

Submission by the Institute for Agriculture and Trade Policy (IATP), Global Forest Coalition (GFC), Biovision Foundation, Center for International Environmental Law (CIEL), ETC Group, Greenpeace International, Pivot Point, SONIA, Water Justice and Gender and the Climate Land Ambition Rights Alliance (CLARA)¹ on the Koronivia joint work on agriculture (4/CP.23) on topic 2 (e)- Improved livestock management systems, including agropastoral production systems

November 2020

This submission is divided into three parts. Part I addresses the **principles** that must underpin approaches taken by governments to create improved livestock management systems as part of their National Adaptation Plans (NAPs) and Nationally-determined Contributions (NDCs), “taking into consideration the vulnerabilities of agriculture to climate change and approaches to addressing food security” as enshrined in the KJWA decision. Part II addresses the key **problems** in livestock systems that should be ameliorated. Part III provides **way forward** with recommendations.

Part I: Principles that need to underpin improved livestock management systems in NAPs and NDCs, “taking into consideration the vulnerabilities of agriculture to climate change and approaches to addressing food security.”¹

1. Absolute emissions reductions must be the key metric in getting to a 1.5°C world: The urgency of the 1.5°C temperature limit goal requires that the livestock sector undertake measures to *reduce* nitrous oxide, methane, and carbon emissions in absolute terms. Use of “emissions intensity” or “feed-conversion efficiencies” as measures of impact disguises continued high emission pathways associated with increased production volumes. Worse, current measures of “efficiency” serve primarily to justify super-intensive industrial agriculture pathways in which the link between animal and landscape is completely severed. This type of production negatively affects biodiversity and achievement of several SDGs.

¹ A global alliance of over 31 farm, food, environmental, faith-based and Peoples’ organizations and independent researchers: <https://www.climatelandambitionrightsalliance.org/>

2. NDCs and NAPs must enshrine holistic, equity-based and rights-based approaches to improved livestock management systems.

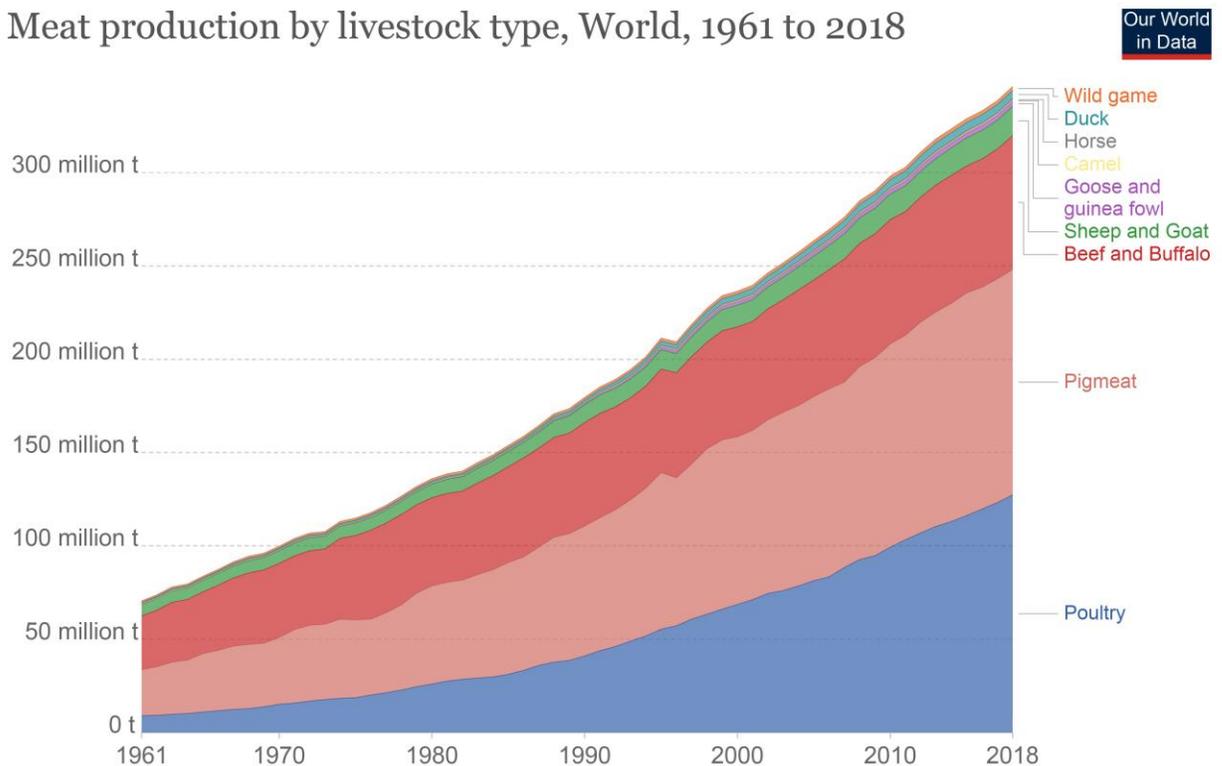
- i. **NDCs and NAPs must holistically tackle livestock systems:*** Livestock systems are part of larger social, cultural and political landscapes and require a holistic vision for their management. Managing livestock's climate impact must therefore not be limited to greenhouse gas (GHG) emissions alone, but to the overall impact on equity, labor and human rights, biodiversity and other planetary boundaries. The use of manure from confined animal feeding operations (CAFOs) to produce biogas must not be considered or incentivised as an emissions reduction tool. This process incentivizes more manure production and associated water and air pollution, still emits significant GHGs, and increasingly is being used to further prop up the growing natural gas infrastructure, thereby slowing the transition toward truly renewable sources of energy.
- ii. **Governments must integrate equity² as a central tenet of improving livestock management systems:*** Seven countries (US, EU, Canada, Argentina, Brazil, Australia, New Zealand) currently account for 43% of the world's livestock related emissions, even as they represent 15% of the world's population.³ They account for over 60% of the emissions when China is included. An equity-based approach requires countries with the highest historical per capita emissions, surplus livestock production and nutritionally high per capita consumption of meat and dairy products to take the lead. Industrialized countries that are major importers of livestock products should also account for these offshored emissions. Countries with low historical per capita emissions in agriculture and low per capita consumption of meat and dairy must not bear the burden of leading reduction efforts in the livestock sector.
- iii. **Right to food⁴, the U.N. Declaration on the Rights of Peasants⁵ and Other People Working in Rural Areas, the U.N. Declaration on the Rights of Indigenous Peoples⁶ and the U.N. Convention to Combat Desertification⁷ must be integral to NAP and NDC implementation:*** Climate action on livestock must respect and strengthen human rights – including the Right to Food. Governments must ensure that these UN legal instruments are the minimal internationally agreed standards for NDC and NAP implementation.
- iv. **Recognize, protect, promote and support pastoral and mixed use agroecological systems for livelihoods, biodiversity and climate benefits:*** Resiliency of pastoral systems⁸ is essential for food security and nutrition for millions of communities around the world. As agreed at the 43rd session of the Committee on World Food Security, climate action on livestock must:⁹ “Enable pastoralists’ mobility, including transboundary passage as appropriate; securing access to land, water, markets and services, adaptive land management, and facilitate responsible governance of common resources, in accordance with national and international laws;” and “Enhance the role of pastoralist organizations and strengthen public policies and investments for the provision of services adapted to the needs and ways of life of pastoralists and their mobility, including promoting gender equality and addressing the specific needs and roles of women within pastoralist communities.”

Part II: Problems in the livestock sector that must be addressed

1. Rapidly rising emissions: Agriculture, forestry and land use accounts for around 23% of total anthropogenic greenhouse gas emissions, up to 37% when the entire food system is included.¹⁰ The livestock sector account for nearly two-thirds of these emissions (14.5 % of all GHGs).¹¹ Yet, livestock's dramatic rise in emissions has occurred only in the last 70 years with the advent of the industrial model of mass production requiring large quantities of cereals and oilseeds to feed animals. 45% of livestock emissions stem from feed production.¹² The rate of increase of livestock for meat and milk continues to accelerate, with the sharpest increases in the last 30 years. (Figure 1). NDCs and NAPs can help reverse this trend. Following the current pathway, predictions show that GHG emissions from agriculture would increase by 77% over baseline 2009 levels of 11.6 to 20.2 Gt CO₂ eq/year in 2050.¹³

Figure 1

Meat production by livestock type, World, 1961 to 2018



Source: UN Food and Agricultural Organization (FAO)

OurWorldInData.org/meat-production • CC BY

Note: Total meat production includes both commercial and farm slaughter. Data are given in terms of dressed carcass weight, excluding offal and slaughter fats.

Just 20 of the largest global meat and dairy companies combined produced more GHGs than Germany in 2016, yet livestock processing companies are not required to report the number of animals they process, let alone account for their emissions. To reach the 1.5°C climate goal, an equitable reduction of absolute emissions in the livestock sector is needed, with countries with the highest historical per capita emissions taking the lead. Emissions intensity reduction targets are inadequate and incentivize growth of unsustainable global and industrial livestock supply

chains. NDCs and NAPs must help deliver a just transition out of this high emissions model of mass livestock production.

From Zoonotic Diseases to Global Pandemics

COVID-19 is a stark reminder of the existential threat of habitat destruction, biodiversity loss and unsustainable agriculture and livestock management practices. Livestock are often intermediate or “amplifier” hosts, particularly when industrial operations enable large numbers of animals of low genetic diversity in confined spaces.¹⁴ In the last 20 years, humanity has confronted “three coronaviruses (SARS-CoV-1, 2003, [Li et al., 2005](#); MERS-CoV, 2012, [Zumla et al., 2015](#), SARS-CoV-2, 2019, [Sohrabi et al., 2020](#)) and influenza viruses (Swine flu, 2009, [Borkenhagen et al., 2019](#)). Industrial poultry farming played a key role in the outbreak of the H5N1 avian influenza.¹⁵ 60% of 335 infectious disease outbreaks that occurred between 1940 and 2004 have been zoonotic.¹⁶

Safeguarding biodiversity and preventing intensive animal husbandry practices from animal to human transmission of life-threatening zoonotic pandemics is a vivid challenge as all nations struggle with COVID-19.¹⁷ Crop and livestock farming were found to threaten 54% and 26%¹⁸, respectively, of 8,688 near-threatened or threatened species. The use of anti-microbials in livestock systems is compounding the threat of such devastating pandemics. Antimicrobial resistance at the livestock-wildlife-human interface is increasing due to the excessive use of antibiotics in agriculture.¹⁹ According to the World Health Organization, antibiotic-resistance in many areas of the world already exceeds 50 % in many major bacteria groups (e.g., E. coli, K. pneumonia and S. aureus) and is currently causing the death of around 700,000 people resistant against antibiotics.²⁰

2. Land use change and biodiversity loss: Industrial livestock production and consumption are major drivers of land-use change and deforestation. Livestock use around 70% of global agricultural land.²¹ Land use change from deforestation, including animal feed crop production is responsible for about 2.4 Gigatons of CO₂ released annually.²² In the Amazon, 80% of all deforested land has been converted to pasture for grazing animals, with much of the remaining 20% used to grow animal feed.²³ The resulting deforestation irreversibly changes entire ecosystems and global carbon cycling. Mass production and high stocking densities on pasture and expansion of feed monocultures through the replacement of native forests, grasslands and savannah have contributed to large-scale disappearance of species, ecosystem losses and damage to critical ecosystem functions.²⁴ Nearly 80% of all threatened terrestrial bird and mammal species are threatened by agriculturally driven habitat loss.²⁵

3. Genetic erosion: The conservation status of wild relatives of domesticated livestock has plummeted.²⁶ The Intergovernmental Platform on Biodiversity and Ecosystem Services

emphasize that “these wild relatives represent critical reservoirs of genes and traits that may provide resilience against future climate change, pests and pathogens and may improve current heavily depleted gene pools of many crops and domestic animals”.²⁷ In the Global South, where indigenous breeds are central to the livelihoods of peasants, extensive pastoral livestock production systems have developed breeds that adapt to droughts, fodder scarcity, climatic extremes and diseases.²⁸ Extensive, pastoral livestock systems are crucial to maintain genetic biodiversity and protect wildlife biodiversity especially in savanna landscapes.

4. Severe ecosystem degradation and environmental pollution: Application of fertilizer and manure related to intensive industrial livestock systems contributes to nearly one-third of all water pollution.²⁹ It also contributes to nitrous oxide and methane emissions. The IPCC notes the dramatic increase in nitrogen-based fertilizers over the last 50 years, altering global nitrogen and phosphorus cycles, contributing to soil degradation and depletion and widespread eutrophication of freshwater bodies, coastal regions and hypoxic (dead) zones in seas and oceans.³⁰ Several peer-reviewed studies have found that rising temperatures is leading to greater eutrophication³¹ and could lead to 30-90% more methane emissions over this century.³² Climate induced changes to precipitation, dumping greater nutrient loads into estuaries is also set to further increase eutrophication-related greenhouse gas emissions with the United States, China, Southeast Asia and India, particularly hard hit.³³

5. Social and economic justice: Millions of small-scale livestock farms and livelihoods have disappeared over the last four decades as transnational corporate livestock supply chains have consolidated both vertically and horizontally, impacting rural indebtedness and decline. Massive COVID-19 outbreaks in meat processing plants in the U.S., Europe, Brazil and elsewhere attest to the endemic workers’ rights violations that occur in the livestock industry. Communities (e.g., indigenous peoples and peasants farmers in Latin America; People of Color communities in the U.S.) living close to livestock facilities and feed crop plantations are exposed to air and environmental pollution which provoke illnesses related to intoxication with agrochemicals, and respiratory and neurobehavioral diseases.³⁴ Efforts to justly transition to sustainable livestock management systems requires governments to ensure that climate, agriculture and trade policies align to regenerate soils and rural communities step in to ensure in a handful of countries and controlled by a small number of corporate actors. According to estimations, in 2016, 10 companies controlled nearly one-quarter of all global meat and dairy production.³⁵ While large livestock companies benefit from international trade agreements (e.g., Mercosur), small-scale livestock farmers cannot compete with squeezed commodity prices of the industry. As prices are below the costs of production, indebtedness of livestock farmers increases, and they are often pushed out from the market.³⁶

6. Special role of women in livestock management: According to FAO, women comprise 43% of the agricultural labor force in developing countries and account for two-thirds of the world's 600 million poor livestock keepers.³⁷ Livestock continues to serve as a critical safety net during economic downturns for these families and serve as a substantial source of additional farm income. Women have traditionally been seed-keepers and holders of traditional knowledge and strategies that have helped communities adapt to climate change. Yet, most landless farmers are women while men control market sales. Women are also typically left out of community/organizational decision-making related to animal husbandry. Little information exists on women’s roles in livestock production and the acute impacts of the expansion of the industrial model of animal agriculture contributing to the disappearance of traditional

pastoralist practices in some regions. These are all issues that need more research and critical thinking. Both the UNFCCC and the CBD have recently generated Gender Action Plans that need to be implemented and integrated to NDCs and National Biodiversity Strategies and Action Plans, respectively.

Part III: Way Forward

1. Ecosystems restoration and human rights should be central priority for livestock management: The IPCC Special Report on Land prioritizes protecting and restoring the planet's ecosystems to limit warming to 1.5°C. Without ecosystem restoration and integrity, agricultural production cannot be climate resilient and sustained. The FAO defines ecosystems as “communities of plants, animals and other organisms that live, feed, reproduce and interact in an area or environment...protecting soil and water, helping to maintain soil fertility, and providing habitat for wild pollinators and the predators of agricultural pests.”³⁸ Weak ecosystem governance undermines the effectiveness of food-security policies and the ability of people to farm.³⁹ This requires that farmers, Indigenous Peoples and local communities be empowered to build agrobiodiversity. In order to do so, governments must recognize farmers and pastoralists' contribution in maintaining ecological functions (See below on Just Transition). This includes involving local communities in doing a climate assessment and providing solutions with regards to the potential of indigenous breeds and crops that build climate resilience and food security. The rights of farmers, Indigenous Peoples and local communities to genetic resources should be guaranteed both at the national and international level.⁴⁰

2. Regulate polluters: Climate policies designed to address emissions should regulate effectively the industrial livestock sector as well as other industries with economic ties with this industry.

3. A Just Transition for farmers and farm and food workers towards healthy food and agriculture:

The International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations (IUF), the world largest food workers trade union, is currently in the process of developing a climate change policy and rights framework for the livestock sector based on Just Transition principles. The elaboration of the framework will include “work on defending democracy, the right to food and fundamental rights at work including freedom of association, the right to organize and collective bargaining, a healthy and safe workplace, gender equality and protection against discrimination.”⁴¹ Furthermore, a “wording on the climate crisis and on negotiating a fair transition for collective bargaining agreements” will be developed by IUF.⁴² According to IUF “the Paris Agreement on Climate Change provides opportunities to engage companies on climate change issues including just transition to new methods of production and jobs.”⁴³ In that regard, a Just Transition must entail social dialogue and democratic consultation of all stakeholders (e.g., workers, labor and trade unions, communities) in order to guarantee planning of job changes, training support and placements as well as social protection.⁴⁴ It must further require improving the conditions of migrant workers and addressing structural racism in the food system, which is often racialized, gendered and reflect class divisions.⁴⁵ A Just Transition away from an agro-industrial model of livestock

production is an urgent task. Such a transition must result in climate resilient livestock management systems that are good for people and the planet. Based on agroecological principles and practices that are socially and environmentally just, it must deliver public health and environmental benefits to producers and consumers in all regions.⁴⁶ Four principles must guide such a transition in agriculture⁴⁷:

i. **Tackle inequalities:** Transition to a low carbon agriculture must tackle inequalities in the agri-food system and root causes of hunger by supporting vulnerable people (e.g., smallholder, pastoralists, Indigenous Peoples, plantation workers) to diversify livelihoods, enhance local control of food systems and necessary resources (e.g., control over common land) and dismantle structural economic policies that disadvantage smallholders and women in particular..

ii. **Transform the food system:** It must support farmers to switch to agroecology by implementing policies that improve smallholder access to markets, relocate subsidies away from large scale industrial farming and associated chemical inputs, and support local seed storing and exchange systems. Job protection, occupational safety and health issues in agriculture must also be addressed (see number 3 below on workers).

iii. **Ensure inclusiveness and participation in planning and governance processes:** Ensure that a Just Transition identifies the need of vulnerable groups within the society and recognizes the knowledge and leadership of smallholder farmers when developing transition measures. Start with mapping of stakeholders who are likely to be impacted by agri-food system changes (e.g., local farm workers, seasonal and migrant workers, traders, consumers and young people) and ensure their full and effective participation in decision-making processes.

iv. **Develop a comprehensive framework of inclusive policies, training and social protection:** Research and assessment must be conducted to be able to evaluate the impacts of the transition of the agri-food system (e.g., assessing job losses, job creation opportunities and skills requirements). Financial resources are needed for training, education, reskilling and support (e.g., to produce agroecologically and different crops and livestock) as well as for social protection during the transition (e.g., compensations for temporary yield and income losses in the first years of transitioning to agroecology).

¹ U.N. Climate Change. Issues Related to Agriculture. Available: <https://unfccc.int/topics/land-use/workstreams/agriculture>

² Both Article 2 and 4 of the Paris Agreement invoke the principle of equity, recognizing that emissions peaking will take longer for developing country Parties, and that in the context of sustainable development and efforts to eradicate poverty, the issue of GHG emission reductions must be addressed with integrity.

³ GRAIN & Institute for Agriculture and Trade Policy (IATP), 2018. Emissions impossible, How big meat and dairy are heating up the planet. Available: <https://www.iatp.org/blog/emissions-impossible>

⁴ *Right to food Declaration, 1948.* Available: <https://www.un.org/en/universal-declaration-human-rights/>

⁵ UN Declaration on the Rights of Peasants, 2018. Available: <https://www.geneva-academy.ch/joomlatools-files/docman-files/UN%20Declaration%20on%20the%20rights%20of%20peasants.pdf>

Article 1 A/HRC/RES/39/12: “a peasant is any person who engages or who seeks to engage alone, or in association with others or as a community, in small-scale agricultural production for subsistence and/or for the market, and who relies significantly, though not necessarily exclusively, on family or household labor and other non-monetized ways of organizing labor, and who has a special dependency on and attachment to the land.”

⁶ UN Declaration on the Rights of Indigenous Peoples, 2007. Available: <https://www.un.org/development/desa/indigenouspeoples/declaration-on-the-rights-of-indigenous-peoples.html>

⁷ UN Convention to Combat Desertification, 1994. Available: <https://www.unccd.int/convention/about-convention>

⁸ Pastoralism is defined as an extensive livestock rearing strategy and a way of life, occurring in the world’s rangelands and mountain pastures. Entirely different in essence to intensive livestock production systems that have emerged in the last half of the last century. This includes both sedentary pastoralism, conducted from a permanent location and mobile pastoralism (also referred to as mobile herding). Mobile pastoralism includes nomadic, semi-nomadic and transhumant, indicating whether a family or a community moves with the herd or only part of a community or family during the migration period. A millennia-old survival strategy, mobile pastoralism remains an adaptive livestock management and livelihood practice whereby communities adjust according to changing circumstances, including periodically available and scattered resources of rangeland ecosystems in arid, semi-arid and mountain regions, following temporal and spatial patterns.

See: Yilmaz et al., 2019. Mobile Pastoralism and Protected Areas: Conflict, Collaboration and Connectivity. *Parks Journal*. Vol. 25(1). 7-24. Available: https://parksjournal.com/wp-content/uploads/2019/05/PARKS-25.1-Yilmaz-et-al-10.2305-IUCN.CH_PARKS25-1EY.en.pdf

⁹ Committee on World Food Security (CFS), 2016. Sustainable Agricultural Development for Food Security and Nutrition: What Roles for Livestock?. Available: <http://www.fao.org/3/a-bq854e.pdf>

¹⁰ Intergovernmental Panel on Climate Change (IPCC), 2019. Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. Available f: <https://www.ipcc.ch/srccl/>

¹¹ Gerber, P.J. & Food and Agriculture Organization of the United Nations (FAO) (ed.), 2013. *Tackling climate change through livestock: a global assessment of emissions and mitigation opportunities*. Rome: Food and Agriculture Organization of the United Nations, Rome. Available: <http://www.fao.org/3/a-i3437e.pdf> &

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¹² Ibid.

¹³ Bajželj et al., 2014. Importance of food-demand management for climate mitigation. *Nature Climate Change*. Vol. 4 (10). 924–929. Available: <http://www.nature.com/articles/nclimate2353>

¹⁴ Ibid. &

Jones et al., 2013. Zoonosis emergence linked to agricultural intensification and environmental change. *Proceedings of the National Academy of Science of the United States of America*, Special Feature. Vol. 110 (21). 8399–8404. Available: <https://doi.org/10.1073/pnas.1208059110>

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