



Submission to SBSTA: Supporting Animal Welfare and Addressing Unsustainable Demand for Animal Products

March 2016

In response to the SBSTA call for submissions (FCCC/SBSTA/2014/L.14), Humane Society International (HSI) and Brighter Green lay out their recommendations for meeting methodological and technological needs under the UNFCCC for animal-welfare-friendly and sustainable agriculture ahead of SBSTA 44.

Our organizations represent millions of animal protection advocates across the globe as well as individuals concerned about the environment, sustainable development, climate change, and food security; and we work cooperatively with farmers, government agencies and other civil society groups worldwide to promote more humane, healthy, and sustainable food systems.

Summary of Key Messages for UNFCCC Parties:

- **Protect and promote animal welfare:** SBSTA must support environmental and social considerations and safeguards in the area of agriculture, including animal welfare. Parties should:
 - Work towards national, regional and local strategies for climate change adaptation and mitigation that ensure equitable, animal-welfare-friendly solutions for farm animal production; and
 - Identify and work to fill research and knowledge gaps related to animal welfare and climate change, and identify pathways to fill those.

- **Recognize and implement demand-side interventions:** Parties must acknowledge the growing research and practice on the imperative of demand-side interventions in agriculture, specifically addressing resource-heavy foods such as animal products. Mitigation potential may be greater than production-side interventions, and demand-side interventions carry multiple co-benefits, for example improved public health. Therefore, parties should:
 - Acknowledge research on the necessary global, demand-side interventions to meet the Paris Agreement's 1.5° C limit;
 - Evaluate technical and methodological options at the national, regional and local levels to manage unsustainable demand for animal products and meet global mitigation targets; and
 - Determine and work to fill any research gaps related to demand-side interventions in agriculture.

- **Greater civil society participation:** Parties should:
 - Include civil society presentations, including an expert speaker on animal welfare, in the in-session workshops at SBSTA 44; and
 - Work towards greater inclusivity of Observer organizations in future UNFCCC work on agriculture.



I. Introduction

With the Paris Agreement in the books, we hope that Parties are prepared to more seriously consider the proper role of agriculture in meeting climate commitments, as well as to take concrete actions to ensure a more secure, sustainable future for food systems around the globe. In agriculture, as perhaps in no other area of climate action, it is more important for a holistic understanding of the impacts of the climate on agriculture and vice versa, along with numerous concomitant implications for sustainable development. Thus, the upcoming SBSTA in-session workshops present a key opportunity to pursue an equitable strategy that supports agricultural development and other social goals, including promoting and safeguarding animal welfare. We encourage Parties to take this approach in Bonn and when deciding on pathways to meet their INDCs and in forming future commitments. Indeed, the livelihoods of billions, the ecosystems upon which we rely, and the lives of tens of billions of animals are at stake.

While numerous aspects of sustainability are important to food systems and development, we focus here on the intersection of climate and animal agriculture. This is both because of the tremendous importance of this intersection outright, as explained below, and because the tremendous progress that has been made globally on these issues, especially in the last ten years, has been nearly wholly ignored in the UNFCCC context. If Parties are serious about their climate commitments, the status quo must be changed.

Luckily, there are tremendous opportunities to achieve co-benefits and avoid or mitigate trade-offs. To do this, Parties must recognize current trends and help set the stage for the future by filling research gaps.

II. Animal Agriculture and Climate Change

Globally we raised over 77 billion land animals for food in 2013 alone. Such vast numbers impact our health and environment, including the global climate. Further, during their often short lives, farm animals suffer myriad assaults to their physical, mental, and emotional well-being, and are typically denied the ability to engage in their species-specific natural behaviors. Worldwide, industrial systems of animal agriculture account for approximately two-thirds of egg and poultry meat production and over half of pork production, with developing countries producing approximately half of the world's industrial pork and poultry.¹

Climate change is yet another way that animals, both domesticated and wild, are impacted. Climate change is already endangering animals and communities around the globe. Diseases are more frequently emerging and spreading to new areas; and rising air and sea temperatures are damaging critical habitats and threatening species who rely on these habitats for survival. Farm animals will not be spared from these impacts, and also will be affected by climate change-induced rangeland drought and other weather events, which could lead to more animal deaths.² For example, as grazing areas dry up in sub-Saharan Africa, pastoralists will be forced to travel farther to find food and many animals will likely starve. In particular, cattle, goats, camels, sheep, and other animals which depend on access to grazing areas for food will suffer from hunger and dehydration.³

At the same time, farm animal production is a significant consumer of natural resources, and a major contributor to global greenhouse gas emissions and should therefore be addressed in climate change adaptation and mitigation solutions.



According to the Food and Agriculture Organization of the United Nations, considering the entire food chain, farm animal production accounts for 14.5% of the world's greenhouse gas emissions.⁴ Even assuming efficient sectoral growth, by 2050 emissions from animal production is predicted to grow 39% over year-2000 levels and to account for 70% of the sustainable level of global GHG emissions.⁵

Meat, egg, and milk production are not narrowly focused on the rearing and slaughtering of farm animals. The animal agriculture sector also encompasses feed grain production, which requires substantial inputs of water,⁶ land,⁷ and energy.⁸ Globally, more than 60% of corn and barley, and over 97% of soymeal, are fed to farm animals.⁹ The growth in farm animal production is projected to increase strain on water resources, particularly due to the high water demands involved in growing animal feed.¹⁰ Animal products generally have larger water footprints than non-animal products. For example, in terms of protein, the water footprint is six times bigger for beef, and one and a half times larger for chicken, eggs and milk, than it is for legumes.¹¹ Globally, land is also becoming a scarce resource,¹² and animal agriculture already constitutes the largest anthropogenic use of land worldwide.¹³ As in the case of water, a significant percentage of this land is diverted to produce feed for farm animals.¹⁴

Unfortunately, climate negotiations thus far have failed to recognize these realities, and, with just a few exceptions, local and international agricultural policies fail to address the importance of demand for animal products as a means of achieving food security and other development goals.

Given the resounding and increasing evidence, it is essential that agricultural policy explicitly addresses environmental and social problems resulting from the animal agriculture sector—and does so in a way that supports the health and well-being of farm animals.¹⁵

III. SBSTA Actions on Agriculture

The research and technological discussion in the UNFCCC must consider the significant role and impact of farm animal production in global warming; and climate change solutions in this sector must be equitable, enhance food security, and promote farm animal welfare.

A. Protecting and Promoting Animal Welfare

SBSTA must support environmental and social considerations and safeguards in the area of agriculture. For SBSTA, that means providing the science and technology that exemplify co-benefits and avoid trade-offs, as well as those that would specifically mitigate (against) poor outcomes. Included here is the need to recognize, respect, and promote animal welfare, given the over 77 billion land animals used in food production globally each year.

Farm animal welfare involves both the physical and psychological well-being of an animal. How they are raised and treated can have important repercussions, not just for animal welfare, but for environmental sustainability, food security, and the economic well-being of farmers. Improving animal welfare can have positive impacts for sustainability and livelihoods in a variety of systems.



In one of our previous UNFCCC submissions in 2013, we addressed the role of animal welfare in climate change adaptation,¹⁶ and therefore will not go into detail regarding those links here. In short, improved animal welfare can support rural livelihoods and food security, benefiting both the people and animals.¹⁷

In addition, however, the choice of mitigation technologies and practices can have immense impacts on the animals raised for food. *Shields and Orme-Evans (2015)*¹⁸ provide a detailed overview of major climate change mitigation practices in relation to animal agriculture. A number of technologies and practices pose significant challenges for animal welfare, including: increased concentrate feed, certain feed additives, breeding for productivity, and biotechnologies such as beta-adrenergic agonists and recombinant bovine somatotrophin. Perhaps most troubling from an animal welfare perspective, however, is a furthering shift to more monogastric species or switching production to more industrialized systems.

Such a shift specifically poses challenges due to the intensive confinement of animals. And the wholesale shift in production systems will, according to a report from the Food and Agriculture Organization of the United Nations, provide only marginal additional climate benefits relative to other production-side interventions.¹⁹

At the same time, however, a number of opportunities exist for co-beneficial climate and animal welfare interventions according to *Shields and Orme-Evans (2015)*,²⁰ including improved animal health and nutrition and improved land and manure management. These types of options are those that should be explored and expanded.

We therefore call on parties to:

- Work towards national, regional and local strategies for climate change adaptation and mitigation that ensure equitable, animal-welfare-friendly solutions for farm animal production; and
- Identify and work to fill research and knowledge gaps related to animal welfare and climate change, and identify pathways to fill those.

Policies must favor farmers who give proper care to their animals and practice and promote more humane and environmentally sustainable agriculture. Animal welfare should be improved in all systems, which can have far-reaching results for the environment and livelihoods.

B. Recognize and Implement Demand-Side Interventions

Parties must acknowledge the growing research and practice on the imperative of demand-side interventions in agriculture, specifically dealing with resource-heavy products such as animal products.

i. Technical Potential of Demand-Side Interventions

As noted above, one study found that by 2050 emissions from animal production is predicted to grow 39% over year-2000 levels.²¹ *Tilman and Clark (2014)* emphasized the public health importance of the intersection of diets and the environment,²² while *Popp et al. (2010)* showed the particular importance of diets in meeting non-CO₂ climate change goals.²³ *Davidson (2012)* further found that achieving aggressive nitrous oxide mitigation pathways by 2050 essentially requires developed countries to cut their meat consumption by half.²⁴



Recent studies indicate that decreases in animal source food consumption can reduce emissions from the farm animal sector more than supply-side solutions. Such reductions in meat, egg, and milk consumption can simultaneously improve food security and public health, as well as lessen pressure on natural resources.²⁵ Further, demand-side changes have the potential to significantly reduce land use and cut mitigation costs.²⁶

The Intergovernmental Panel on Climate Changes Fifth Assessment Report recognized the tremendous mitigation potential of demand-side options, including diet change.²⁷ For example, a 2014 study found that a 50 percent reduction in all EU consumption of meat, dairy and eggs would cut agricultural greenhouse gas emissions by 19 to 42 percent.²⁸ Among others, studies in the UK,²⁹ US,³⁰ India,³¹ and Italy³² have shown lower emissions for more plant-based diets.

ii. Global Trends in Meat Reduction

In both industrialized and developing countries, a variety of public health, environmental, and animal protection groups have launched campaigns and programs to shift consumer choice towards healthier, more humane, and ecologically sustainable food choices. A tremendous wealth of knowledge is being generated within these circles relating to the drivers of consumer choice, behavioral change (as it relates to dietary practices), and effective policy, educational, and marketing tools for promoting more plant-based eating. For example, Humane Society International is successfully promoting Meatless Monday and Green Monday throughout Asia, Latin America, and in South Africa. The Humane Society of the United States has convinced major food companies, and entire school districts in the United States to adopt Meatless Monday and similar initiatives. Leaders in the public health sphere, including the Johns Hopkins School of Public Health, helped launch and continue to promote Meatless Monday. Parties would benefit from tapping into this knowledge base, and drawing more of these civil society actors into the dialogue.

iii. Government Reticence

Unfortunately, governments have not necessarily been quick to follow these trends. In a 2014 report, *Livestock – Climate Change’s Forgotten Sector: Global Public Opinion on Meat and Dairy Consumption*, Chatham House found that “[c]onsumers with a higher level of awareness are more likely to indicate willingness to reduce their meat and dairy consumption for climate objectives.”³³ Further, in their 2015 report, *Changing Climate, Changing Diets Pathways to Lower Meat Consumption*, diverse focus groups in four countries believed governments should lead the such efforts. Yet, the report also found that governments are unwilling to tackle overconsumption of meat and dairy due to an overestimated fear of public backlash. This has left them “...trapped in a cycle of inertia: they fear the repercussions of intervention, while low public awareness means they feel no pressure to intervene.”³⁴

iv. Further Work of UNFCCC Parties

It is no longer politically necessary to side-step the issue. As evidenced by the examples above, the discussion on the need for reduced consumption of meat and other animal-based foods is rapidly gaining momentum across the world. The need for the lower consumption of meat, egg, and milk products –



particularly by consumers in industrialized countries, and mid- and high-income consumers in developing and emerging economies – must be stated openly.

Exciting new options can make these transitions easier. Plant-based meat alternatives, for example, have the potential to significantly curb the climate, water, and land use burden compared to conventional meat production.

We therefore call on parties to:

- Acknowledge research on the necessary global, demand-side interventions to meet the Paris Agreement’s 1.5° C limit;
- Evaluate technical and methodological options at the national, regional and local levels to manage unsustainable demand for animal products and meet global mitigation targets; and
- Determine and work to fill any research gaps related to demand-side interventions in agriculture.

C. Greater Civil Society Participation

Civil society participation in past SBSTA agriculture workshops has fallen well short of full and inclusive participation. Yet, civil society organizations have significant experience and expertise with a wide variety of applicable technologies and methodologies at issue.

We therefore call on parties to:

- Include civil society presentations, including an expert speaker on animal welfare, in the in-session workshops at SBSTA 44; and
- Work towards greater inclusivity of Observer organizations in future UNFCCC work on agriculture.

IV. Conclusion

In light of the growing challenges to animal welfare in the global farm animal sector, in addition to the interdependency of public health, environmental, and sustainable development objectives, UNFCCC Parties must implement agricultural policies that improve food security and long-term sustainability, while promoting and enhancing animal welfare.

Governments must address demand-side options. The technical mitigation potential, co-benefits to public health and other sustainable development goals, as well as the opportunity costs of not acting, are too great to ignore. Thus, Parties must ensure that national, regional and local policies manage unsustainable demand for animal products. Governments and civil society must address drivers of agricultural emissions by raising awareness and implementing policies regarding the health, climate, and environmental benefits of reducing demand for animal products, particularly in developed nations and amongst higher income urban consumers in mid-income nations.

Further, Parties need to take a holistic approach to meeting their climate obligations. Thus, they should work towards national, regional and local strategies for climate change adaptation and mitigation that ensure equitable, animal-welfare-friendly solutions for farm animal production. This should be reflected in



and inserted into negotiation processes, and the outcomes must be context-specific and adaptable to national and local needs.

We look forward to working with Parties to develop solutions to climate change emissions and impacts in the farm animal sector in a manner that also promotes and enhances food security, animal welfare, and overall environmental sustainability. Our recommendations and supporting data provide a basis for this future work.

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³ Intergovernmental Panel on Climate Change. 2007. Climate change 2007: climate change impacts, adaptation and vulnerability; summary for policymakers. Working Group II Contribution to the Intergovernmental Panel on Climate Change Fourth Assessment Report, Chapter 5: food, fibre, and forest products, pp. 275 and 277-278.

⁴ Gerber PJ, Steinfeld H, and Henderson B et al. 2013. Tackling climate change through livestock – A global assessment of emissions and mitigation opportunities. Food and Agriculture Organization of the United Nations (FAO), Rome.

⁵ Pelletier N and Tyedmers P. 2010. Forecasting potential global environmental costs of livestock production 2000-2050. Proceedings of the National Academy of Sciences of the United States of America 107(43):18371-18374.

⁶ Steinfeld H, Gerber P, Wassenaar T, Castel V, Rosales M, and de Haan C. 2006. Livestock's long shadow: environmental issues and options. Food and Agriculture Organization of the United Nations, p. xxii.

⁷ Steinfeld H, Gerber P, Wassenaar T, Castel V, Rosales M, and de Haan C. 2006. Livestock's long shadow: environmental issues and options. Food and Agriculture Organization of the United Nations, p. xxi.

⁸ Steinfeld H, Gerber P, Wassenaar T, Castel V, Rosales M, and de Haan C. 2006. Livestock's long shadow: environmental issues and options. Food and Agriculture Organization of the United Nations, p. 84.

⁹ Steinfeld H, Gerber P, Wassenaar T, Castel V, Rosales M, and de Haan C. 2006. Livestock's long shadow: environmental issues and options. Food and Agriculture Organization of the United Nations, pp. 39, 43.

¹⁰ Rosegrant MW, Ringler C, Zhu T. 2009. Water for Agriculture: maintaining food security under growing scarcity. Annual Review of Environment and Resources 34:205-222. p. 207

¹¹ Mekonnen MM and Hoekstra AY. 2012. A global assessment of the water footprint of farm animal products. Ecosystems 15:401-15.

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¹³ Steinfeld H, Gerber P, Wassenaar T, Castel V, Rosales M, and de Haan C. 2006. Livestock's long shadow: environmental issues and options. Food and Agriculture Organization of the United Nations, p. xxi.

¹⁴ Steinfeld H, Gerber P, Wassenaar T, Castel V, Rosales M, and de Haan C. 2006. Livestock's long shadow: environmental issues and options. Food and Agriculture Organization of the United Nations, p. xxi.

¹⁵ Brighter Green. 2015. The triangle: the evolution and future of industrial animal agriculture in the U.S., China, and Brazil. Discussion Paper.

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- ¹⁶ Humane Society International, Brighter Green, and World Society for the Protection of Animals. 2013. Submission to SBSTA: recommendations for animal-friendly and sustainable agriculture. <http://unfccc.int/resource/docs/2013/smsn/ngo/399.pdf>.
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