

**Global Agenda of Action
in Support of
Sustainable Livestock Sector
Development**

Rome, 2 April 2012

The livestock sector is resource-hungry

- ~ 70 of total agricultural land, 35 % of all crop land
- ~ 60 % of total anthropogenic biomass appropriation
- ~ 29 % of agricultural water use
- substantial contribution to anthropogenic greenhouse gas emissions (being re-calculated)
- Driver of deforestation (pasture, soy) and degradation
- Major source of water pollution

Contributions

- 13 % of all dietary energy; 25 % of all dietary protein
- 1.5 % of world GDP
- Driver of rural growth in developing countries
- livelihood component to more than 1 billion people
- Component of food security

Livestock's resource use issues

- Production of animal protein is typically less efficient than that of plant protein
- Remoteness - areas often out of reach (neglect, expansion into forests, overgrazing)
- Intensive systems are often detached from land base - nutrient depletion and overloads

Livestock demand and resource constraints

Global demand to grow by
70 to 80 % by 2050

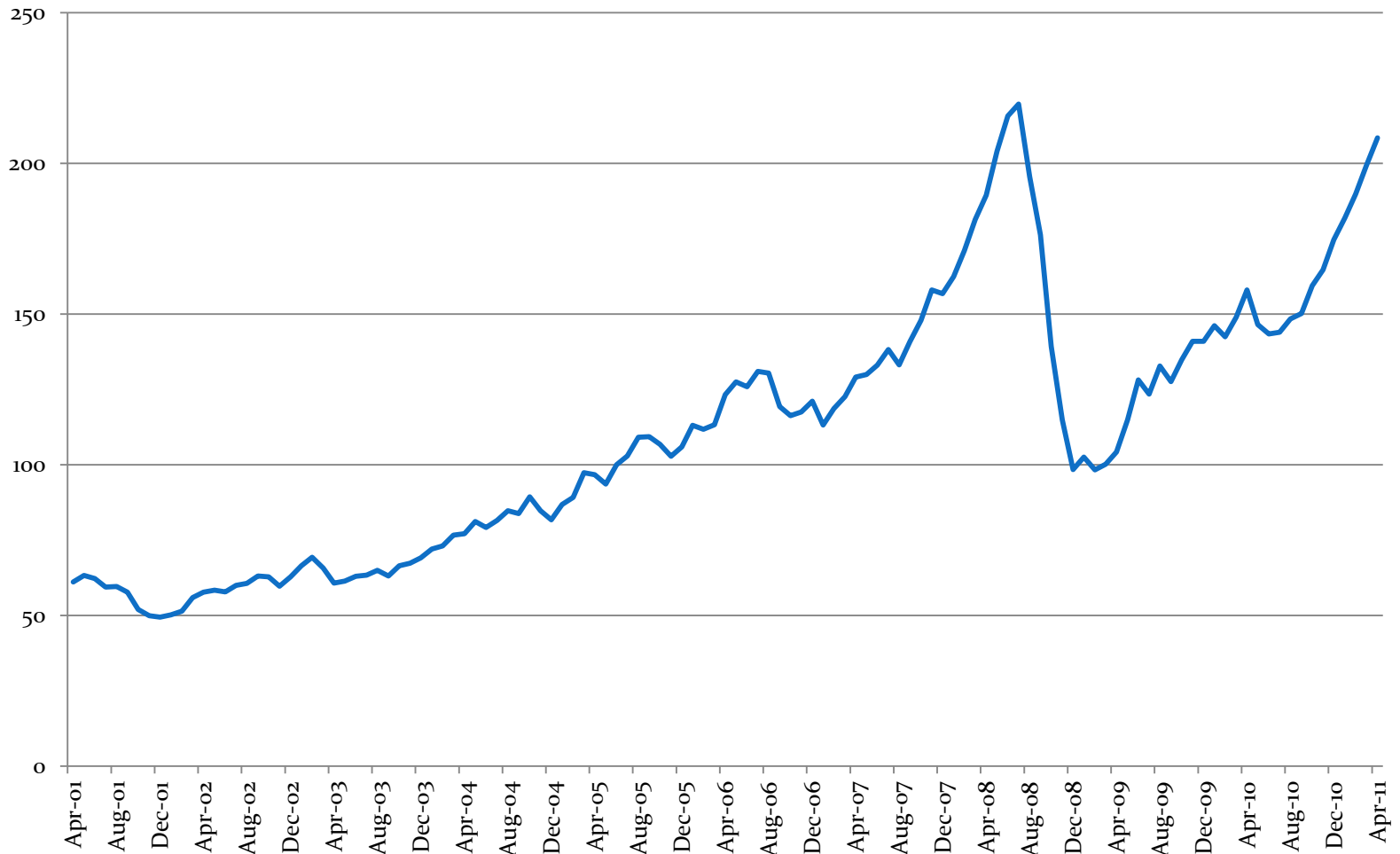
- Stagnant in rich countries
- Still strong in emerging countries
- Rapidly growing anywhere else

Growing scarcities and risks

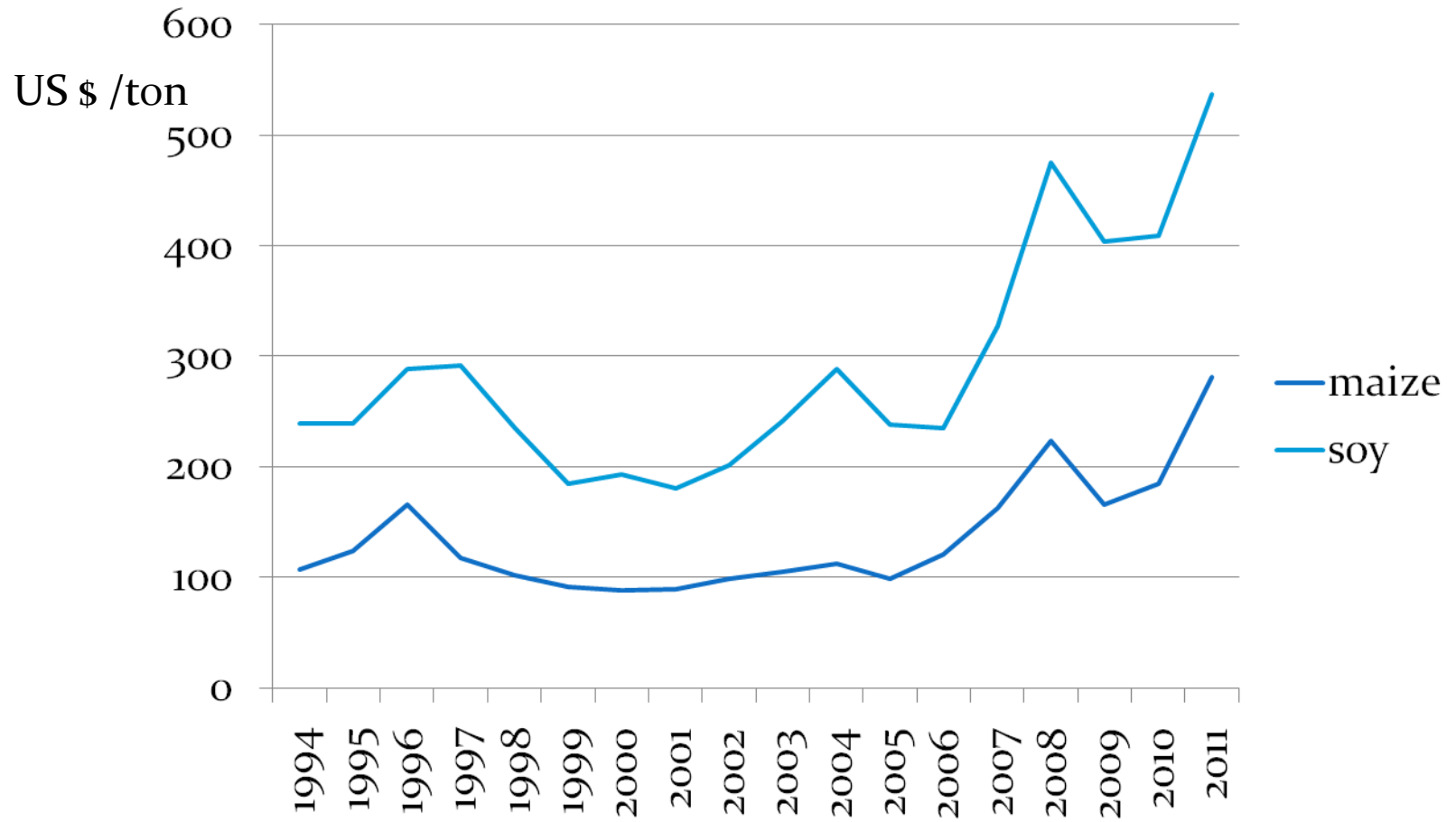
- Growing scarcities - oil, land, water, energy, phosphorus
- Environmental degradation and pollution
- Climate change

Commodity prices on the rise

Commodity Price Index Monthly Price



International prices for maize and soy



Point of Departure

- The livestock sector is resource-hungry
- The sector has specific resource issues
 - Low NRU efficiency
 - geographic dispersion (extensive systems)
 - geographic clustering (intensive systems)
- Demand will continue to grow and needs to be accommodated within finite resources
- Potential for social, health and economic gains needs to be seized

Direction of Change

Improving the efficiency of natural resource use

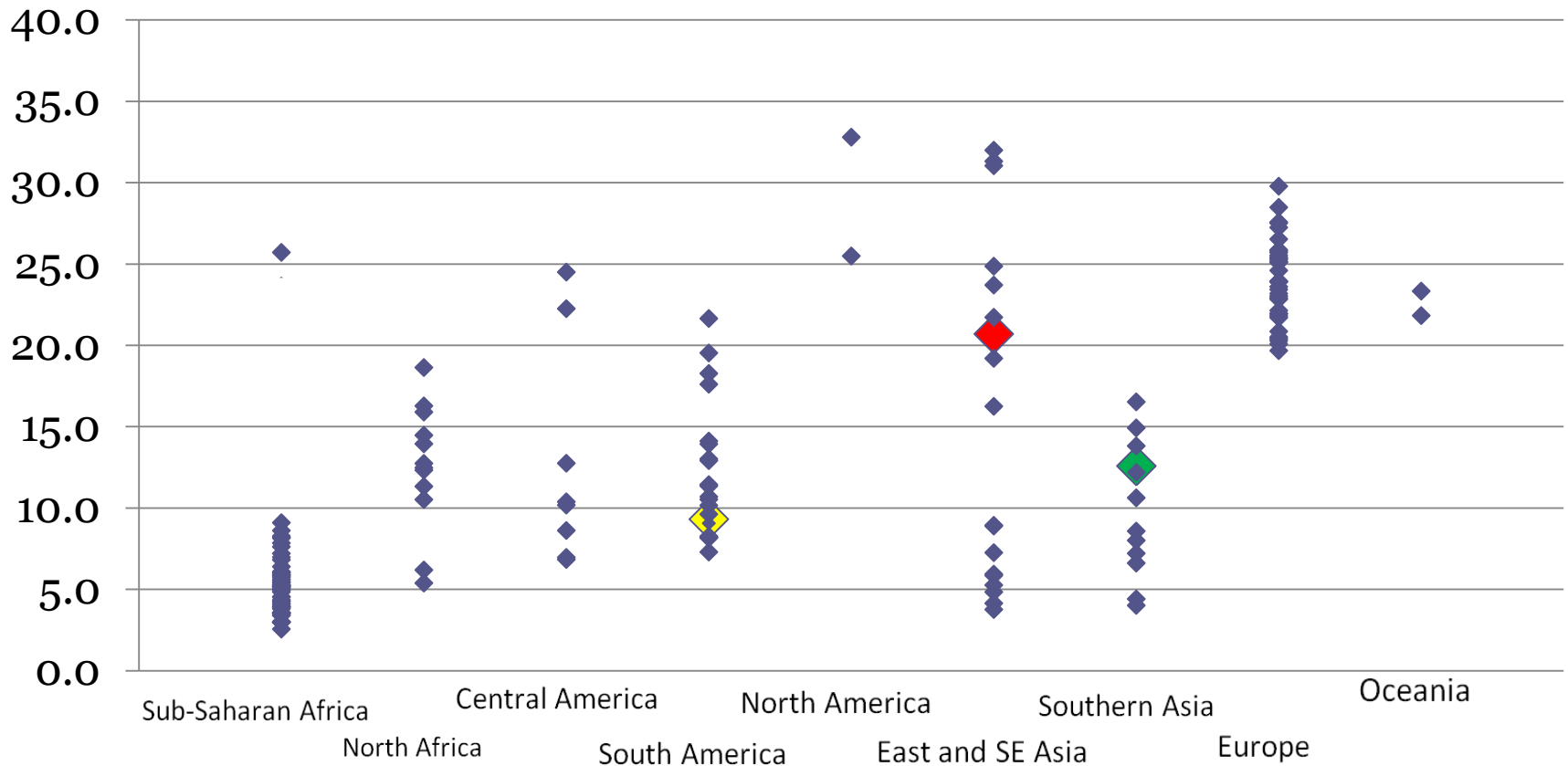
Three focus areas:

1. Closing the efficiency gap: catching up in technology adoption
2. Restore value to grasslands: supporting soil carbon, ecosystem health and productivity restoration with climate finance
3. Zero discharge: towards full recovery of nutrient and energy from animal manure

Closing the Efficiency Gap

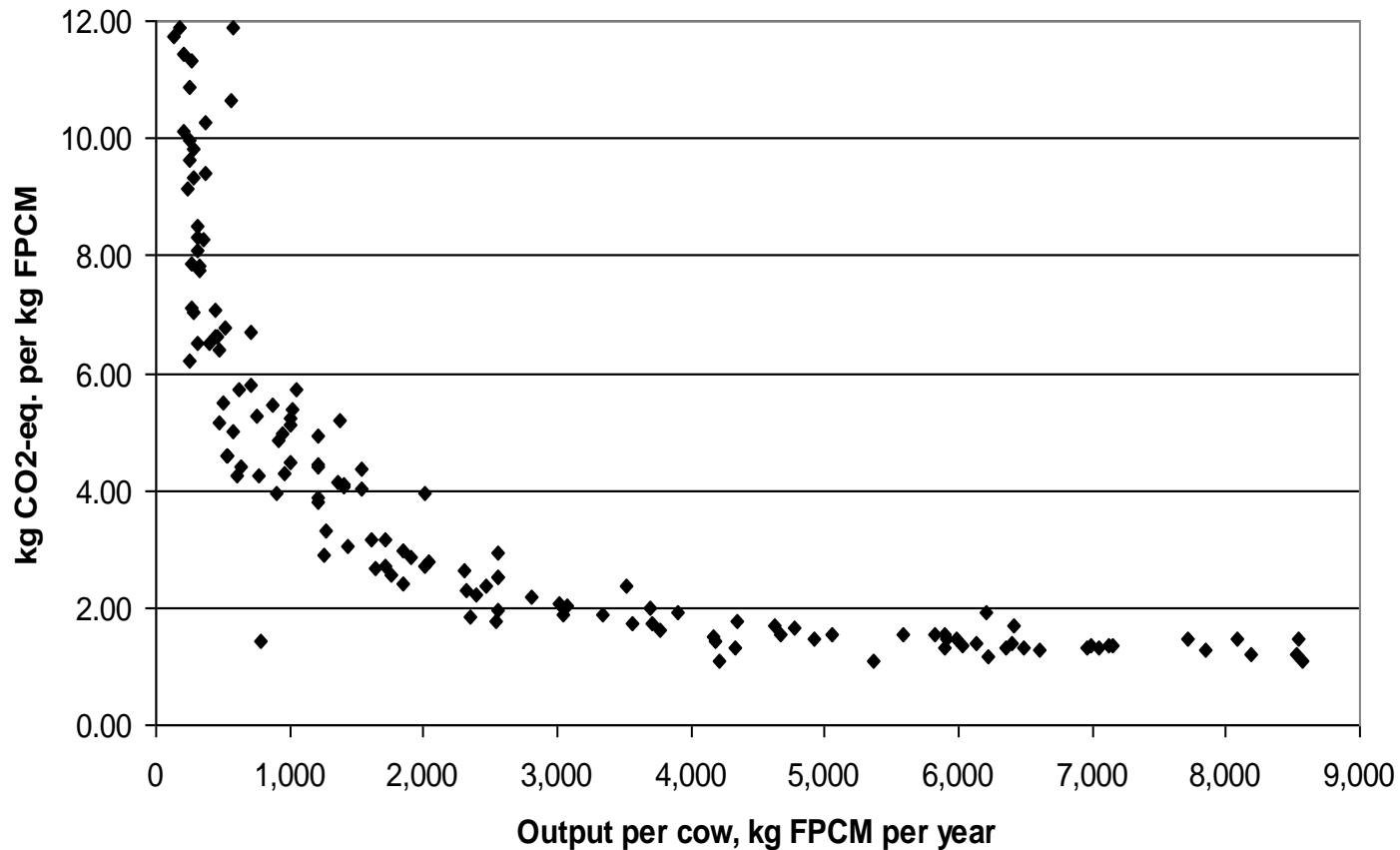
Inter-country comparison of nitrogen use efficiency in dairy production

(Share of ingested N found in milk and meat)



Source: FAO-AGAL

Relationship between total greenhouse gas emissions and milk output per cow



Source: Gerber et al.

Closing the efficiency gap





















- Resource constraints have started to “bite” - high commodity prices induce innovation and drive technology
- Productivity and efficiency gains move largely in parallel
- Huge gaps between attainable and actually attained efficiency
- Gaps can be narrowed with existing technology
- Globally there is more gain from large numbers of producers catching up than from pushing the frontier

Closing the natural resource use efficiency gap

What has changed: The natural resource constraint is increasingly perceived by stakeholders

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Actions	Governments	Private Sector	Civil Society Org.	Science	Inter Governmental Org.
Measuring efficiency Partnership					
Assessing natural resource use efficiency gap and options to close the gap					
Develop PPPs and other models to foster innovation and technology transfer					
Promote investment programmes for efficiency improvement					

Expected result: More knowledge intensive practices, with more efficient natural resource use

How do we express and measure natural resource efficiency?

Productivity and NRU efficiency are not the same

- Both are descriptions of efficiency
- Human-made inputs (labor, capital, knowledge)
- Natural resource inputs (land, water, nutrients, fossil energy, air)
- Prices and values may not be the same (externalities, market failures)
- Substitution processes

How do we express and measure natural resource efficiency?

- The need for broadly accepted units and easy ways of measuring them
- The issue of multiple and non-marketable products
- Global versus local scarcities
- Gas emission intensities to be included
- How to deal with trade-offs?

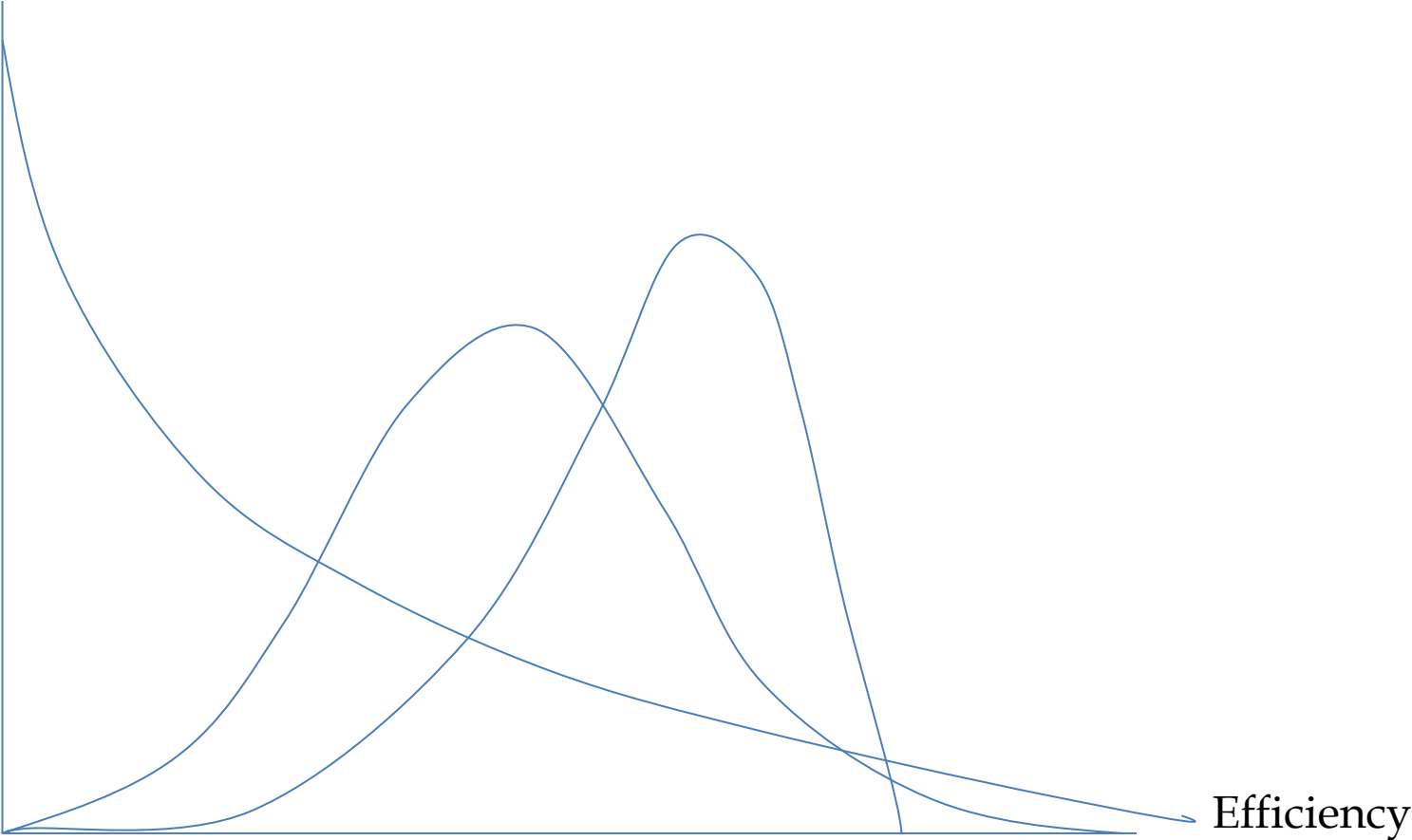
Where are the largest gaps?

- Animal species and commodity?
- Production system (grazing, mixed, industrial)?
- Geographical region?

- What shape of efficiency distribution?

What shape?

Frequency



What are the constraints to closing the gaps?

- Prices and incentives? Presence of market failures and externalities?
- Market barriers? Support services? Access to capital?
- Access to knowledge and technology? Technical capacities?
- Institutional framework and public policies?

Identify the targets

- High to medium potential but currently limited by constraints that are within reach; growing and functioning markets
- What combination of technical, institutional and policy approaches?

Towards a work programme

- Additional research
 - About the gap
 - About closing it
- Resource mobilization
 - Financial institutions
 - Private sector
 - Donors
- Transfer of knowledge and technology
- Development of conducive policy frameworks
- Proof of concept – pilots - investments

Tentative GAA Structure

