



Technical Advisory Group (TAG) on integrating Circular Bioeconomy approaches in the environmental assessment of the livestock supply chains

Terms of reference

BACKGROUND

With an increasing global population and consequently, food demand, the livestock sector represents a key actor to address the challenge of global food and nutrition security, but the sector also uses some feed resources that are edible to humans, resulting in food-feed competition. To reduce this competition for resources, the livestock sector has taken the opportunity of the large availability of agro-industrial by-products and crop residues and the ability of ruminant and monogastrics to convert non-edible biomass into high-quality proteins, thus contributing to the circular bioeconomy approaches. Nevertheless, the Circular bioeconomy approaches attempt to reduce the consumption of resources by promoting the more efficient use of materials and energy through the reuse and recycling of waste hence animal production can contribute efficiently to the Bioeconomy for a sustainable food chain, providing multiple benefits.

There has been a rapid increase in publications on the research area of bioeconomy and many are mapping possible recovery options for agro-industrial by-products as alternative feed or the use of livestock residues and waste streams.

It is, however, missing a database displaying the potential of the livestock sector to contribute to circular bioeconomy approaches. In addition, the FAO LEAP Guidelines do not guide how to compare the environmental footprint of alternative feed or other recovery options.

To define and develop methodologies and metrics to account for the Circular Bioeconomy approaches in the livestock sector, a Technical Advisory Group of experts will be formed. The TAG will review the main and emerging recovery options for livestock production residues and waste streams as well as alternative feed resources and will develop technical guidelines to conduct the environmental footprint of recovery options and assess potential offsets.

AIMS OF THE ACTIVITY

Nonetheless, concerning the challenges put forward the aims of this TAG will be:

- To describe recovery options for livestock residues and waste streams.
- To build consensus on how to compare the environmental footprint of recovery options for livestock residues and waste streams.
- To build consensus on how to account for potential carbon offsets from circular bio-economy approaches.

DELIVERABLES

- Guidelines to compare the environmental footprint of recovery options for livestock residues and waste streams as well as alternative feeds (agro-industrial by-products), and to assess potential offsets from circular bio-economy approaches
- A scientific publication highlighting the key findings, consensus reached and emerging issues

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. All TAG members report to the TAG co-chairs. LEAP will not grant any honorarium to TAG members.

Minimum requirements include:

- Working knowledge of English.
- Expertise in the circular bio-economy approaches, livestock, animal science, feed technology and processing, waste management, and animal product rendering,
- 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, feed industry, 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

FAO LEAP is going to team with The Global Research Alliance, the Global Alliance for Climate-Smart Agriculture, the Life Cycle Initiative, and the Global Soil Partnership for this guideline development.

As an action network of the Global Agenda for Sustainable Livestock (GASL), FAO LEAP will also seek input from the GASL academia cluster.

TIMELINE

| TAG formation | 1 st meeting | 2 nd meeting | Paper submitted for publication | Draft technical report for review | Technical review | Public review | Release of the Technical Report |
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| 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, regional balance and gender balance are two key selection criteria