:**

Animal welfare considerations require systematic, suitably differentiated application across the livestock sector.

From a feasibility / acceptance perspective, suggested priorities of action are:

**(a) in smallholder mixed and pastoral systems, focus on animal welfare interventions with convincing economic returns for the farmers (balancing human and animal welfare objectives);**

**(b) in transition systems of livestock production, incorporate animal welfare objectives into the emerging process for the design / negotiation of global public goods-orientated sector guidance.**



# Thank you

**A responsible Livestock Sector  
in Support of Global Food Security**