



Food and Agriculture Organization
of the United Nations

Enhancing climate action in the livestock sector

POLICY BRIEF



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Key messages

1. The development of evidence-based livestock and climate change policies must recognize the diversity of livestock systems and the voice of smallholder farmers.
2. More capacity development, awareness raising and incentives for farmers are necessary to support the development of low-emission livestock systems.
3. Countries should mainstream climate change into livestock development programmes to improve policy coordination and governance within and across sectors.
4. Accessing public and private climate finance and investment in the livestock sector is challenging for many countries in Africa and Latin America and the Caribbean.

Boosting Koronivia in the livestock sector

The adoption of the Paris Agreement in 2015 paved the way for countries to commit to the international response to climate change, through the transition to a low-emission economy and the development of a climate-resilient future. The Koronivia Joint Work on Agriculture (KJWA) roadmap offered the opportunities to discuss the role of agri-food systems in climate action while considering their vulnerability to climate change and addressing food security.

The livestock sector contributes to the food security and livelihoods of hundreds of millions of people

BOOSTING KORONIVIA





across the world. It provides high-quality, nutritious animal-source foods and is a major source of income for many. Climate change affects the sector through extreme events such as droughts, floods and wildfires, disease outbreaks. Livestock also have environmental externalities including anthropogenic greenhouse gases (GHG) emissions. With the increasing demand for animal-source foods and an ever-growing sector across the globe, adaptation and mitigation actions are indispensable to support the transformation of livestock systems to become more resilient, productive and sustainable.

In November 2017, the 23rd Conference of Parties (COP23) adopted the landmark decision of **Koronivia Joint Work on Agriculture (KJWA)** to address issues related to agriculture through consultation with Parties and observers, while considering the vulnerabilities of the sector to climate change and addressing food security. It was the first substantive outcome and COP decision in the history of the United Nations Framework Convention on Climate Change (UNFCCC) agenda on agriculture.

The KJWA offers the opportunity to unlock the potential of agriculture as a solution to climate change. It complements countries' Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs) while contributing to the overall achievement of the Sustainable Development Goals (SDGs).

The KJWA can play a crucial role in enabling the livestock sector to contribute to climate action by mobilizing knowledge, technology, finance and capacity. It acknowledges the strategic importance of livestock including key areas such as improved soil carbon sequestration in grazed grasslands, improved nutrient use and manure management and improved livestock management systems. The KJWA process offers good opportunities for countries to exchange views and experiences related to the inclusion of livestock in their national climate actions.

While parties to the Paris Agreement have enhanced their commitments to reduce GHG emissions in their NDCs, a recent UNFCCC Secretariat report shows that parties need to raise the ambitions of their climate action to keep global temperature rise well below the 2°C limits by 2030 as compared to pre-industrial level (UNFCCC, 2021).

The urgency to raise ambitions in the Nationally Determined Contributions (NDCs) is also echoed by an unprecedented call for action from global leaders and civil society alike. The published first part of the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report leaves no room for doubt that GHG emissions and the changing climate are responsible for the extreme weather events we are facing today (IPCC, 2021). Climate scenario analyses provide evidence that mitigation and adaptation interventions in agri-food systems (including livestock), are key to prevent the rise in global temperature (IPCC, 2019).

This brief summarises the outcomes of a series of regional workshops on “Boosting Koronivia in the livestock sector” organised by the Food and Agriculture Organization of the United Nations (FAO) from 30 September to 22 October 2020. The workshops, attended by 35 countries from Africa and Latin America and the Caribbean, provided a platform for countries to exchange experiences and discuss how the KJWA can support climate actions on livestock while delivering the 2030 Agenda for Sustainable Development.

Reliable data, tools and capacity development are crucial

Addressing climate change and building resilience of livestock systems require evidence generation and economic analyses to strengthen synergies and reduce trade-offs with other Sustainable Development Goals (SDGs). Developing evidence-based policies requires substantial data and technical capacities for analysis and translation into meaningful information. For



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instance, many countries in Africa and Latin America and the Caribbean have limited availability of data on livestock systems and when available, they are often outdated. The institutional capacities and financial resources to collect, analyse and manage such data are also limited.

Quantifying soil organic carbon to demonstrate the offset potential in grassland and silvopastoral systems represents a challenge for many countries. This quantification is costly and requires new and innovative technologies for the measurement and monitoring of soil carbon dynamics over time (e.g. accumulation/loss). Moreover, countries need tools and protocols to capture the benefits of best practices, which have a large potential to reduce the emissions of enteric methane (CH₄) and other GHG emissions, thus cutting global warming in the near-term.

There is a need to enhance institutional capacities to build an accurate baseline for GHG emissions, develop country-specific mitigation scenarios and establish robust national Monitoring, Reporting and Verification (MRV) frameworks. Such analysis should support the development of evidence-based livestock and climate change policies that recognize the diversity of the livestock systems and the voice of farmers and other stakeholders. Moreover, the policy development process should be inclusive by considering smallholder farmers and indigenous communities. There is also a need to set priorities and investments for research, and data collection to improve the science and demonstrate co-benefits of mitigation actions in livestock systems, through scenarios and socio-economic modelling and impact analysis.

**Reinforce governance
of natural resources
for integrated
climate action**

Livestock systems can contribute to land degradation and deforestation. The livestock sector is experiencing grassland and rangeland degradation due to overgrazing and continuous episodes of drought. Fire outbreaks also threaten the natural resources base for local communities and their livestock. Furthermore, the use of community land for pastoralism in some African countries represents a specific challenge to the adoption of best practices and technologies. In Latin America, the massive deforestation for land grabbing and livestock expansion (e.g. for cattle production or feed production), increases GHG emissions from agri-food systems in the region. Inadequate legal frameworks to manage land and weak land tenure policies are barriers to overcoming these issues.

It is necessary to develop and update legal frameworks and policies to avoid deforestation and manage rangelands and grasslands management to avoid overgrazing to minimise the impacts of climate change. Countries and livestock stakeholders should bolster efforts to improve governance across agri-food systems and enhance policy coherence between land use and livestock policies. They should also reinforce the mainstreaming of climate change into development programmes to improve policy coordination and governance within and across sectors.

**Increase awareness
about livestock and
climate change**

Farmers and livestock stakeholders are often unaware of the complex interactions between livestock production, the environment and climate change but they are the first to experience the negative impacts of these interactions.

Farmers and rural communities worldwide are among the most vulnerable to climate change.



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Livestock systems in particular are affected by heat stress, impacts on fertility and productivity. For vulnerable communities, climate actions on the ground need to strengthen resilience, ensure food security and adapt to a changing climate. In some countries, farmers are often unaware that livestock systems are a source and a sink of GHG emissions and that mitigation and adaptation actions have many co-benefits. Smallholders and family farmers possess limited knowledge on the potential of grasslands and rangelands to capture carbon, enhance soil health, and biodiversity. Thus, countries should reinforce farmer field schools or participatory workshops to enhance knowledge among farmers on livestock farming and climate change.

Furthermore, mitigation measures should also result in tangible benefits for farmers, such as increased income, improved animal health and productivity among others. The adoption of new practices often involves a high initial economic investment (e.g. silvopastoral systems) and requires access to new technologies and resources for successful implementation. Policy-makers should provide incentives to encourage the adoption of low-emission and climate-smart livestock practices (e.g. sustainable nitrogen management). It is also important to provide farmers with access to locally developed or adaptable technologies. Other incentives could include promoting the development of low-emission value chains and certification schemes for farmers through close collaboration with the private sector.

Strengthening climate finance and investment

Access to climate finance and investments in the livestock sector is lower relative to other agri-food systems sub-sectors because of multiple obstacles to mobilizing finance (Buto, 2021 and World Bank, 2021). The vulnerability of the sector to climate change and weak governance and policy

frameworks are considered too high risk for private sector investments.

The barriers to accessing international climate finance lie with the requirements to comply with MRV frameworks and/or to provide co-financing. Specific requirements regarding application processes and project design also reflect additional obstacles.

The KJWA can play a crucial role in enabling finance and investment in the livestock sector. Farmers should receive more incentives to better access to private and public credit and insurance. Countries and livestock stakeholders should formulate integrated and multi-disciplinary projects and national strategies that also consider socio-economic aspects to support resilience and livelihoods. Moreover, countries should develop a better understanding of the extended co-benefits, as well as trade-offs from the sector to direct public investments and attract external sources of investment. Countries should develop sustainable livestock value chains and improve access to markets to support smallholder farmers' income. The identification of national long-term climate priorities is necessary to facilitate access to climate finance.

Participating countries:

Africa: Eritrea, Ethiopia, Kenya, Rwanda, Somalia, South Sudan, Benin, Burkina Faso, Burundi, Cameroon, Côte d'Ivoire, Djibouti, Guinea, Mali, Niger, Senegal, Botswana, Eswatini, Lesotho, Madagascar, Malawi, Mozambique, South Africa, Zambia

Latin America and the Caribbean:

Argentina, Brazil, Chile, Costa Rica, Dominican Republic, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay

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