



FAO Online learning event :Tackling climate change through livestock: Global assessment and multi-stakeholder initiative
22-24 October, 2013

Livestock Environmental Assessment and Performance Partnership



LEAP is:

International, Multi-stakeholder, Partnership

Focused on:

- Livestock supply chains
- Life-cycle thinking
- Environmental assessment and performance

Based on principles of:

- transparency
- consensus
- science-based decision-making

The objective of LEAP

To develop internationally agreed sector-level methodologies and guidance to allow transparent, robust and fair measurement of the environmental performance of livestock supply chains



Why LEAP?



Livestock Supply Chains are Complex:

- Involve natural processes that are difficult to control and measure
- Multiple products, co-products
- Long supply chains
- Many actors
- Diverse farming systems
- Data challenges and scarcity
- Lack of guidance
- Challenging questions for LCA



There is lack of internationally agreed sector specific methodology and guidance to measure the environmental performance of livestock supply chains.



Why LEAP?

In a marketplace that is demanding more information on products AND with a sector that is working to improve performance...

A lack of internationally agreed harmonized measurement approaches can lead to.....

- Confusion between different measurement approaches
- Potential discrimination between products
- A lack of understanding of environmental impacts or opportunities to improve performance across the supply chain.
- Possible biased approaches being used to favor a product, farming system, country.
- Inability to measure progress of interventions or management changes across supply chains.
- Distraction from focus on **REAL MEASURABLE IMPROVEMENT** of the livestock sector and its products.

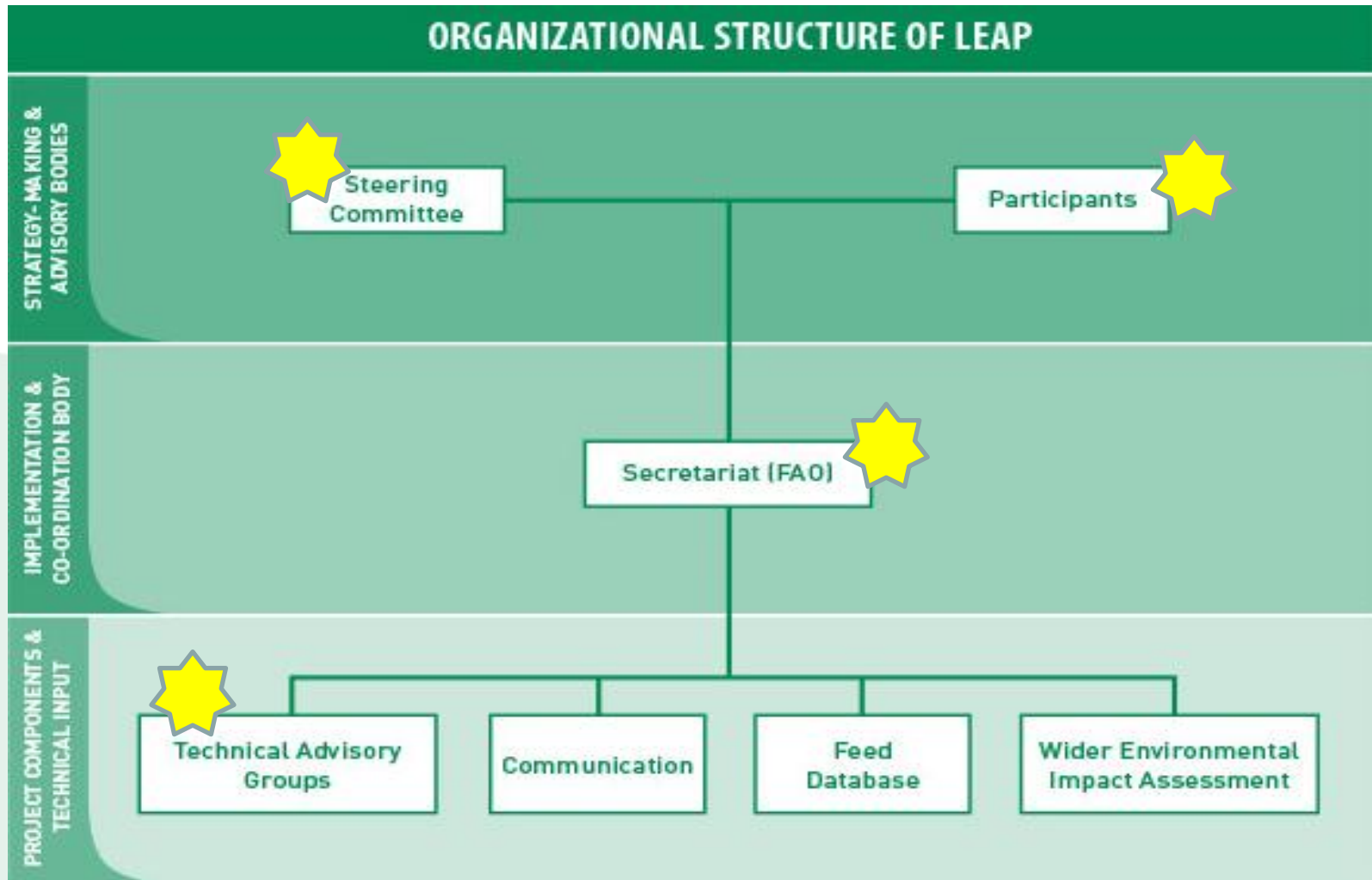


Who is LEAP?



LEAP

Organization Design of LEAP



How is it governed?

By a Steering Committee currently made up of:

Governments

Industry

Civil Society
Organizations

?



What is LEAP doing?



The objective of LEAP

To develop internationally agreed sector-level methodologies and guidance to allow transparent, robust and fair measurement of the environmental performance of livestock supply chains

e.g. defined output of producing international methodology and guidance for measuring the environmental performance of animal feed chains by March 2014.

The Actions of the Partnership

2012-2015



PHASE 1 Common principles and core approaches

- Project plan
- Launch of LEAP (July 2012)

- Common principles and elements
- Communication strategy

PHASE 2 Development of GHG/Environmental assessment guidance

- Small Ruminants (goats and sheep) TAG*
- Animal Feeds TAG
- Poultry TAG
- Development of feed database
- Biodiversity methodology review

PHASE 3 Development of GHG/Environmental assessment guidance

- Large Ruminants TAG
- Swine TAG
- Feed database and platform live trial
- Biodiversity TAG
- Water methodology review

PHASE 4 Methodology improvement and wider environmental impacts

- Nutrient use efficiency project
- Water TAG
- Case studies and review
- Data and methodology improvement

PHASE 5 Review and evaluate

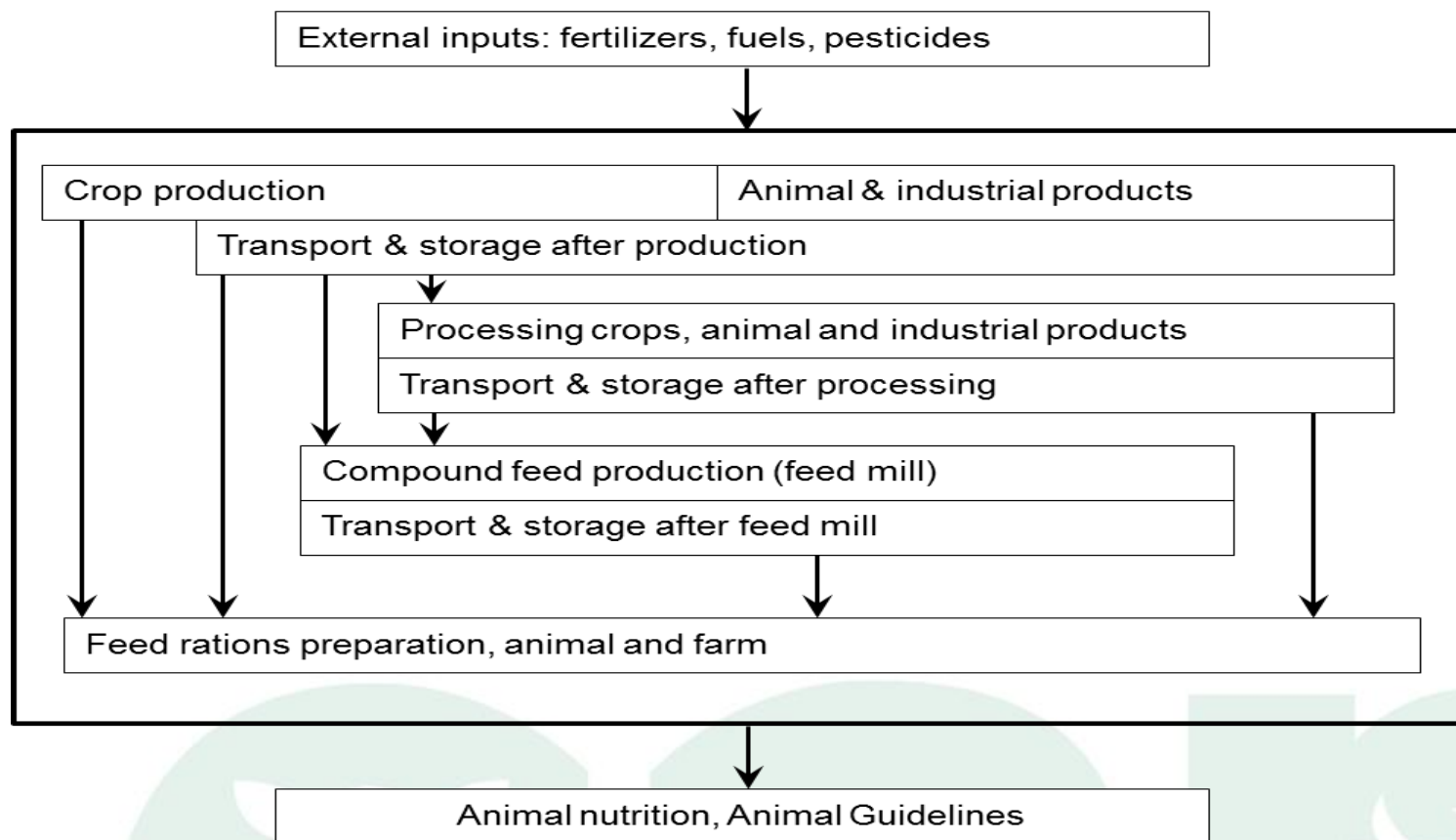
- Environmental assessment guidelines published
- Feed database and platform completed
- Evaluation and next steps

* TAG: Technical Advisory Group

Let's look at an example.....

Animal Feeds TAG

- ✓ Strong basis of knowledge-sharing and cooperation
- ✓ Experts from around the world (20)
- ✓ Full environmental footprint methodology, aligned with international approaches
- ✓ Aim for completion by March 2014
- ✓ Complemented by a feed database to allow access to quality data
- ✓ Case studies to illustrate application and to fully test guidance and methodology
- ✓ Full International Review



System boundary diagram for the life cycle of feed (roughages, crop residues, co-products, compound feeds, etc.). The inputs are outside the main system boundary, because no guidelines are defined for these (background data), but the emissions for producing the inputs is incorporated.

What impact categories shall/should be included?

Mandatory to report (shall)	Mandatory to explore (shall be considered)	Voluntary to report (may)	Impact categories	Impact Assessment model	EF Impact Category indicators	Source
X			1. Climate Change	Bern model - Global Warming Potentials (GW over a 100 year time horizon).		
X			1a. Climate Change due to land use change (=land transformation)			
		X	2. Ozone Depletion	EDIP model		
	X		3 Ecotoxicity for aquatic fresh water	USEtox model		
X			11. Eutrophication, aquatic	EUTREND model	fresh water: kg P equivalent marine: kg N equivalent	Struijs et al, 2009 as implemented in ReCiPe
	X		12. Resource depletion, water consumption	water scarcity footprint		(Ridoutt, B.G. and Pfister, S., 2010)
X			13. Resource depletion, mineral & fossil	CML 2002 model	Kg antimony equivalent	Van Oers et al 2002
X			14. Land occupation	N.A.	M2*years per land use category and country/biome	This document
X			15. Land transformation	N.A.	M2 per land use category change per country calculated according to PAS2050/2011	This document
		X	16. Marine Resource depletion	Wasted Potential Yield (WPY) if operational	Kg or MJ of wasted biomass	To be checked if method is operational

Mandatory to report (shall)	Mandatory to explore (shall be considered)	Voluntary to report (may)	Impact categories	Impact Assessment model	EF Impact Category indicators	Source
		X	5. Human toxicity, non-cancer effects	USEtox model	CTUh (Comparative Toxic Unit for humans)	Rosenbaum et al, 2008
		X	6. Particulate matter/Respiratory inorganics	RiskPoll model	kg PM2.5 equivalent	Rabl and Spadaro, 2004
		X	7. Ionising radiation, (human health)	Human Health effect model	kg U235 equivalent (to air)	Dreicer et al. 1995
		X	8. Photochemical ozone formation	LOTOS-EUROS model	kg NMVOC equivalent	Van Zelm et al, 2008 as applied in ReCiPe
			9. Acidification	Accumulated Exceedance model	mol H+ eq	Seppälä et al.,2006, Posch et al, 2008
			10. Eutrophication, terrestrial	Accumulated Exceedance model	mol N eq	Seppälä et al.,2006, Posch et al, 2008

Contacts

- www.fao.org/partnerships/leap

General questions:

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Specific questions:

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- Nutrient Efficiency to Aimable.Uwizeye@fao.org
- Feed related questions to Carolyn.Opio@fao.org