



GLOBAL AGENDA OF ACTION

IN SUPPORT OF SUSTAINABLE LIVESTOCK SECTOR DEVELOPMENT

Focus Area 1: Closing the efficiency gap

Livestock Information systems (LIS) in relation to FA1

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1. Background – FA1 doc.: closing the efficiency gap in NRU

1. Develop capacity to quantitatively evaluate and benchmark the environmental performance of different production systems and supply chains.
2. Assess the potential natural resource use efficiency gains that can deliver both environmental and production benefits.
3. These assessments need to be complemented with cost benefit analyses for suitable policy interventions.
4. Information generated and sharing. To be discussed.

1. Background – Liv. Inf. Syst. meeting (Brauns., 18-19/04/2013)

1. We have been discussing elements of LIS which could potentially have:
 - a) Global coverage
 - b) Able to make evaluation at the farm/field level
 - c) Able to analyze production, economics and environmental elements
2. LIS able to develop a detailed assessment of the gap.
3. For defining regions and production systems, as an example, FAO could provide GLEAM (Global Livestock Emissions Analysis Model), where a global scope could provide the first step to this process.
4. Other organizations could provide a multi-disciplinary approach in some regions where they have been working in (e.g. CIRAD).
5. A detailed assessment of the use of natural resources in relation to technical and economic efficiency can be explored by using the agri benchmark framework and models (network – standardized model).

2. Objectives

Objectives and expected outcomes

1. To explore the availability of livestock information systems (LIS) that can contribute to a better characterization and definition of production systems and regions
2. To exchange information regarding methodologies for collecting, processing, analyzing and benchmarking production systems and regions
3. To identify information systems which could be potentially used by the FAO for scoping production systems and regions to work with
4. To identify models and tools which can be used for the assessment of the changes implicated in the improvement of efficiency

3. What we have? Feedback from the FA1

Contribution to FA1 - Livestock information systems

	Type of data	Products covered	Updating	Availability	Regional coverage	Regional depth	Levels of measurements
	Physical, economic, environmental, socio-economic	Cow-calf, beef finishing, sows, hogs, ewes, lambs, milk cows	last year available, update annually, bi-annually	Public, exclusive, electronic, print	Country, regional, continent, global	Region (within a country), country, regional, continent, global	Whole-farm, enterprise, gross margin, total costs
agri benchmark	Physical, (socio-)economic, environmental (emissions)	All listed	2011 annual update	Public reports, result data bases for partners and projects	Global 29 countries	Typical farms, country regions, countries, regional	All listed
CIRAD	Farm accounting data energy balance "practices" reunion SSA-WA., Amazonia, Vietnam	Milk, meat	2010	Exclusively (depends)		Farm chain	
FAO-AGAL	Animal production system parameters (production, structure, feed,..), environmental	All main products	Year of reference 2005	Public	Global	From region to pixel	Supply chain level
ILRI		Dairy, pig, cattle and small ruminant		Public, some area exclusive (currently being used or analyzed) and depends on partners	Sub-Saharan Africa, Asia and Latin-America. Multiple projects in many countries	Covers the whole value chains, diverse production systems with an emphasis on smallholder livestock keepers	Whole value chain level measures

3. What we have? Feedback from the FA1

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Agricultural Horticultural Development Board (UK)	Production data http://markets.eblex.org.uk/markets/market-intelligence-publications.aspx http://www.dairyco.org.uk/market-information/farming-data/	Dairy, cattle. Sheep, pigs, cereals and oil seeds	Monthly, quarterly update	Public	UK	Commercial production	Farm level productivity, output, markets
	Emission factors for intensive pig and poultry rearing	pig and poultry within EU	data collection - to date	Public	UK	Commercial production	Farm level productivity, output, markets
PBL - Neth Env Assessment Agency	Animal production system parameters (production, structure, feed,...), environmental	All main products	Reference year 2005	Largely public	Global	From region to pixel	
EMBRAPA Brazil	Farm accounting data (nutrient balance and water footprint) and Animal production system parameters	Dairy, pig, cattle and poultry	Farm accounting data (annual update to dairy) Animal production system parameters (some data annual update)	Public and some exclusive	Brazilian States for animal production systems (pig, poultry, and dairy)	Typical farms and country regions	Whole-farm
ATB Germany	Farm data plant and livestock production	Dairy, beef cattle	on-going research using data from 2009 - ...	public articles	global	farm scale	whole-farm

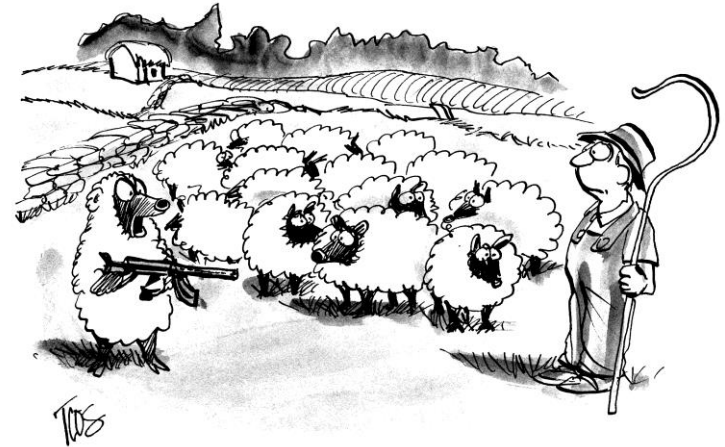
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3. What we have? Feedback from the FA1

A detailed assessment of the gap is needed

1. Identify the gap
2. Measure the gap
3. Define how to reduce the gap
4. Measure the change within the gap
5. Scale up



"There are gonna be some changes around here."

Therefore, an standardized LIS is required

3. What we have? Feedback from the FA1

Identify the gap

Measure the gap

How to reduce the gap

Measure the change

Scale up



a. Define efficiency boundaries

b. Define the scope for selecting and defining production systems and regions

c. Define criteria to select production systems and regions

d. Select production systems and regions where future strategic guidance could take place

3. What we have? Feedback from the FA1

Identify the gap

Measure the gap

How to reduce the gap

Measure the change

Scale up



- a. Define a standardised system for collecting, analysing and evaluating results
- b. Collect field/farm information for defining the base line
- c. Standard analysis and evaluation of the gap – preliminary results of the gap identified

3. What we have? Feedback from the FA1

Identify the gap

Measure the gap

How to reduce the gap

Measure the change

Scale up



a. Identify alternatives for reducing the gap

b. Define scenarios for selecting and implementing these alternatives

c. Modeling these alternative scenarios

d. Implementing the alternative(s) (piloting)

3. What we have? Feedback from the FA1

Identify the gap

Measure the gap

How to reduce the gap

Measure the change

Scale up



a. Compare new findings with previous base line

b. Quantify how much the gap has been reduced

c. Lessons learnt

3. What we have? Feedback from the FA1

Identify the gap

Measure the gap

How to reduce the gap

Measure the change

Scale up



Complex issue out of the range of this analysis

4. Discussion

1. Do we need a detailed and standardized assessment of the gap?
2. Production, environment and economic?
3. How deep this assessment might be?
4. How to measure a baseline scenario (*status quo*)
5. How to model alternative scenarios for selecting the most appropriate
6. How to measure the changes found?
7. Farm/field level