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COMMITTEE ON AGRICULTURE

SUB-COMMITTEE ON LIVESTOCK

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Alignment of FAO's work on livestock to the Strategic Framework 2022-31

Executive Summary

FAO supports its Members to strengthen the contribution of livestock systems towards achieving the Sustainable Development Goals (SDGs). FAO's work on sustainable livestock systems is at the interface of the *four betters* of FAO Strategic Framework 2022-31: *better production, better nutrition, a better environment* and *a better life*. Sustainable livestock systems play important roles in achieving each of these aspirations. This document describes how FAO's work on livestock aligns with the Strategic Framework.

Better production in livestock systems,¹ as well as being an important aspiration, underpins each of the other three *betters*. When improving productivity, synergies must be harnessed with other *betters* and potential trade-offs identified and managed, taking a systems approach. Natural resources must be used efficiently to minimize environmental externalities, negative social impacts must be avoided, and the best possible health and welfare of the animals raised under our care must be ensured. Multi-stakeholder platforms can help facilitate discussion around synergies and trade-offs among sustainability objectives.

Animal source food is nutrient-dense and provides energy and many essential nutrients such as proteins, fatty-acids and micronutrients, contributing greatly to **better nutrition**. FAO aims to promote an optimal contribution of animal source food to healthy diets for all.

Livestock systems draw heavily on natural resources, emit greenhouse gases and, if not managed in a sustainable way, can contribute to detrimental land-use change, land degradation and environmental pollution. FAO strives to help Members optimize the contribution livestock systems make to a **better environment**.

¹ Livestock systems embrace all aspects of the supply and use of livestock commodities, including the distribution and abundance of livestock, the different production systems in which they are raised, estimates of consumption and production now and in the future, the people engaged in livestock production, and the benefits and impacts of keeping livestock (see <https://www.fao.org/livestock-systems/en/>).

Livestock systems contribute to the livelihoods of many millions of people who depend on them for their livelihoods. FAO endeavours to ensure that the diversity of livestock systems is acknowledged and builds upon the multiple contributions livestock play towards a *better life*.

Suggested action by the Sub-Committee

The Sub-Committee is invited to recommend COAG to:

- invite Members to acknowledge and reflect in their policies, as appropriate, the diversity of livestock systems and the varied roles livestock play in contributing to food security, nutrition, livelihoods and inclusive economic growth; and
- further invite FAO to enhance livestock's contribution towards the SDGs by mobilizing data, innovation, technology and complements – in particular through strategic partnerships.

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I. Introduction

1. At its twenty-seventh session, the Committee on Agriculture acknowledged the roles of livestock in achieving the SDGs, as well as FAO's work to support this.² Livestock are integral to agricultural systems more broadly and interact with many dimensions of sustainability.

2. FAO supports Members in transforming livestock systems to (i) contribute to food security, nutrition and healthy diets; (ii) provide opportunities for inclusive economic growth and improved livelihoods; (iii) improve animal health and welfare; and (iv) protect natural resources and respond to climate change.^{3,4} The programme of work of the Committee on Agriculture's Sub-Committee on Livestock is organized around these sustainability objectives, which are well aligned with the FAO Strategic Framework 2022-31.

3. To accelerate progress, and foster synergies and manage possible trade-offs across sustainability objectives, the FAO Strategic Framework envisages four accelerators: technology, innovation, data and complements (governance, human capital and institutions) in support of programmatic interventions.

4. This document describes the alignment of FAO's work on livestock with its Strategic Framework and looks at ways to enhance the contribution of livestock to the *four betters* and the SDGs more broadly.

² C/2021/21, paragraph 11.

³ COAG/2020/5.

⁴ FAO. 2018. *World Livestock: Transforming the livestock sector through the Sustainable Development Goals*. Rome. 220 pp. (also available at <https://doi.org/10.4060/ca1201en>).

II. Livestock in the Strategic Framework 2022-31

A. *Better production*

5. This aspiration is fundamental to each of the other three betters. In many parts of the world, technical and organizational innovations – such as improved feeding, genetics, animal health, husbandry practices and information technology – are driving up productivity of livestock, feed crops and pastures.

6. Sustainable intensification of livestock systems ensures a better integration with other agricultural sectors, as part of bioeconomy, and the enhancement of synergies and management of potential trade-offs across different dimensions of sustainability. Multi-stakeholder engagement can facilitate discussion around these synergies and trade-offs.

7. Within-system comparisons reveal large variations in productivity, suggesting considerable scope to improve efficiency through broader adoption of best practices in different contexts. Productivity growth has mostly responded to increasing consumer demand and economic drivers, rather than to the need to achieve other dimensions of sustainability. Where such forces are weak – such as in systems with poor market access or where livestock serve social and other functions beyond productivity – public policy should be directed to create an enabling environment to improve and strengthen market mechanisms.⁵

8. Animal health and welfare deserve special attention due to their links with improved productivity, human health and environmental health. This is the principle underpinning “One Health”, whereby livestock systems are at the nexus of human, animal and environmental health.

9. Better animal health and welfare can raise productivity and enhance livestock’s contribution to better nutrition and livelihoods, and a better environment. The devastating impacts of diseases can be reduced or prevented. The global burden of food-borne diseases, many of which are carried by livestock products, was 33 million disability-adjusted live years in 2010. Of that burden, 40 percent was borne by children under five years of age. Tackling zoonotic diseases with pandemic potential – emerging from growing opportunities for pathogen transmission among people, animals and the environment – at the source is of paramount importance.

10. Good animal welfare requires not only disease prevention and veterinary treatment, but also appropriate housing, shelter, management, nutrition, and humane transport and slaughter of livestock.

11. Growth in livestock production globally has been accompanied by an increase in use of antimicrobials, not only to treat infections but also to prevent disease and promote growth. There is an urgent need to address the use of antimicrobials to reduce antimicrobial resistance (AMR).⁶

12. What FAO is doing:

- supporting Members in the sustainable development of livestock systems by offering expertise and assistance in livestock production, health and systems analysis;
- collecting, processing, validating and disseminating FAOSTAT annual data on livestock production and trade for Members to support agricultural and food security policies and programmes;⁷
- supporting Members in implementing the Global Plan of Action for Animal Genetic Resources by providing technical and policy support, and monitoring the status of animal

⁵ See COAG:LI/2022/3.

⁶ COAG:LI/2022/7.

⁷ FAO. 2021. Crops and livestock products. In: *FAOSTAT* [online]. Rome. Updated as at 21 December 2021. [Cited 13 January 2022]. <https://www.fao.org/faostat/en/#data/QCL>.

genetic resources, including through the Domestic Animal Diversity Information System (DAD-IS), which contains data for the calculation of SDG indicators 2.5.1b and 2.5.2;

- facilitating multi-stakeholder dialogue at all levels to formulate and design policies and investments that facilitate a sustainable transformation of the livestock sector, for example through the Global Agenda for Sustainable Livestock (GASL);
- supporting Members with knowledge and capacity development to address animal welfare in livestock production, comply with internationally agreed standards, and apply best practices; such practices recognize animals as sentient beings and respond to societal concerns and that the improved animal welfare is essential for improved animal health and productivity;
- implementing One Health, with Tripartite partners the World Health Organization (WHO) and the World Organisation for Animal Health (OIE); a One Health priority programme (BP3) integrates One Health across agrifood systems to address biological threats, including zoonotic infections of pandemic potential and AMR;
- developing, with the other two tripartite partners WHO and OIE, plus the United Nations Environment Programme (UNEP), a Global Plan of Action for One Health to collaboratively address health threats at the human-animal-plant-environment interface; the Tripartite plus UNEP has established a One Health High-Level Expert Panel to gather scientific evidence and identify gaps in the links between human, animal and environmental health; and
- supporting Members to follow the One Health approach to reduce risks across livestock systems; the efforts target the improvement of producer biosecurity through the development of progressive management pathways coupled with strengthened early warning systems.⁸

B. Better nutrition

13. SDG 2 aims to end hunger, achieve food security and improved nutrition and promote sustainable agriculture. With 8.6 billion people to feed in 2030, achieving SDG 2 requires a transformation of agrifood systems. Food security exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences in order, to ensure an active and healthy life. However, approximately one in nine people suffer from hunger or are undernourished, mostly in low- and middle-income countries (LMICs), where approximately 13 percent of the population is undernourished. Concurrently, one in three adults globally is overweight or obese and poor diet contributes to six of the top ten risk factors for the global burden of disease. Approximately three billion people cannot afford a healthy diet, with the poor and traditionally marginalized disproportionately affected. Countries are currently off track to achieve zero hunger⁹ and the COVID-19 pandemic is exacerbating difficulties. In addition, micronutrient deficiencies affect some two billion people globally.

14. Livestock-derived food products comprise 33 percent of protein and 17 percent of calorie intake worldwide, but this is not equitably distributed across regions, groups or income levels. Many groups do not consume sufficient terrestrial animal source food to meet their nutritional needs, while others consume more than their dietary needs.

15. Livestock contribute to food security on all scales. At the household level, livestock-keeping increases incomes and availability of foods, contributing to healthy and nutritious diets. At the community level, the sector creates employment opportunities. At the national and global levels, it helps provide the world's population with sufficient and reliable supplies of nutritious, affordable and safe food.

⁸ COAG:LI/2022/5.

⁹ FAO. 2021. *Tracking progress on food and agriculture-related SDG indicators 2021: A report on the indicators under FAO custodianship*. Rome. 143 pp. (also available at <http://www.fao.org/sdg-progress-report/en/#chapeau>).

16. What FAO is doing:

- supporting Members to achieve SDG 2 (its primary focus). FAO's work includes enabling healthy diets through an agrifood systems approach that aims to accelerate impactful policy and action for better data, evidence, policy coherence, collective action, capacity and commitment for healthy diets, to ensure healthy diets for all, upholding the "right to food" and ensuring that no-one is left behind;
- working to curb hunger and malnutrition at the regional, subregional and country level. By working closely with Members and Regional Economic Communities (RECs), FAO's decentralized offices contribute directly to improving livestock productivity and, in combination with targeted policy and action, support improved nutrition and food security;
- compiling, validating and disseminating FAOSTAT annual food balances of both crop and livestock products for its Members, estimating availability for different uses such as food for human consumption or animal feed, and dietary supply of calories, proteins and fats to support nutrition and food security analysis;¹⁰
- providing support, through the Codex Alimentarius Commission, in the application of Codex Alimentarius standards by developing capacities to ensure the safety of feed and animal source food; and
- assessing the contribution of livestock to food security, sustainable food systems, nutrition and healthy diets.¹¹

C. A Better environment

17. Livestock are highly versatile, helping hundreds of millions of people to survive in marginal areas, withstand climate shocks and adapt to changing climatic conditions. But livestock are also the biggest users of agricultural land for feed and forages, drawing heavily on natural resources and contributing significantly to climate change.

18. Livestock systems need to contribute to the conservation of biodiversity and to important ecosystem services, including nutrient cycling, soil organic carbon sequestration and maintenance of agricultural landscapes. There are many opportunities to improve efficiency, reduce waste and better integrate livestock systems into a bioeconomy.

19. Permanent pastures and grasslands cover about one-quarter of the Earth's land area and account for some 70 percent of agricultural land. Approximately one-third of the crops produced globally are used to feed livestock. Some of this cropland and pastureland has been converted from forest and part of that converted land is degraded though estimates of how much vary widely.¹² Deforestation and land degradation both release carbon stocks into the atmosphere.

20. Livestock systems draw significantly on water resources and contribute in some areas to land-use change, particularly through forest encroachment for feed production and pasture, resulting in deforestation, habitat fragmentation and biodiversity losses.

21. Livestock systems also contribute to greenhouse gas (GHG) emissions on farms, mostly through enteric fermentation and manure. They also contribute upstream through the production of feed and other inputs, and downstream in transportation, cooling, storage and processing of livestock products.

¹⁰ FAO. 2021. Supply Utilization Accounts. In: *FAOSTAT* [online]. Rome. Updated as at 21 December 2021. [Cited 13 January 2022]. <https://www.fao.org/faostat/en/#data/SCL>.

¹¹ See COAG:LI/2022/2.

¹² Gibbs, H. K. & Salmon, J. M. (2015). Mapping the world's degraded lands. *Applied Geography*, 57 (2015) 12-21, <https://doi.org/10.1016/j.apgeog.2014.11.024>

22. The three main GHGs emitted from livestock systems are methane (CH₄), nitrous oxide (N₂O) and carbon dioxide (CO₂). Methane is an especially important target as it is an extremely potent but short-lived GHG. As such, in the race to manage global warming, reducing methane emissions can provide fast returns. Livestock systems offer great potential to reduce emissions, capture CO₂ and produce renewable energy.

23. What FAO is doing:

- developing guidelines, tools and methods to support Members in their commitments to respond to climate change, and building capacities of multiple stakeholders to use these tools for national GHG inventories, investment planning, determination of best practices and to help access climate finance;¹³
- acting as the custodian of several SDG indicators related to climate change and natural resources and strengthening the knowledge and evidence base by developing assessments and evaluating the impacts of technical options to improve the environmental performance of the sector;¹⁴ this includes contributions to the Intergovernmental Panel on Climate Change (IPCC) and the United Nations Framework Convention on Climate Change (UNFCCC) processes such as the annual Conference of Parties and the Koronivia Joint Work on Agriculture;
- piloting and validating best practices to improve the efficiency of the sector and livestock–environment interactions through projects and support to up-scaling and investments; and
- providing convening platforms for intergovernmental processes and multi-stakeholder partnerships for better integration of environmental outcomes with broader sustainability objectives.

D. A Better life

24. Livestock production is increasing, but smaller producers in LMICs are failing to participate fully in sector growth. Of the 770 million people surviving on less than USD 1.90 per day, about half depend directly on livestock for their livelihoods.¹⁵

25. Livestock, through its multiple roles, is catalytic in helping rural households achieve their livelihood objectives: enhancing human, social, natural, physical and financial capital, and providing resilience against external shocks.

26. However, alongside the benefits of livestock-keeping lie issues of equality. Large numbers of low-income livestock producers are women, yet they often have less access to productive resources and markets than men, preventing them from deriving significant benefits from their livestock. Child labour is common in some livestock systems, with young boys and girls tending herds and flocks instead of going to school. As livestock systems expand to meet demand, millions of small-scale livestock producers – efficient but not competitive – may be forced to abandon the business altogether.

27. What FAO is doing:

- established the Livestock Policy Lab – a platform that serves as a science-policy interface between decision makers, researchers and practitioners to support the identification of policy issues, generation of analytical evidence, and formulation of policy instruments oriented to enhance the contribution of livestock to achieving the SDGs;

¹³ COAG:LI/2022/4.

¹⁴ FAO. 2022. Livestock Environmental Assessment and Performance (LEAP) Partnership. In: *FAO*. Rome. [Cited 13 January 2022]. <https://www.fao.org/partnerships/leap/en/>.

¹⁵ FAO. 2018. Shaping the future of livestock sustainably, responsibly, efficiently [online]. [Cited 13 January 2022]. <http://www.fao.org/3/I8384EN/I8384en.pdf>.

- cooperating with several partners to support Members to develop Livestock Master Plans based on the most important and strategic opportunities identified for investment in sustainable livestock systems;
- supporting Members to expand social protection schemes to small-scale livestock-keepers, including pastoralists; overseeing the Pastoralist Knowledge Hub to empower pastoralists and works with pastoralist communities to improve livestock production, health and market access;
- contributing to the GASL Action Network on Livestock for Social Development and, in that context, developing a tool to assess the social contribution of the dairy sector;
- supporting Members in implementing policy and legislative frameworks through the FAO Global Health Security Programme; and
- providing, through the Hand-in-Hand Initiative, a number of integrated facilities to strengthen the Organization's capacities to provide sustained analytical and policy support, build multi-stakeholder partnerships that mobilize "means of implementation", promote investment, and enable medium- and long-term cross-sectoral collaboration – all within a programmatic orientation directed towards accelerating the achievement of SDGs1, 2 and 10, as well as other organizational priorities; the Hand-in-Hand Geospatial Platform fosters data-sharing and research collaboration with more than two million unique data layers.

III. Further strengthening work on livestock

28. An important priority as FAO and its Members implement the Strategic Framework 2022-31 is to accelerate progress (i) by mobilizing data, innovation, technology and complements; (ii) through strategic partnerships; and (iii) by building Members' capacities to take full advantage of these cross-cutting accelerators.

29. Digitalization in livestock systems – particularly in relation to monitoring performance and tracing the origins of livestock products and inputs – must be enhanced. Policies also need to be strengthened to address livestock, both to optimize benefits and mitigate harms. Strategic partnerships need to be enhanced, particularly with the private sector, to accelerate progress.

30. Achieving multidimensional outputs calls for multi-stakeholder approaches so that the voices and interests of all groups are considered. This also needs to be strengthened.

31. With the climate crisis gaining recognition, there is growing urgency for Members to increase their commitments to ambitious action towards meeting the Paris Agreement commitments. With livestock systems contributing substantially to anthropogenic GHG emissions, it is essential that climate action in livestock systems is integrated into Paris Agreement commitments and others such as the Global Methane Pledge.¹⁶

32. The same applies to biodiversity and the Convention on Biodiversity Post-2020 Global Biodiversity Framework, which is currently under development.

33. To improve the environmental performance of livestock systems, it is essential to improve efficiency, and promote reuse and recycling across the entire lifecycle of food, both within and beyond agricultural systems. FAO should strengthen its work to help Members promote the integration of livestock systems in bioeconomy.

¹⁶ See <https://www.globalmethane.org/>.