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

Source: The Economist
International prices for maize and soy

Source: FAO commodity prices, 2011
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
## Closing the natural resource use efficiency gap

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

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<td>Assessing natural resource use efficiency gap and options to close the gap</td>
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<td>Develop PPPs and other models to foster innovation and technology transfer</td>
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<td>Promote investment programmes for efficiency improvement</td>
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**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

Efficiency
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

GAA Multi-Stakeholder Platform

Stakeholder clusters
- Public sector
- Civil society
- Academia/research
- Private sector
- International organizations

GAA advisory group

Action programme clusters
- Restoring value to grassland
- Reduced discharge
- Closing the efficiency gap

GAA Secretariat
brokering, support, coordination