



## FAO LEAP Technical Advisory Group (TAG) on Ecosystem Services

### *Terms of reference*

#### **BACKGROUND**

Livestock are a major driver in most rural landscapes and economics and contribute to food security and nutrition, but it also polarizes debate over its environmental impacts, animal welfare and human health. Conversely, the various services that livestock farming systems provide to society are often overlooked and have rarely been quantified.

Ecosystem services are the benefits people obtain from ecosystems. These include provisioning services such as food and fiber; regulating services for air quality, climate, water, disease, pollination, or natural hazard; cultural services that provide recreational, aesthetic, education values, social relations, and spiritual benefits; and supporting services such as soil formation, photosynthesis, water and nutrient cycling. To build strategies for truly sustainable production systems, their reliance on and support to ecosystem services needs to be understood and acknowledged.

Several scientists and researchers have proposed indicators for the assessment of ecosystem services in Life Cycle Assessment (LCA). However, these studies have developed specific characterization factors for the integration of ecosystem services in the impact assessment phase of LCA, but many knowledge gaps exist. The majority of these indicators are still not operational and few studies have presented a comprehensive list of ecosystem services for inclusion in Life Cycle Impact Assessment (LCIA). There is also a lack of technical guidance for mapping and valuing ecosystem services in livestock systems at a different scale.

Mapping and valuing of ecosystem services must have clear guidelines on how this should be carried out based on the objective, to guarantee consistency such as a set of common principles, definitions, classifications, accounting rules and impact assessment procedures. There is an increasing need to develop a harmonized international approach to assessing and evaluating the contribution of ecosystem services in livestock production.

A new FAO LEAP Technical Advisory Group will be formed to develop a guideline on measuring and accounting for the multifunctionality of ecosystem services provided by livestock species and their production systems in LCA.

#### **AIMS OF THE ACTIVITY**

With this call an FAO LEAP TAG will be formed with the following aims:

- to build consensus on principles and guidelines to assess ecosystem services from livestock value chains.
- to allow assessing synergies and trade-offs among ecosystem services to evaluate the impact of interventions for GHG mitigation and adaptation to climate change in the context of NDCs.

Guidelines will be developed building also on findings of the FAO LEAP TAGs on Biodiversity, Nutrients, Water and Soil Carbon stock changes.

### **DELIVERABLES**

- Guidelines to integrate and account for ecosystem services in the life cycle assessment of livestock supply chains.
- Scientific article on the key findings and consensus reached.

### **ROLE AND ENGAGEMENT**

TAG members are invited to actively participate in four virtual meetings. Each meeting will last up to two days. In addition to participation in the meetings, TAG members are expected to continue to work on TAG deliverables under the overall guidance of the TAG chair to deliver quality technical products on schedule. Active participation in TAG activities also guarantees co-authorship of the technical products. TAG members report to the TAG chair. LEAP will not grant any honorarium to TAG members.

Minimum requirements include:

- Working knowledge of English.
- Skilled in team working and hence in constructively sharing views and knowledge.
- Highly motivated and committed to developing sound tools enabling support transparent decision-making at various scales and in all regions worldwide.
- Respect for the cultural and scientific diversity of TAG members.

### **QUALIFICATIONS**

TAG members are technical experts having a strong background in one or more of the following subjects: plant science, animal science, life cycle assessment, livestock production systems, soil science, climate science, ecology, and environmental chemistry. Ideally, TAG members have a track record in research-proven through peer-reviewed publications.

### **JOINING FORCES WITH OTHER INITIATIVES**

A TAG will be jointly formed with GASL action networks and will involve, amongst others, GACSA, the Global Soil Partnership, and scientific communities such as the UNEP-hosted Life Cycle Initiative and the Ecosystem Services Partnership.

Guidelines will be developed building also on findings of the LEAP TAGs on Biodiversity, Nutrients, Water and Soil Carbon.

The alliance with other GASL action networks will allow the TAG to also address socio-economic aspects associated with ecosystem service

## TIMELINE

TAG formation	1 <sup>st</sup> meeting	2 <sup>nd</sup> meeting	Paper submitted for publication	Draft technical report for review	Technical review	Public review	Release of the Technical Report
20 January 2023	15 March 2023	15 June 2023	30 October 2023	30 October 2023	20 November 2023	10 December 2023	15 January 2024

## APPLICATION

Candidates are kindly requested to submit their CVs to the LEAP Secretariat (Livestock-Partnership@fao.org) by 20 December 2022. CVs must include an updated list of publications and work experiences. All applications will be reviewed by the LEAP Secretariat. Merit and gender balance are two key selection criteria.