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U.S. Department of Agriculture

Re: Docket No. FNS-2019-001: Meetings: 2020 Dietary Guidelines Advisory Committee

The Center for Biological Diversity submits the following comments to the Dietary Guidelines Advisory Committee and the Center for Nutrition Policy and Promotion on the development of the 2020-2025 Dietary Guidelines for Americans.

The Center for Biological Diversity is a national, nonprofit conservation organization with more than 1.7 million members and online activists dedicated to the protection of endangered species and wild places. We believe the health and well-being of humans is intrinsically linked to the health and well-being of nature. The American diet and federal nutrition recommendations have an enormous impact on water, soil, climate, biodiversity, and the health of ecosystems.

A sustainable food system is not only a critical part of addressing the climate emergency and extinction crisis, it is also necessary for protecting public health and our ability to grow enough nutritious food for Americans.

I commend the Committee's decision to address the topic of dietary sustainability in an "integration chapter" of the forthcoming *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*. I appreciate the thoughtful, rigorous work of the Committee and staff that led to this decision, which reflects the latest science showing that diets that promote planetary health are aligned with promoting public health.

In consideration of the Committee's draft conclusions, additional scientific evidence, and the urgency of addressing the environmental cost of dietary patterns, I urge the Committee to include the following conclusions and strong recommendations in its final report:

I. Sustainability must be a core part of national dietary guidance to protect public health and food security.

The purpose of national dietary guidelines is to promote health and food security. The 2015 Dietary Guidelines Advisory Committee found that diets lower in animal-based

foods and higher in plant-based foods are aligned with the best available nutrition science and help ensure access to sufficient, nutritious and safe food for current and future generations, since they require fewer resources and support soil health and resiliency. The committee concluded that “a diet higher in plant-based foods, such as vegetables, fruits, whole grains, legumes, nuts, and seeds, and lower in calories and animal-based foods is more health promoting and is associated with less environmental impact than is the current U.S. diet.”¹

The body of evidence supporting plant-forward diets for the climate, health and food security has only grown since the 2015 advisory committee released its scientific report. A systematic review conducted by the Union of Concerned Scientists found that between July 2015 and September 2019, 95 new peer-reviewed papers were published on this topic, including 22 focusing specifically on U.S. diets.²

The urgency of addressing the environmental impact of our food system cannot be overstated. The Intergovernmental Panel on Climate Change (IPCC) has determined that if global greenhouse gas emissions (GHG) aren't halved within the next 10 years, humans and wildlife alike will suffer the effects of catastrophic climate change.^{3, 4} To tackle this urgent need, we must align food policy with climate policy. Several studies have determined that we won't be able to meet international climate targets without reducing consumption of animal-based foods and shifting toward diets higher in plant-based foods.^{5, 6, 7} This is especially true for countries with high consumption, like the United States.

Globally, as much as 29% of planet-warming emissions come from food production each year, and more than half of those come from meat and dairy.⁸ The livestock sector

¹ Scientific Report of the 2015 Dietary Guidelines Advisory Committee. U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion. Available at <http://www.health.gov/dietaryguidelines/2015-scientific-report/>

² Reinhardt, S.L., Boehm, R., Blackstone, N.T., El-Abbadi, N.H., McNally Brandow, J.S. Taylor, S.F., and DeLonge, M.S. 2020. Systematic Review of Dietary Patterns and Sustainability in the United States, *Advances in Nutrition*, , nmaa026, <https://doi.org/10.1093/advances/nmaa026>

³ United Nations (UN) Development Programme. 2019. Nationally Determined Contributions (NDC) Global Outlook Report 2019. Retrieved from: https://www.undp.org/content/undp/en/home/librarypage/environment-energy/climate_change/ndc-global-outlook-report-2019.html

⁴ Intergovernmental Panel on Climate Change (IPCC). 2018. Global Warming of 1.5°C. An IPCC Special Report [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. Retrieved from: https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_High_Res.pdf

⁵ Bajželj, B., K. S. Richards, J. M. Allwood, P. Smith, J. S. Dennis, E. Curmi and C. A. Gilligan. 2014. Importance of food-demand management for climate mitigation. *Nature Climate Change*. 4(10): 924-929.

⁶ Hedenus, F., S. Wirsenius and D. A. Johansson. 2014. The importance of reduced meat and dairy consumption for meeting stringent climate change targets. *Climatic Change*. 124(1-2): 79-91.

⁷ Springmann, M., M. Clark, D. Mason-D'Croz, et al. 2018a. Options for keeping the food system within environmental limits. *Nature*. 562(7728): 519-525.

⁸ Vermeulen, S. J., Campbell, B. M., and Ingram, J. S. 2012. Climate change and food systems. *Annual Review of Environment and Resources*. 37.

alone accounts for 16.5% of global emissions representing a significant burden on the climate from within the food system.⁹ Beyond the climate impacts, meat and dairy production, including grazing usage and agricultural lands for cattle feed, take up an astounding 30% of the Earth's surface and 80% of all agricultural land in the United States.^{10, 11} Americans consume more meat than almost any other country, and our beef consumption is four times the global average.¹²

The high rate of meat consumption in the U.S. has an enormous impact on biodiversity, as well as on our ability to mitigate and adapt to the climate crisis. In its Special Report on Climate Change and Land released in 2019, the IPCC warned that food systems are already being adversely affected by the frequency and intensity of extremes associated with climate disruption. Declining crop yields, unpredictable planting seasons, increases in agricultural pests and diseases, and worsening land degradation pose a threat to food security.¹³

Dietary recommendations that fail to recognize the environmental costs of food production can result in an increase in greenhouse gas emissions. For example, one study found that a shift from the average U.S. diet to the USDA dietary recommendations could result in a 12% increase in diet-related greenhouse gas emissions, primarily from the increase in dairy consumption.¹⁴

Research released earlier this year by the University of Michigan and Tulane University, *Implications of Future U.S. Diet Scenarios on Greenhouse Gas Emissions*, found that shifting 50% of animal-based foods in the current average American diet to plant-based foods would reduce diet-related greenhouse gas emissions by 35% per person per day. Cumulatively these changes are even more significant. The cumulative emissions savings of this dietary pattern would add up to more than 1.6 billion tons by 2030. If 90% of beef consumption were replaced alongside the 50% reduction in all other animal products, it would result in more than 2 billion tons of prevented greenhouse gas

⁹ Calculated using the 2017 online update to the FAO 2013 GLEAM assessment that estimates the livestock sector emitted 8.1 GT CO₂eq in 2010 (using 298 and 34 as global warming potentials for N₂O and CH₄, based on the IPCC 2014 report). The IPCC 2014 report estimates total anthropogenic GHG emissions in 2010 of 49 GT CO₂eq. See: FAO, Global Livestock Environmental Assessment Model (GLEAM) [online], Rome, www.fao.org/gleam/en/ and IPCC [Intergovernmental Panel on Climate Change], Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, [Core Writing Team, R.K. Pachauri & L.A. Meyer (eds.)], IPCC, Geneva, Switzerland (2014), http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf.

¹⁰ Ramankutty, N., Evan, A.T., Monfreda, C. and Foley, J.A. 2008. Farming the planet: 1. Geographic distribution of global agricultural lands in the year 2000. *Global biogeochemical cycles*. 22(1).

¹¹ Food and Agricultural Organization (FAO) of the United Nations. Animal Production. Retrieved from: <http://www.fao.org/animal-production/en/>

¹² OECD. 2020. Meat consumption (indicator). doi: 10.1787/fa290fd0-en. Accessed on 12 March 2020.

¹³ Mbow, H.O.P., Reisinger, A., Canadell, J. and O'Brien, P. 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. Intergovernmental Panel on Climate Change (IPCC). Retrieved from: <https://www.ipcc.ch/srccl/chapter/summary-for-policymakers/>

¹⁴ Heller et al. 2015.

emissions. However, without dietary changes the emissions associated with the average American diet will increase 9% by 2030 due to population growth.¹⁵

Thus, the cost of inaction – including the omission of sustainability from federal dietary guidance – will push us further from necessary emissions reductions and closer to climate catastrophe.

And it isn't just climate change that's threatening food security. Our current food system is creating a downward spiral in which unsustainable production contributes to climate change, poor soil health and desertification, excessive water extraction, pollution, and biodiversity loss. In addition, the increasing demand for seafood, illegal fishing, and climate change present serious threats to global fisheries, which may be exacerbated by aquaculture.¹⁶ All of this makes it increasingly difficult to continue producing enough nourishing, healthy food.^{17, 18}

In 2019 the Society for Nutrition Education and Behavior published a position on the importance of including environmental sustainability in dietary guidance, stating that “environmental sustainability should be inherent in dietary guidance, whether working with individuals or groups about their dietary choices or in setting national dietary guidance. Improving the nutritional health of a population is a long-term goal that requires ensuring the long-term sustainability of the food system.”¹⁹

Incorporating sustainability into national dietary guidance is supported by scientific evidence and is necessary for protecting food security and promoting public health.

II. The Dietary Guidelines for Americans should recommend diets higher in plant-based foods and lower in animal-based foods, particularly limiting red and processed meats.

Research shows that there are strong linkages between food and health. The current American diet is contributing to high rates of preventable chronic diseases such as cancer, heart disease, and type 2 diabetes, making diet-related disease the leading

¹⁵ Heller, M., Keoleian, G., and Rose, D. 2020. Implications of Future US Diet Scenarios on Greenhouse Gas Emissions. Retrieved from: <http://css.umich.edu/publication/implications-future-us-diet-scenarios-greenhouse-gas-emissions>

¹⁶ Pauly D, Christensen V, Guénette S, et al. Towards sustainability in world fisheries. *Nature*. 2002;418(6898):689-695.

¹⁷ “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” (Intergovernmental Panel on Climate Change, 2019), <https://www.ipcc.ch/site/assets/uploads/2019/11/SRCCL-Full-Report-Compiled-191128.pdf>.

¹⁸ M.E. Brown et al., “Climate Change, Global Food Security, and the U.S. Food System” (U.S. Global Change Research Program, 2015), <https://doi.org/10.7930/J0862DC7>.

¹⁹ Rose, D., Heller, M. and Roberto, C. “Position of the Society for Nutrition Education and Behavior: The Importance of Including Environmental Sustainability in Dietary Guidance.” *Journal of Nutrition Education and Behavior*, Volume 51, Issue 1, 3 - 15.e1 [https://www.jneb.org/article/S1499-4046\(18\)30673-0/fulltext](https://www.jneb.org/article/S1499-4046(18)30673-0/fulltext)

cause of death in the U.S.²⁰

The draft conclusions of the 2020 Dietary Guidelines Advisory Committee reflect the scientific consensus (including conclusions drawn by the 2015 Dietary Guidelines Advisory Committee) that dietary patterns characterized by higher consumption of plant-based foods and lower consumption of meat and dairy are associated with reduced risk of obesity, cardiovascular disease, type 2 diabetes, breast cancer, colorectal cancer, gestational diabetes, hypertensive disorders of pregnancy (including preeclampsia and gestational hypertension), and preterm birth. Similar dietary patterns were also associated with favorable bone health, with limited evidence of association with reduced risk of lung cancer and age-related cognitive impairment and/or dementia.²¹

Dietary patterns emphasizing vegetables, legumes, fruits, nuts, and whole grains were also associated with lower risk of all-cause mortality. This included dietary patterns that did not include dairy as well as those that did not include any animal products.

Lower consumption of red and processed meats, in particular, are associated with reduced risk of cardiovascular disease, colorectal cancer, gestational diabetes, preterm birth, and all-cause mortality.²² This is consistent with the findings of the World Health Organization which, after evaluating more than 800 studies, classified processed meats like bacon, sausage and ham as known carcinogens to humans, and classified red meat as a probable carcinogen.²³

In 2018, the American Medical Association adopted a policy for Culturally Responsive Dietary and Nutritional Guidelines that recognizes “that lactose intolerance is a common and normal condition among many Americans, especially African Americans, Asian Americans, and Native Americans, with a lower prevalence in whites, often manifesting in childhood” and recommended that meat and dairy products should be clearly indicated as optional in the Dietary Guidelines for Americans, based on individual dietary needs.²⁴

Although the Committee concluded that changes to USDA Food Patterns aren't necessary, the scientific evidence and current average American diet suggest a greater

²⁰ Ashkan Afshin et al., “Health Effects of Dietary Risks in 195 Countries, 1990–2017: A Systematic Analysis for the Global Burden of Disease Study 2017,” *The Lancet* 393, no. 10184 (May 11, 2019): 1958–72, [https://doi.org/10.1016/S0140-6736\(19\)30041-8](https://doi.org/10.1016/S0140-6736(19)30041-8).

²¹ 2020 Dietary Guidelines Advisory Committee. Topics and Questions Under Review by the Committee. Draft conclusions up to date as of 4/20/2020. Retrieved 5/28/2020 from: <https://www.dietaryguidelines.gov/work-under-way/review-science/topics-and-questions-under-review>

²² Ibid.

²³ Bouvard, Véronique, et al. "Carcinogenicity of consumption of red and processed meat." *The Lancet Oncology* 16.16 (2015): 1599-1600.

²⁴ Public Health: Culturally Responsive Dietary and Nutritional Guidelines D-440.978. American Medical Association. 2018. Retrieved May 29, 2020 from <https://policysearch.ama-assn.org/policyfinder/detail/D-440.978?uri=%2FAMADoc%2Fdirectives.xml-0-1522.xml>

need to increase consumption of plant-based foods and decrease consumption of animal-based foods, particularly limiting red and processed meats.

The Dietary Guidelines for Americans should include recommendations and supporting evidence to help shift the American diet toward a major reduction in beef, and a substantial reduction in all other animal-based foods, from current consumption levels. The guidelines should emphasize the importance of plant-based foods, including proteins, and replace dairy with water as the beverage of choice. Finally, dietary patterns that promote environmental sustainability, such as the Healthy Vegetarian Eating Pattern, should be identified as such and foods that present particular environmental concerns, such as red and processed meat and seafood, should be presented alongside information about their environmental impacts.

III. The Departments of Agriculture and Health and Human Services must address the environmental and socioeconomic factors influencing healthy, sustainable diets.

Abundant science now illustrates the synergies between healthy dietary choices and a secure food system, which in turn impact public health and equity.²⁵ Establishing the link between health, dietary patterns, food environment and food security is necessary to ensure we can continue to provide nutritious food for Americans.

Prior to the COVID-19 pandemic, more than 11% of U.S. households were food insecure, including 5.6 million households with very low food security.²⁶ By the end of April 2020, more than 1 in 5 households – and 2 in 5 households with mothers and children under 12 – were food insecure.²⁷

Research has shown that food insecurity and food deserts – areas with limited access to affordable healthy food – disproportionately affect communities of color and low-income communities.²⁸ These unhealthy food environments are exacerbated by inequality and structural racism such as historically low wages and predatory junk food marketing.²⁹ Food insecurity is associated with greater risk of diet-related chronic illness, such as cardiovascular disease.³⁰

²⁵ Neff, Roni, ed. Introduction to the US Food System: Public Health, Environment, and Equity. John Wiley & Sons, 2014.

²⁶ Food Security and Nutrition. USDA ERS. Accessed June 1, 2020 from: <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/food-security-and-nutrition-assistance/>

²⁷ Bauer, Lauren. "The COVID-19 crisis has already left too many children hungry in America." Brookings Institution. May 6, 2020. <https://www.brookings.edu/blog/up-front/2020/05/06/the-covid-19-crisis-has-already-left-too-many-children-hungry-in-america/>

²⁸ Bower, Kelly M., et al. "The intersection of neighborhood racial segregation, poverty, and urbanicity and its impact on food store availability in the United States." *Preventive medicine* 58 (2014): 33-39.

²⁹ Harris JL, Frazier W, Kumanyika S, Ramirez AG. Increasing disparities in unhealthy food advertising targeted to hispanic and black youth. Rudd Report. 2019.

³⁰ Seligman HK, Laraia BA, Kushel MB. Food insecurity is associated with chronic disease among low-income NHANES participants. *J Nutr.* 2010;140(2):304-310.

The 2020-2025 Dietary Guidelines for Americans must examine and address the racial and socioeconomic disparities that underlie food insecurity and unhealthy food environments, particularly as many more Americans will face these challenges due to the coronavirus pandemic. The Dietary Guidelines Advisory Committee should call for specific recommendations in the final guidelines that help increase access to healthy, sustainable food and nutrition.

Nutrition education and other interventions related to the dietary guidelines should ensure that dietary patterns begin to follow the recommendations for good health and sustainability. This should include effective behavioral, food environment and policy interventions that can encourage and support increased consumption of fruits and vegetables and reduced consumption of animal-based foods.

The dietary guidelines can help identify and encourage food-environment and policy approaches that systematize healthy, sustainable eating rather than relying solely on individual choice. The 2015 Dietary Guidelines Advisory Committee noted: “These approaches have the potential for broad and sustained impact at the population level because they can become incorporated into organizational structures and systems and lead to alterations in sociocultural and societal norms. Both policy and environmental changes can also help reduce disparities by improving access to and availability of healthy food in underserved neighborhoods and communities.”³¹

Finally, more research is needed to understand the relationship between the Social-Ecological Model, health equity, and the ability of Americans to eat according to the Dietary Guidelines. Additional research is needed to improve understanding of how dietary choices affect the livelihoods and well-being of people and communities, the co-benefits to communities of sustainable diets (e.g. reduced pollution, fewer greenhouse gas emissions, improved water quality, increased biodiversity). This information can help improve immediate health outcomes as well as build resilience in communities and in the food system in the face of climate change, future pandemics or other major disruptions.

IV. The scientific integrity of the Dietary Guidelines for Americans must be preserved in the final guidance issued by the Administration.

As the leading trusted source of diet and nutrition information for Americans, the dietary guidelines must maintain scientific integrity in order to maintain credibility with the American public. The National Academies of Sciences’ congressionally-mandated review of the Dietary Guidelines for Americans (DGA) process emphasized that “The adoption and widespread translation of the DGA require that they be universally viewed

³¹ Scientific Report of the 2015 Dietary Guidelines Advisory Committee. U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion. Available at <http://www.health.gov/dietaryguidelines/2015-scientific-report/>

as valid, evidence based, and free of bias and conflicts of interest to the extent possible.”³²

The changes in this year’s process – including determining the topics and questions before the appointment of Committee members and the exclusion of high-quality external systematic reviews and meta-analyses – have already raised questions about whether the Committee has had the ability that previous Committees had to fully exercise their independent expertise to ensure that recommendations were driven by the latest science without the influence of politics or private interests.

Despite these restrictions placed on the Committee, USDA and HHS should address issues that the Committee felt were important to include, such as the topic of dietary sustainability in the integration chapter, in the final guidelines. The final policy report should continue to reflect the types of sensible, evidence-based improvements to our food environment and public policies that support Americans’ ability to make healthier dietary choices, as they have in previous editions with guidance on physical activity, food safety and policies to promote healthy diets.

To protect food security, it is imperative that the nutrition policy which guides American dietary patterns and federal food purchasing and policies, as well as influencing our agricultural systems, is based on the latest scientific evidence and free from industry bias and conflicts of interest.

V. Conclusion

As the basis of federal nutrition policy and programs, the dietary guidelines directly affect billions of meals served each year in schools, government cafeterias, military bases, prisons, healthcare institutions and through social service programs such as Meals on Wheels. The dietary guidelines determine the health and sustainability of meals served to our most vulnerable citizens as well as influencing food availability, social norms, and nutrition education for the public at large.³³

The dietary guidelines have an enormous influence over creating equitable food choices and policies in the United States and the greenhouse gas emissions associated with U.S. dietary patterns. The urgency of integrating sustainability into food and nutrition policy and programs has never been clearer. The COVID-19 pandemic has exposed the vulnerabilities of our food system, while the challenges of extreme weather events, droughts, and other climate-related impacts threaten agricultural production and public

³² National Academies of Sciences, Engineering, Medicine. *Redesigning the Process for Establishing the Dietary Guidelines for Americans*. Washington, DC: The National Academies Press; 2017

³³ National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Food and Nutrition Board; Committee to Review the Process to Update the Dietary Guidelines for Americans. *Redesigning the Process for Establishing the Dietary Guidelines for Americans*. Washington (DC): National Academies Press (US); 2017 Nov 16. 2, Role and Purposes of the Dietary Guidelines for Americans: Evaluation and Findings. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK469833/>

health and safety. The dietary guidelines can help build a healthy, sustainable and resilient food system.

Thank you for the opportunity to comment on the committee's draft conclusions. We look forward to reviewing the draft scientific report. Increased transparency is critical to ensuring evidence-based dietary guidance that will be widely accepted among Americans.

From farm to fork, America's food system should make the safest and healthiest food available to everyone. The Dietary Guidelines are the administration's opportunity to provide evidence-based, forward-thinking nutrition guidance Americans can stand behind and, as such, must prioritize the health of Americans, the sustainability of our environment and the resilience of our food system over partisan politics and corporate interests.

Respectfully submitted,
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