

Dairy Asia: Towards Sustainable From Concept to Action

Henning Steinfeld, FAO

Millennium Development Goals (2000 – 2015)

- Eradicate extreme poverty and hunger
- Achieve universal primary education
- Promote gender equality and empower women
- Reduce child mortality
- Improve maternal health
- Combat HIV/AIDS, malaria and other diseases
- Ensure environmental sustainability
- Develop a global partnership for development

Progress on MDGs so far

- Steady progress on poverty, hunger, health, education and gender, led by Asia – Africa lagging
- Environmental sustainability failure – climate gases, resource scarcity, environmental destruction
- Rio+20: Sustainable Development Goals to replace MDGs

High-level Report on SDGs (2013)

5 big transformational shifts

- Leave No One Behind. End Poverty . Basic economic opportunities and human rights.
- Put Sustainable Development at the Core. Integrate the social, economic and environmental dimensions.
- Transform Economies for Jobs and Inclusive Growth.
- Build Peace and Effective, Open and Accountable Institutions for All.
- Forge a New Global Partnership. A new spirit of solidarity, cooperation, and mutual accountability.

17 SDG's – UN General Assembly September 2015

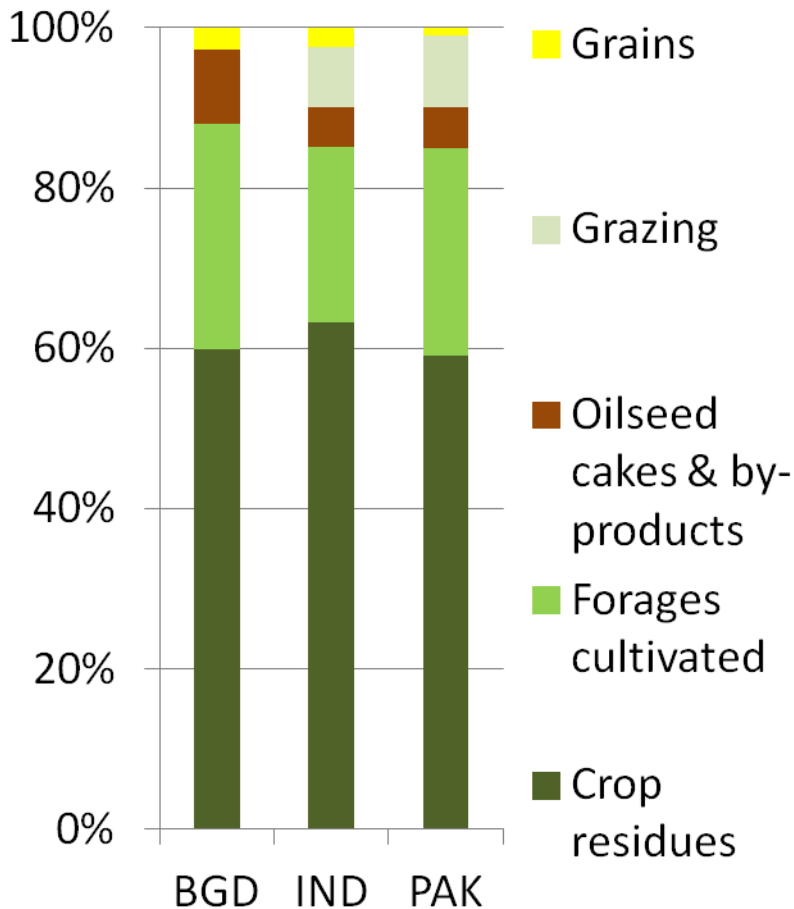
**WHAT DOES THIS MEAN FOR DAIRY
IN ASIA?**

Livestock Protein Balances

For selected countries

	EDIBLE PROTEIN OUTPUT/INPUT	EDIBLE PROTEIN OUTPUT- INPUT TONNES
	AV.2005-2007	AV.2005-2007
Saudi Arabia	0.19	-659 588
USA	0.53	-7 650 830
Germany	0.62	-1 183 290
China	0.95	-665 276
Netherlands	1.02	18 070
Brazil	1.17	550 402
Nepal	1.88	40 803
India	4.30	3 379 440
Sudan	8.75	340 895
New Zealand	10.06	638 015
Mongolia	14.60	35 858
Ethiopia	16.95	141 395
Kenya	21.16	202 803

Feed Base for Dairy



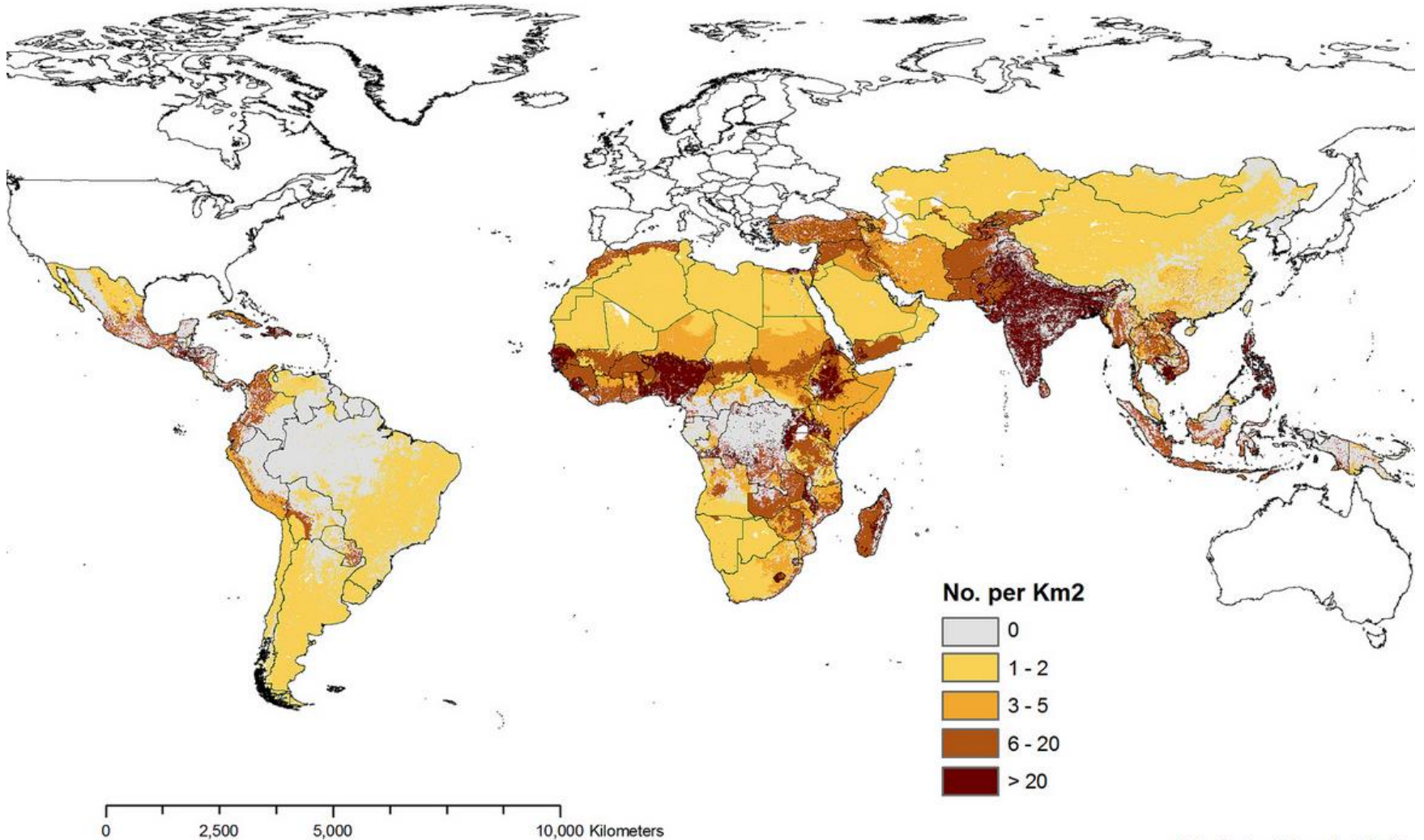
- Minimum competition with human food grain
- Disposal of agricultural wastes
- Conversion of non-edible material into highly valuable food
- India: Net contribution equivalent to protein needs for 150 million people

Poor livestock keepers (millions)

Region	< 1.25 \$	< 2.0 \$
East Asia	70	170
South Asia	178	328
Africa – South of Sahara	154	219
Other regions	19	35
All regions	421	752

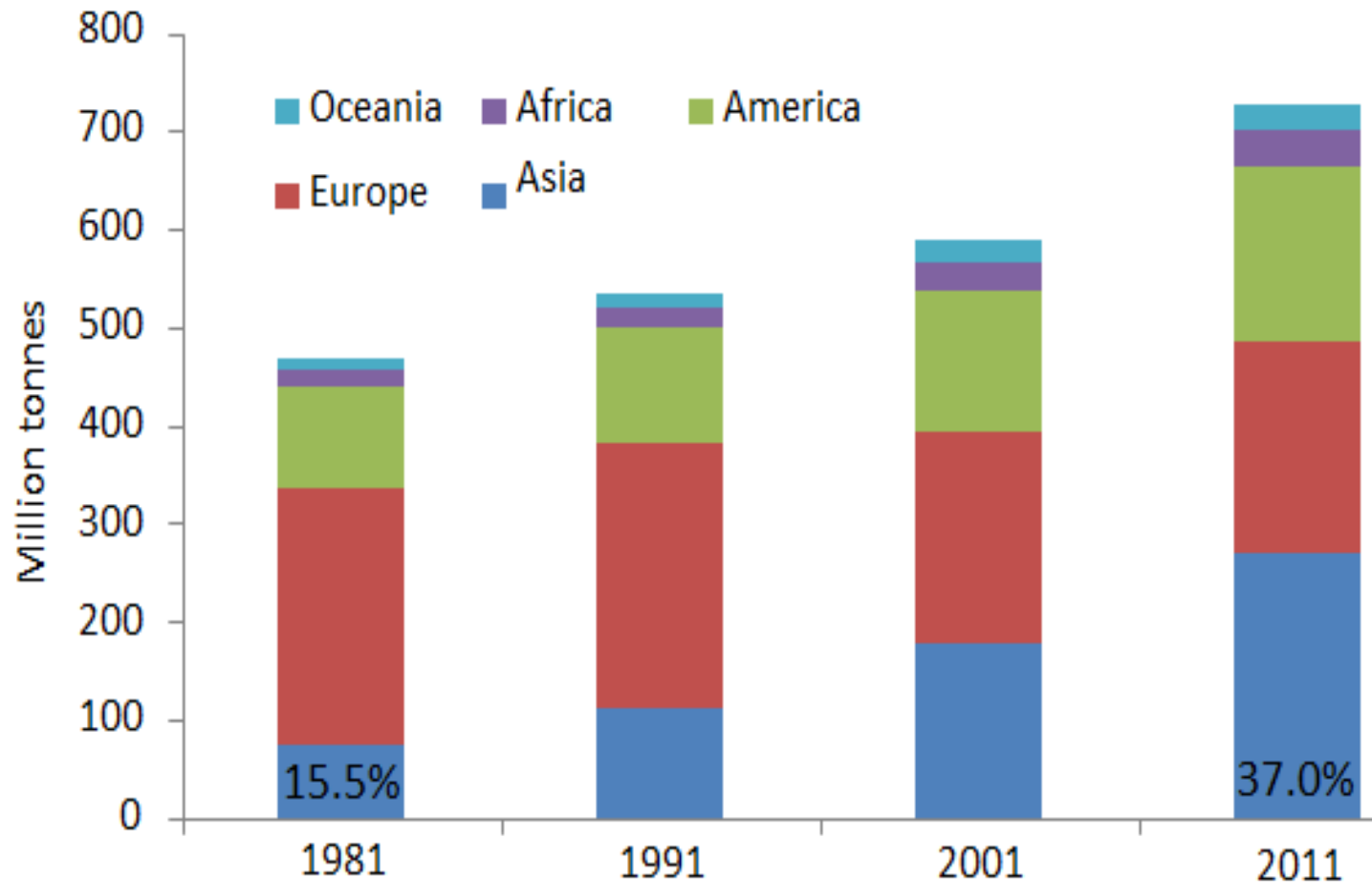
Livestock = source of livelihood,
subsistence and income, asset building

Density of Poor Livestock Keepers Year 2010*



*Update: March 2012

Asia's Growing Share in Global Milk



Differences between South and East Asia

South Asia

- Small scale, traditional
- Self-sufficient, exports
- Importance of buffaloes

East Asia

- Medium to large scale, modern
- Large and growing imports
- Mostly cattle

OPPORTUNITIES

People

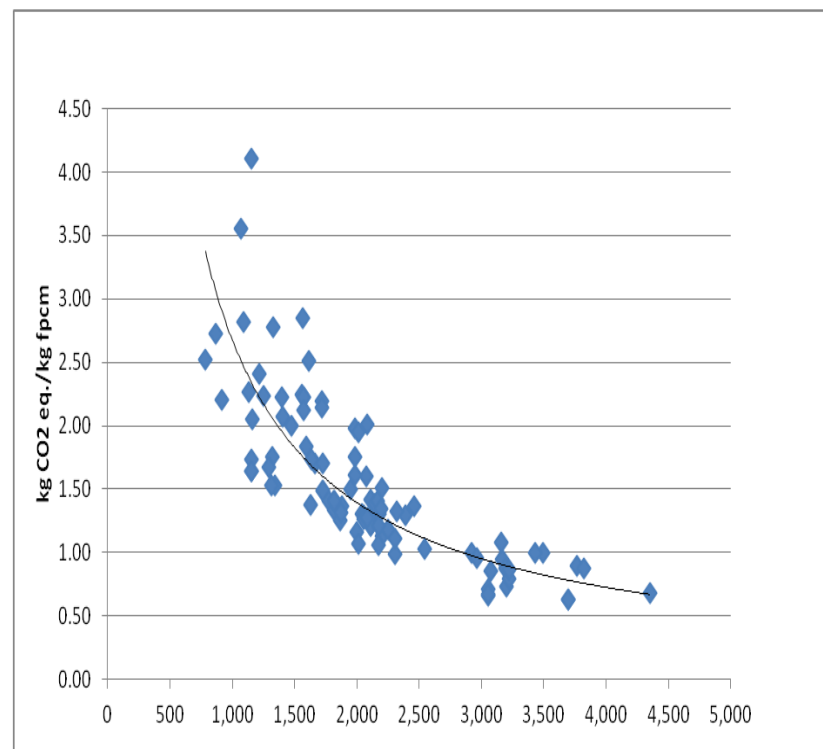
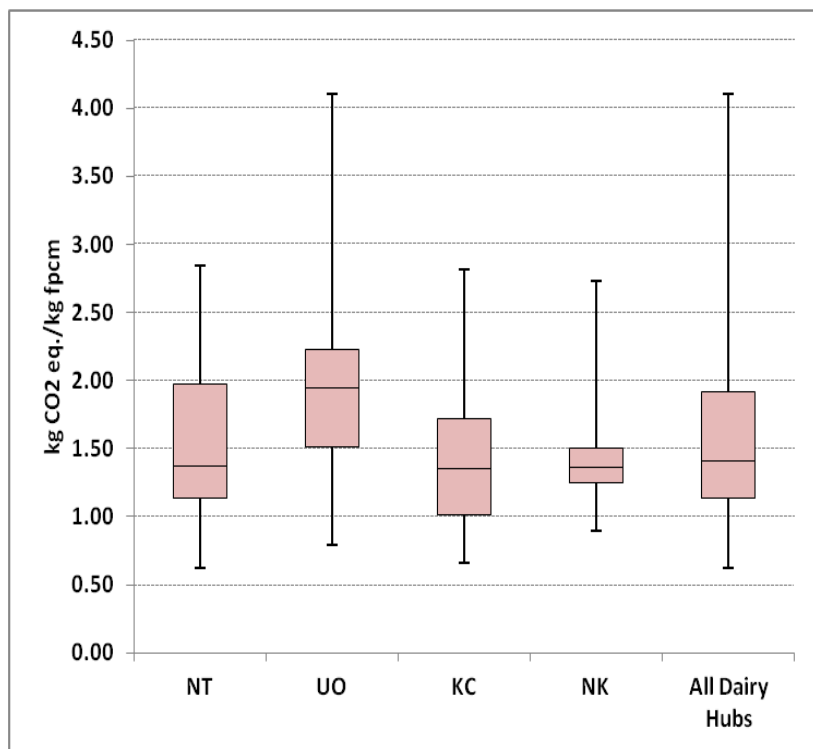
- Large numbers of rural poor familiar with livestock/dairy in areas of “endemic” poverty
- “start with what you have”
- Existing skills and motivation; asset building
- “baby steps” out of poverty; milk sales can pay for schooling, health, nutrition
- Collective action (cooperatives)

Practices

- Large productivity gap – can be closed with proven, improved practices
- Efficiency-enhancing innovation in feeds, genetics; health protection
- Productivity and emission intensity move largely in parallel
- Focus on scale-neutral technologies

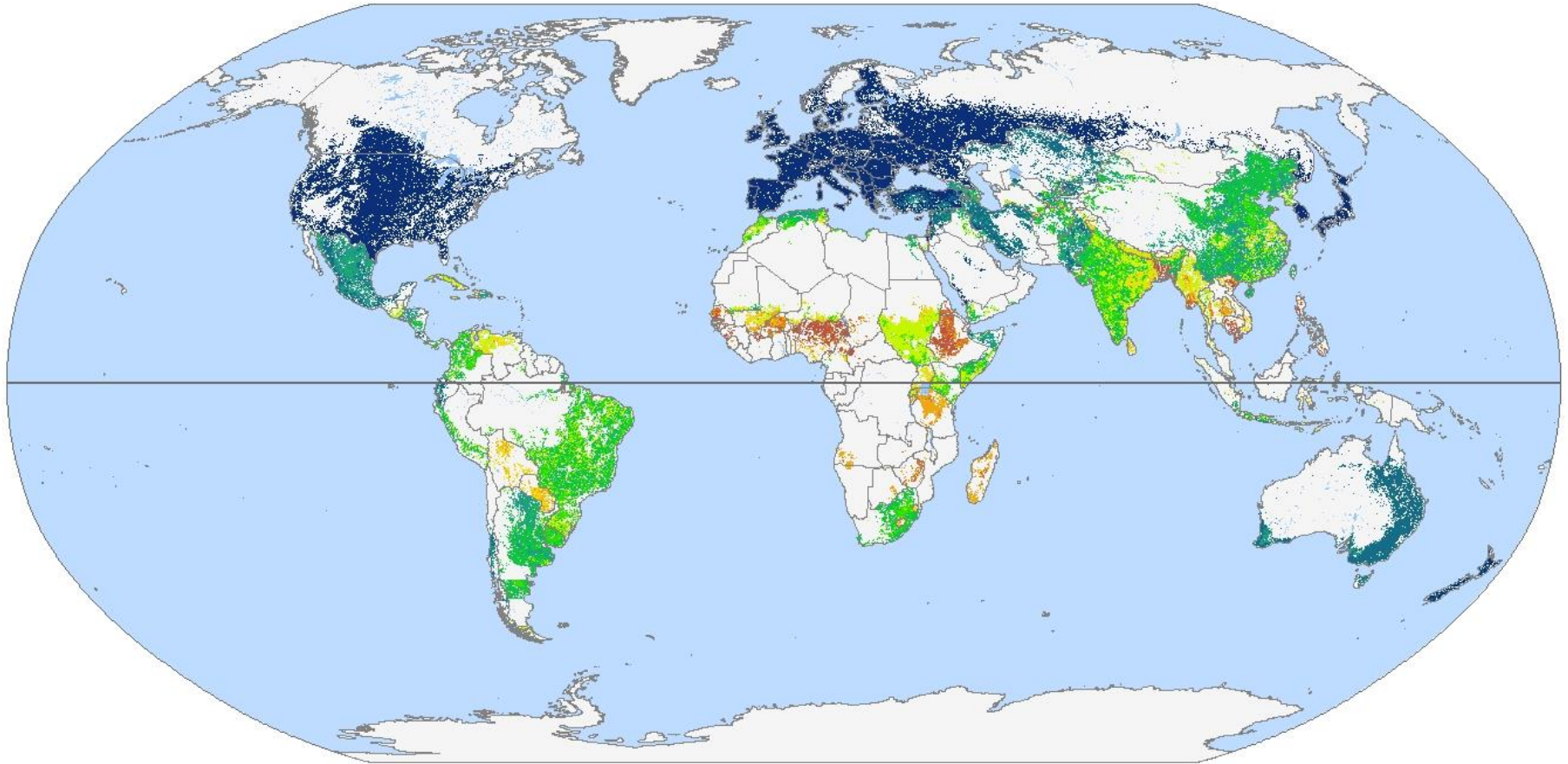
Is there an emission gap?

Emissions gap within systems: dairy production in Western Kenya



- smallholder mixed dairy system, temperate climate zone
- average milking herd: 2 cows per farm
- average milk yield: 1800 litres/cow/year

Methane Emission Intensities



Enteric methane (kg of CO₂ equivalent) per kg of edible protein



Markets

Growing demand for dairy products

Differentiated approach

- Livelihood oriented producers: importance of input markets (animals, animal health, supplementary feed)
- Market oriented producers: access to growing value chains, output markets, cold chains
- Income and employment in dairy value chains

Policies

- Focus on competitiveness (smallholders vs large; domestic vs international)
- Targeted and differentiated sector policies
 - Access to resources (CPR)
 - Access to markets and services; technologies; market information
 - Credit and insurance
 - Infrastructure
 - Institutional development and partnerships



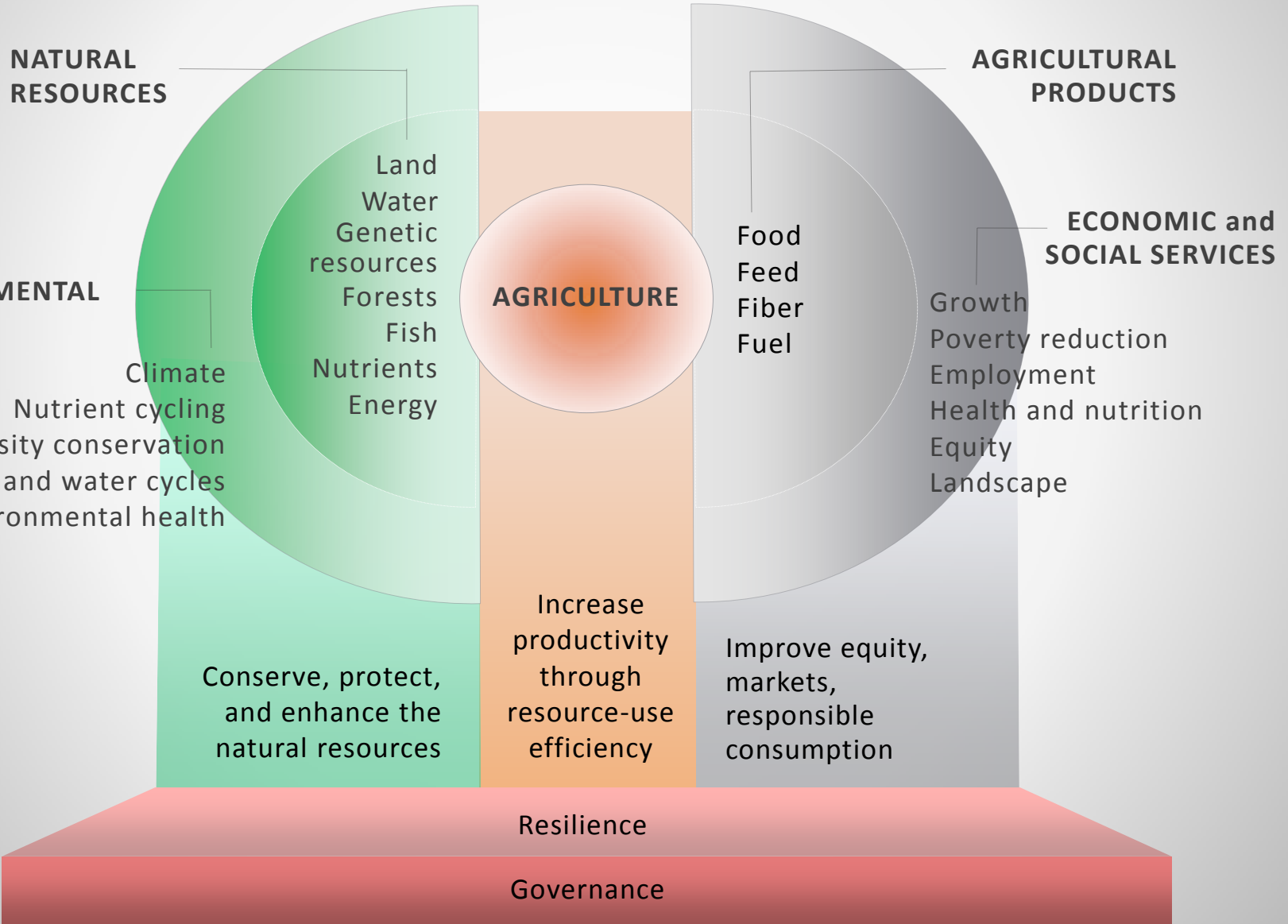
WHAT ARE THE RESPONSE OPTIONS?



PRINCIPLES AND COMPONENTS OF AGRICULTURAL SUSTAINABILITY: BALANCING HUMAN BENEFITS

NATURAL SYSTEM

HUMAN SYSTEM



Responses

Increase efficiency

- Efficiency of resource use – land, water, nutrients
- Emission intensity – CO₂ eq per unit of product
- Reduce waste through recycling and recovering nutrients and energy
- Requires incentives, regulations and continuous innovation



Responses

Enhance livelihoods and human well-being

- Incomes and food, inclusive development
- protect assets, enhance multiple functions of livestock
- Integrated landscape management (optimize contributions rather than maximizing output) for food, biodiversity, water, cultural values
- Address overconsumption – healthy diets



Responses

Protect resources

- Reduce food-feed competition
- Limit livestock's expansion into valuable eco-systems
- Integrated land use management (in particular in fragile eco-systems)
- Protect water resources
- Requires incentives and regulations



Responses

Increase resilience

- Livestock as a tool of adaptation
- Improve coping capacity with shocks

Improve governance

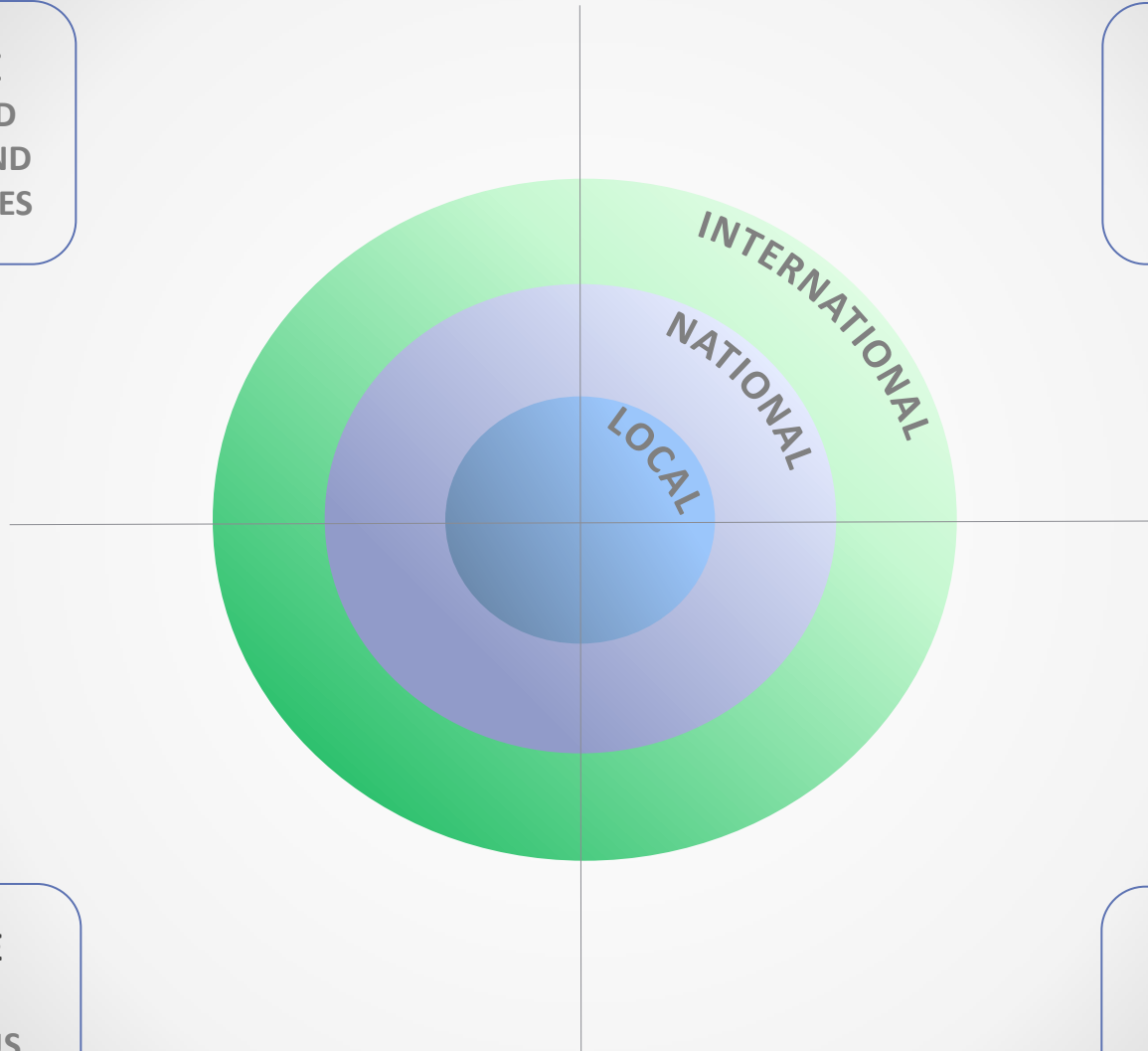
- Of global commons (e.g. climate)
- Of local commons (e.g. communal grazing, water)
- Incentive schemes (payment for environmental services, carbon markets)



LEVELS OF THE PROCESS

EVIDENCE
UNDERSTAND
PROBLEMS AND
OPPORTUNITIES

DIALOGUE
EXCHANGE
CONSULT



**PRACTICE
CHANGE**
CONTINUOUS
IMPROVEMENT

TOOLS
GUIDANCE
(RULES)
INCENTIVES

What FAO can contribute

- Knowledge: best practices, assessment and analysis, technologies in feeds, genetics, health
- Policy dialogue: intergovernmental, multi-stakeholder partnerships (Global Agenda for Sustainable Livestock)
- Develop policy options: integrated analysis, trade-offs, tools





GLOBAL AGENDA FOR SUSTAINABLE LIVESTOCK

Thank you

henning.steinfeld@fao.org

www.livestockdialogue.org

Sustainable livestock. For people, for the planet