EATING FOR THE ENVIRONMENT: THE POTENTIAL OF DIETARY GUIDELINES TO ACHIEVE BETTER HUMAN AND ENVIRONMENTAL HEALTH OUTCOMES

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AE request abstract DRAFT – NOT FOR CIRCULATION – DO NOT CITE

I. OVERVIEW

Dietary guidelines ("DG") are the unsung heroes of American food policy with the potential to improve individual, public, and environmental health outcomes in the 21st Century.[1] Realizing their potential requires stakeholders to view the dietary guideline's purpose more holistically so that they influence not only individual eating patterns but also food production. Such a shift will require DGs to incorporate clinical studies, population science , and environmental science so that they suggest eating patterns designed for nutrition, public health, and production and manufacturing of foods that contribute to a sustainable food system.

As an opening and critical premise, this paper is based on the view that sustainability is a fundamental value that should be encoded in American law and policy, if it is not already.[2] Without such a value, particularly in food law and policy, the American political system is ill equipped to address the near and long term needs of its citizens. The US food system is underpinned by an incredibly complex portfolio of law, regulation, and policy that largely overlooks one particular lever – the appropriate role of government in shaping eaters' (consumers) demand for certain products. This crucial issue – the way in which government policy can alter dietary patterns – involves a potent mix of government power and economic

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[1] *See* 7 U.S.C. § 5341 (2012) (requiring US dietary guidelines).

[2] The issue of whether sustainability is already an implicit American value, particularly following the environmental activism of the late 60s and 70s is an important one. As this article will explain, the Secretaries of the Departments of Health and Human Services and Agriculture rejected this view when they refused to include sustainability recommendations in the 2015 guidelines despite the clearly having discretion to do so under the principles of *Chevron* and the delegation doctrine. A complete analysis of the nuances of that administrative decision is beyond the scope of this article, but readers are encouraged to reason through whether sustainability principles are arguably implicit in federal exercises of power because core American values compel policy making that maximizes near term well-being while preserving resources for future generations (though perhaps these values are not not labeled as "sustainability").

interests (not to mention that of individual citizens) that can be marked by hostile political battles that increasingly pit science against special interests.

Science plays a critical role in developing DGs. As this paper explains, a preponderance of science and medical knowledge is required to inform DGs. Scientific validation is a critical part of the process and so too is understanding how science is conducted and defined. Questions include how science is funded and even more fundamentally, what *type* of science appropriately informs DGs. It is fair to state that the DGs have evolved from relying only on clinical science recommendations for nutrient intake in humans to including population science for metadata analysis relating diet to public health outcomes.[3]

It is also accurate to state that life cycle analysis ("LCA") – which is a specific scientific methodology designed to evaluate the environmental, social and economic impacts of particular products[4] – was not accepted as a valid scientific consideration appropriate to inform USDGs in 2015, though the expert report relied on it. Though LCA is an emerging field, this paper takes the position that combined with clinical and population science it has the potential to add powerful insight into the consequences of different dietary patterns for human and environmental health.

There are legitimate concerns about the focus of clinical research as it informs dietary and nutritional advice. The most recent, and perhaps best, illustration comes from the 2016 discovery that the sugar industry shifted the focus of nutrition research to the role of saturated fats in chronic disease while squelching the question how sugar might contribute.[5] Perhaps

[3] Editors: source coming – may need to infer this from past NEL documents or from interview with a two time DGAC member.

[4] United Nations Environment Programme, *Towards a Life Cycle Sustainability Assessment* (2011) 22 http://wedocs.unep.org/bitstream/handle/20.500.11822/8001/UNEP_LifecycleInit_Dec_FINAL.pdf?sequence=3&isAllowed=y (there are a variety of definitions of LCA and readers are encouraged to explore this interesting methodology, which is admittedly imprecise but also a powerful tool in evaluating dietary choices.)

[5] Anahad O'Connor, *How the Sugar Industry Shifted the Blame to Fat*, N.Y. Times, Sept. 12, 2016 https://www.nytimes.com/2016/09/13/well/eat/how-the-sugar-industry-shifted-blame-to-fat.html ("At the time, studies had begun pointing to a relationship between high-sugar diets and the country's high rates of heart disease. At the same time, other scientists . . . were investigating a competing theory that is was saturated fat and dietary cholesterol that posed the biggest risk for heart disease . . . [a sugar industry funded researcher] reassured the sugar executives "We are well aware of your particular interest . . . and will cover this as well as we can.")

equally important is the legitimate concern that relying on new fields of scientific research is risky where there is more uncertainty because the field is emergent. Whether the question is one of integrity or methodology, for the purposes of this paper, it is sufficient for readers to understand that science *is* critical to meaningful DGs. Unfortunately the current state of the science has the public and Congress concerned about its reliability. As a consequence, there is a significant perception that the USDG are untrustworthy.[6] This mix of science, politics, and process poses an important question: Can American law and policy encourage eating for the environment? Should it?

This symposium paper first explains briefly the scope of the United States Dietary Guidelines ("USDG") and their role in US food policy. It then provides an overview of global trends in dietary guidance, including creating explicit linkages between DGs and sustainable food systems and the reasons some nations have chosen to take this approach. Finally, it begins to tell the story of how dairy and meat recommendations illustrate the potential impact of DG that more broadly consider public and environmental health, in additional to individual nutritional goals.

Several good sources retell the story of the modern-era of the USDG, which began in the late 1960s under the leadership of Senator George McGovern though the most comprehensive, and perhaps discouraging, is Food Politics, by Marion Nestle.[7] Her book captures the process and content flaws often attributed to the USDGs – first, that the USDG are unduly influenced by industry and second, partly as a function of the first, they encourage "eating more" rather than providing advice about what to eat *and* what to avoid.[8] Despite these flaws, the USDG are powerful components of the US food system. For example, billion dollars of federal feeding

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[6] National Academies of Sciences, *Optimizing the Process for Establishing the Dietary Guidelines for Americans: The Selection Process*, S-4 Feb. 2017 (hereinafter NAS Report).
[7] MARION NESTLE, FOOD POLITICS 29-67 (2002) (providing an overview from 1900 through 1990 of the US nutritional guidance and policy).
[8] *See generally*, NESTLE, *supra* note **.

program spending (National School Lunch Program alone cost $17B in FY16[9]) comply with them and their content is distributed widely through USDA publications and marketing.[10] Given their influence on the spending of federal food dollars and their role in the food economy (see below), understanding the process by which they are created is important to understanding how they can be recalibrated in 2020 and beyond to bring about more a sustainable food system.

A. The United States Dietary Guidelines[11]

The 1990 National Nutrition Monitoring and Related Research Act[12] provides that:

> (1) At least every five years the Secretaries shall publish a report entitled "Dietary Guidelines for Americans". Each such report shall contain nutritional and dietary information and guidelines for the general public, and shall be promoted by each Federal agency in carrying out any Federal food, nutrition, or health programs.
>
> (2) The information and guidelines contained in each report required under paragraph (1) shall be based on the preponderance of the scientific and medical knowledge that is current at the time the report is prepared.

By requiring the USDGs to be based on the preponderance of the scientific and medical knowledge that is current at the time, the statute allows guidance to evolve with advances in understanding the complex relationship between diet and health.[13]

What should people eat? Given the scientific complexity of this question the USDG are developed by the Dietary Guidelines Advisory Committee ("DGAC" or "the Committee"). The Committee is appointed through a consultative process between the Department of HHS and the Government Services Administration ("GSA") that first determines that HHS is best served by a federal advisory committee. The Federal Advisory Committee Act ("FACA")[14] governs the activities of the Committee.

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[9] UNITED STATES DEPARTMENT OF AGRICULTURE, FEDERAL COST OF SCHOOL FOOD PROGRAMS *https://www.fns.usda.gov/sites/default/files/pd/cncost.pdf* (last visited Feb. 29, 2017).

[10] Among the federal food programs that require compliance with the USDG are: National School Lunch Program 42 U.S.C. §1758 (2012); Child and Adult Care Food Program, 42 U.S.C. § 1766 (2012); Nutrition Education and Obesity Prevention Grant Program, 7 U.S.C. §2036a (2012)

[11] The specific guidelines may be accessed here: https://health.gov/dietaryguidelines/2015/.

[12] 1990 National Nutrition Monitoring and Related Research Act (Public Law 101-445), & U.S.C. § 5341(a) (2012).

[13] *Id.*

[14] P.L. 92-463 (2012); 5 U.S.C. Appx. 2 (2012).

In 2015, the Committee members were selected based on their expertise in areas such as cardiovascular diseases, type 2 diabetes, overweight and obesity, cancer, general medicine, epidemiology, public health, as well as nutrition education and behavior change.[15] While these selection criteria are certainly appropriate given the DGs' statutory purpose, the popular press has identified serious concerns about whether those who serve are adequately free of corporate and special interests.[16] Additionally, based on its own hearings[17] and possibly concern over a FACA challenge to the cholesterol recommendation[18], Congress has mandated that the National Academy of Sciences ("NAS") review the appointment process and make recommendations for its improvement; the first report on this topic was issued in February 2017 and is discussed below.[19]

B. Nutrition Evidence Library

The Committee's work is guided by its charge, which is generic in its language and does not provide further direction beyond the statutory mandate of 7 U.S.C. § 5341.[20] Once established Committee members must follow FACA and the USDA Nutrition Evidence Library ("NEL") supports their work.[21] The role of the NEL, as described in the charge, is to "assist the

[15] Establishment of the 2015 Dietary Guidelines Advisory Committee, 78 Fed. Reg. 8147 (Feb, 5, 2013) available at https://www.federalregister.gov/documents/2013/02/05/2013-02502/establishment-of-the-2015-dietary-guidelines-advisory-committee.

[16] Helen Bottemiller Evich, *Meat Industry wins round in war over federal nutrition advice*, (Politico, Jan. 7, 2016), http://www.politico.com/story/2016/01/2015-dietary-guidelines-217438#.1f9i54w:ouE1. ("The congressional effort to thwart some of the advice was unsuccessful. But the omnibus spending package did contain $1 million for an independent review of the integrity of the entire Dietary Guidelines process — a win for a growing circle of interests who believe it's been hijacked by politics.")

[17] Cite congressional hearing transcript

[18] [18] *Physicians Comm. for Responsible Med. v. Vilsack*, No. 16-CV-00069-LB, 2016 WL 5930585, at *2 (N.D. Cal. Oct. 12, 2016); see *infra* p. ** for a more in-depth discussion of the case.

[19] *See infra*. **-** for a discussion of the NAS Report recommendations with respect to DGAC membership.

[20] Secretary of Health & Human Services, Charter, 2015 Dietary Guidelines Advisory Committee (Jan. 9, 2013) available at https://health.gov/dietaryguidelines/dgac2015-charter-final.pdf

[21] United States Department of Agriculture, 2015 Dietary Guidelines Advisory Committee, Nutrition Evidence Library Systematic Reviews, NutritionEvidenceLibrary. Gov, http://www.nel.gov/category.cfm?cid=50 (last visited Mar. 1, 2017).

Committee in conducting and creating a transparent database of systematic reviews . . . on a wide range of food and nutrition-related topics to inform its recommendations."[22]

More specifically, the NEL supports the Committee by identifying evidence portfolios for the Committee's systematic reviews. In 2015, there were four categories of systematic review: (1) Dietary Patterns, Foods, and Nutrients; (2) Individual Diet and Physical Activity Behavior; (3) Food and Physical Activity Environments; and (4) Cross-Cutting Topics of Health Importance.[23] For each category, there is an extensive evidence portfolio that not only captures the research questions, but the specific plan for identifying, grading, and interpreting scientific literature relied upon to guide the Committee's work. This method of capturing the Committee's work adds a level of transparency and clarity that permits later analysis of the USDG scope of work. It also allows later analysis of whether the Committee and NEL (unintentionally) limit the scope, depth, and breadth of science relied upon when forming the dietary guidelines in any given cycle.

C. The Federal Advisory Committee Act (FACA)

Given that *Physicians Committee for Responsible Medicine v. Vilsack*[24] ruled that the USDG are not reviewable under the Administrative Procedure Act[25] FACA is critical to ensuring that the process by which they are created is accountable to the public (in fact it is likely the *only* mechanism for court challenge of USDG recommendations). As recently as 2016, FACA formed the basis for a complaint that a member of DGAC lacked independent judgment with respect to cholesterol because the member had indirectly received research funding from the egg industry (the USDG language with respect to cholesterol and eggs was softened considerably).[26] Finding

[22] Secretary of Health & Human Services, Charter, 2015 Dietary Guidelines Advisory Committee (Jan. 9, 2013) available at https://health.gov/dietaryguidelines/dgac2015-charter-final.pdf

[23] United States Department of Agriculture, 2015 Dietary Guidelines Advisory Committee, Nutrition Evidence Library Systematic Reviews, NutritionEvidenceLibrary. Gov, http://www.nel.gov/category.cfm?cid=50 (last visited Mar. 1, 2017).

[24] 867 F. Supp. 2d. 24 (D.D.C. 2011)(finding dietary guidelines are not agency action subject to the judicial review provisions of the APA).

[25] 5 U.S.C. §§500-569 (2012).

[26] *Physicians Comm. for Responsible Med. v. Vilsack*, No. 16-CV-00069-LB, 2016 WL 5930585, at *2 (N.D. Cal. Oct. 12, 2016).

the complaint non-justiciable because there was a "lack of meaningful standard" to determine whether there was any inappropriate influence in the DGAC, the case was dismissed.[27] However, the role of FACA, transparency, bias, and conflict of interest remain very live issues in the quest to address the question of what constitutes inappropriate influence of special interests in the USDG.

Since 1972, FACA has served to mediate how experts provide input into US policymaking in a consistent, but limited manner.[28] Accountability to the public is ensured by requiring that the advisory committee: (1) provide timely notice of meetings[29] (2) subject documents to the Freedom of Information Act[30]; (3) keep detailed minutes[31]; (4) meetings be chaired by a federal office or employee who also has the authority to adjourn meetings if it is in the "public interest" to do so[32]; (5) additionally, the federal officer or employee must approve convening of meetings along with agendas.[33] The law also has specific provisions concerning FOIA requests and record keeping that, again, are designed to insure that an advisory committee works openly and transparently and does not usurp any executive power.[34]

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[27] *Id.*
[28] 5 U.S.C. Appx. 2 § 2(a) (2012).
[29] 5 U.S.C. Appx. 2 §10(a)(2) (2012).
[30] 5 U.S.C. §552 (2012).
[31] 5 U.S.C. Appx. 2 §10(c) (2012).
[32] 5 U.S.C. Appx. 2 § 10 (e) (2012).
[33] 5 U.S.C. Appx. 2 § 10 (f) (2012).
[34] *See* Steven P. Crowley & William F. Funk, *The Federal Advisory Committee Act and Good Government*, 14 Yale J. on Reg. 451, 527 (1997) *("*The Act, however, is not only an economic bargain. It also seems to promote openness, participation, and accountability in regulatory decision-making, thus enhancing the political legitimacy of the administrative state. Additionally, the Act helps to ensure that such participation is unbiased and evenhanded, thereby minimizing the danger of illicit influence on agency decision making. These virtues are interdependent. Because self-serving advice, however cheap, is no bargain, it is crucial that balance, even-handedness, and openness continue to be promoted in advisory-committee activities. While the interpretation, implementation, and administration of the Act have for the most part contributed to the success of the FACA, it is also true that a review of the case law and the results of the agency survey suggest several innovations that could improve the Act's effectiveness while advancing its underlying goals. Although some imaginable innovations would require difficult trade-offs between administrative-efficiency values, on one hand, and participation and openness values, on the other, certain improvements would largely further both sets of values simultaneously. Such innovations warrant serious consideration--by Congress, the GSA, the White House, the courts, and by agencies themselves."); for a current, thorough review of tools for government transparency, *see* Jennifer

Despite FACA, an outgrowth of the controversy over the 2015 Committee's recommendation to consider environmental impact of eating patterns, the Senate mandated review of the Committee's process by the NAS.[35] In its first report the NAS framed the Congressional concerns as "whether the processes whereby the [USDG] is developed, interpreted, and disseminated are optimal and balanced."[36] In its first report on the selection of DGAC member selection the NAS makes four recommendations to "provide more transparency, eliminate bias and including members with a range of viewpoints."[37] The first is for the Secretaries of USDA and HHS to employ neutral third party reviewers at the selection stage to identify, based on screening criteria developed by the Secretaries, a candidate pool of primary and alternative nominees.[38] This recommendation is intended to address the Congressional concern that "some subsets of the public do not trust the DGA"[39] and that greater transparency around the appointment process can avoid concerns about serious conflicts of interest and lack of expertise.

In the report, conflicts of interest are defined not only as financial but also substantive requiring inquiry into statements made in publications, service as unpaid advisors, and memberships/affiliations with organizations (presumably with vested interests in the DG). [40] To the extent possible, DGAC members should most certainly avoid serious conflicts of interests but this deeper vetting process may raise concerns in the current political climate – particularly if

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Shkabator, *Transparency with(out) accountability: Open Government in the U.S.* 31 Yale L. & Pol'y Rev. 79 (2012).

[35] National Academies of Sciences, *Optimizing the Process for Establishing the Dietary Guidelines for Americans: The Selection Process*, Feb. 2017 (hereinafter NAS Report)("When the 2015-2020 edition of the DGA was released, some of the content received criticism
from different stakeholders leading to questions about the advisory committee's composition and membership selection processes. Further questions were raised about the breadth of the advisory committee's scope, the processes it used to evaluate the evidence, and the completeness of its work.")

[36] NAS Report *supra* note ** at ix.

[37] NAS Report *supra* note ** at ix.

[38] NAS Report *supra* note ** at S-5, 4-7 – 4-9.

[39] NAS Report *supra* note ** at S-5.

[40] NAS Report *supra* note ** at S-4.

nominees have a record of urging government policy to address climate change or other similarly charged issue (such as reducing meat or dairy intake).

The second NAS recommendation builds on the first by suggesting that once the DGAC are identified with short biographies and identification of known conflicts, the provisional list should be open for public comment.[41] To avoid the risk of potential reputational harm from public attack, the comments on the provisional nominees would not be available for public review. However, recommendation three suggests that the Secretaries should manage potential biases and conflicts by "creating and posting a policy and form to explicitly disclose financial and nonfinancial biases and conflicts as well as other conflict and bias management techniques.[42] Finally, NAS suggests that the Secretaries adopt a system to regularly review the DGAC selection process and make improvements based on feedback within that system.[43]

Creating a better process is critical given that "[c]omposing and overseeing the DGAC must be deemed a matter that is 'absolutely committed to the agency's judgment . . . and closed to judicial review."[44] The NAS recommendations are informative because, if implemented, they will add a greater degree of transparency to the process. Yet, the NAS report should also be examined carefully for unintended consequences. For example, what is the distinction between expertise and bias and is it truly distinguishable; is a scientist who has spent her whole career carefully studying the impact of animal agriculture on climate and who has evidence that the animals have a greater impact on emissions than plants biased or expert when she recommends a plant-based diet?

Examining the DGAC process is helpful in that it raises critical questions concerning conflict, bias, science, evidence, and values but care must be taken to avoid adding opportunities

[41] NAS Report *supra* note ** at S-7.
[42] NAS Report *supra* note ** at S-8.
[43] NAS Report *supra* note ** at S-8.
[44] *Physicians Comm. for Responsible Med. v. Vilsack*, No. 16-CV-00069-LB, 2016 WL 5930585, at *3 (N.D. Cal. Oct. 12, 2016)(internal citations omitted).

in the process to cloud the distinction between conflict/bias and expertise, as well as to minimize the opportunities for the selection process to become an avenue for special interests to further politicize the DGAC and USDG.

As the brief overview of the USDG statute, the NEL, FACA, and the NAS study illustrate there are layers of process that are designed to ensure that the Secretaries of HHS and USDA receive objective advice from the Committee to achieve the statutory purpose. However, this also raises an important question concerning the Committee's work: What happens when the Secretaries disagree? The 2015 USDG Advisory Committee report provides a clear example of the limits of the process and more importantly, how the process may be reframed in the future to provide a broader range of considerations by the Committee.

II. EATING FOR THE ENVIRONMENT 2015

A. The USDG Advisory Committee 2015 Report

On October 7, 2015, the House Agriculture Committee convened to review the status of the DGAC's work and the anticipated USDG with two witnesses: HHS Secretary Burwell and USDA Secretary Vilsack.[45] Its concerns were three-fold – rumors of new advice concerning red meat, sustainability, and a tax on foods high in sugar.[46] Vilsack and Burwell largely confirmed that the DGAC was indeed considering these issues and immediately clarified that while DGAC's work would inform the guidelines, it would not dictate them.[47] For additional context, the importance of these DGs to the American people was illustrated by a record 29,000 public comments on the DGAC's work. Of those 19,000 addressed sustainability and 97% supported its inclusion in the USDG.[48]

[45] *Hearing to Review the Development of the 2015 Dietary Guidelines for Americans*, 104th Congress, Serial No. 224-29 1 (2015) (hereinafter USDG Congressional Hearing)(
[46] USDG Congressional Hearing, *supra* note ** at **; *see* Spencer Chase, *Cabinet Secretaries assure Congress Dietary Guidelines will stay on track*, AgriPulse (Oct. 8, 2015) https://www.agri-pulse.com/articles/6086-cabinet-secretaries-assure-congress-dietary-guidelines-will-stay-on-track.
[47] USDG Congressional Hearing, *supra* note ** at 8 (Secretary Vilsack's Statement).
[48] USDG Congressional Hearing, *supra* note ** at 20 (Secretary Burwell's comments).

Committee Chair Mike Conaway remarked after the hearing that he was "'tickled to death that Burwell and Vilsack laid the sustainability conversation to rest" and that "[i]t was important that those issues not cloud the guidelines . . . [i]f they did, then it would lessen public acceptance and trust . . . because it would seem like there was an agenda attached to them and neither secretary wants that."[49] Indeed, the USDG have a statutorily declared agenda – the health of the American people. And, sustainability is critical to not only population health today but also well into the future.

The 2010 USDG identified sustainability as relevant topic, but did not make specific inquiry into it with a systematic review by NEL. Advancing the 2010 theme, the 2015 DGAC took the bold step of framing the question in this way: "What is the relationship between population-level dietary patterns and long-term food sustainability?"[50]

The manner of framing highlights a challenging shift in the process of DG development – making near term dietary pattern recommendations while also considering the long-term impact of such choices for individual and environmental health. This is precisely way a sustainability framework – in particular, the guiding principal of providing for today's food security while at the same time planning for resource availability for future generations – would permit a USDG to incorporate an approach that addresses near and long term sustainability goals. Similarly, adopting the temporal thinking sustainability demands positions the USDG become a helpful point of reference for other food law and regulation – including the Farm Bill.[51]

This step is important because as currently configured, the Farm Bill focuses on incentivizing commodity crops and specifying the foods must be included in national feeding programs without much reliance on the USDG and seemingly without any recognition that there

[49] Chase *supra* note **

[50] Dietary Guidelines Advisory Committee, 2015 Advisory Report 167-68 (Feb. 2015) https://health.gov/dietaryguidelines/2015-scientific-report/ (last visited Mar. 1, 2017) (hereinafter "DGAC Report").

[51] *See* William Eubanks, *The Future of Federal Farm Policy: Steps for Achieving a More Sustainable Food System*, 37 Vt. L. Rev. 957 (2013) (advocating for incremental inclusion of sustainable food system production incentives in the Farm Bill).

is a way for government to align demand with production through the USDG. Professor Eubanks states succinctly and correctly, "farmers will farm wherever the money is". [52] The USDG could be as powerful as Farm Bill subsidies at putting the money, in the form of consumer demand – whether from individuals or institutional purchasers – for more plant-based foods and products to farmers and the food industry. In turn, this empowers farmers to remain truer to their own values, which Professor Eubanks suggests Farm Bill policies undermine particularly when the choice must be made between subsidies and sustainability.[53] Of course, the first step is for food law and policy to come closer to aligning agricultural production with sustainable dietary patterns.

The Advisory Committee identified four elements of sustainable diets – values, supply-chain participants, consumers, and policies.[54] This paradigm captures a food systems approach yet it also highlights the distance the Advisory Committee attempted to travel in Chapter 5 when it introduced systems thinking. And, in a very subtle way it hints at the power of the USDG to change consumer behavior in ways that likely scare stakeholders vested in the *status quo.* For example, a 65 year old who enjoys the outdoors and has grandchildren but is moderately overweight and flirting with diabetes may not have been motivated to reduce meat intake by his own health, but he may be likely to do so if it has implications for the natural environment and his grandchildren's health. Explicitly encoding values such as this is a departure from past practice and for this reason alone, may have formed the basis for some stakeholders' strong resistance to such a paradigm and the Secretaries explicit rejection of it as beyond the scope of the statute.

On the other hand, there is no clear statement that considering sustainability would be beyond the scope of congressionally delegated authority. In fact, the inclusion of sustainability could simply represent an evolution in the Secretaries' interpretation of the scope of USDG

[52] Eubanks, *supra* note ** at 968.
[53] Eubanks, *supra* note ** at 968 ("[A]ll available data indicates that many farmers genuinely want to grow healthier foods, maintain their communities, and conserve their natural ecosystems, but they are pressured to farm corn and other commodity crops at the expense of those values because that is where the profits are garnered under the existing subsidy framework.")
[54] DGAC Report, *supra* note ** at Fig. D5.1.

guidance. Most importantly, they could conclude that because science has clearly linked environmental health to human health that a sustainability framework will allow the USDG to more fully achieve their purpose. This is particularly so given that the Secretaries, when rejecting Chapter 5, began reasoning in this way:

> One of our government's most important responsibilities is protecting the health of the American public and that includes empowering them with the tools they need to make educated decisions. Since 1980, families have looked to the Department of Health and Human Services and Agriculture for science-based dietary guidelines to serve as a framework for nutritious eating.[55]

In some respects, the question can be framed as purely political and not subject to change given the DC and 9th Circuits' clear rulings that the Administrative Procedure Act is inapplicable to USDG (leaving eaters little recourse should the USDG take direction with which they disagree). However, without reviewability it is important to think carefully about where accountability rests. For example, the statute requires a preponderance of scientific and medical knowledge to inform recommendations. If this is the touchstone for USDG inclusion, then what might a citizen do if she wishes to challenge the Secretaries refusal to include sustainability because she believes that there is clear nexus between planetary health, human health, and dietary patters? Similarly, how do citizens compel review of the NEL's inclusion of life cycle analysis (LCA) or any other emergent science?[56] These are classic questions posed by the "expert" agency model and deserve further attention before the 2020 DGAC is appointed (and indeed are slated to be examined by the NAS).[57]

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[55]Secretaries Vilsack and Burwell, *2015 Dietary Guidelines: Giving you the tools you need to make healthy choices*, USDA Blog, Oct. 6, 2015 http://blogs.usda.gov/2015/10/06/2015-dietary-guidelines-giving-you-the-tools-you-need-to-make-healthy-choices/

[56] Life cycle analysis is "a standardized methodological framework for assessing the environmental impact (or load) attributable to the life cycle of a food product." DGAC Report, *supra* note ** at 5:203-04.

[57] NAS Report, *supra* note ** at S-2 (The specific questions addressed in the next report are: 2. How the Nutrition Evidence Library (NEL) is compiled and utilized, including whether NEL reviews and other systematic reviews and data analysis are conducted according to rigorous and objective scientific standards; 3. How systematic reviews are conducted on long-standing *DGA* recommendations, including whether scientific studies are included from scientists with a range of viewpoints; and 4. How the *DGA* can better prevent chronic disease, ensure nutritional sufficiency for all Americans, and accommodate a range of individual factors, including age, gender, and metabolic health.)

It seems as if the DGAC anticipated the questions LCA and Chapter 5 would raise when they framed the NEL process to identify science that supported considering sustainability as an important part of USDG. Chapter 5 acknowledges that investigating the link between population-level eating patterns and long-term food system is an "emerging area of scientific investigation that is not readily addressed by traditional study designs such as randomized controlled trials . . .".[58] However, with modifications detailed in the DGAC's report, the NEL was able to review and identify authoritative sources that helped the Committee understand the relationship between dietary pattern and food system sustainability. In fact, the Committee ultimately concluded:

> Consistent evidence indicates that, in general, a dietary pattern that is higher in plant-based foods, such as vegetables, fruits, whole grains, legumes, nuts, and seeds, and lower in animal-based foods is more health promoting and is associated with less environmental impact (GHG emissions and energy, land, and water use) than is the current average U.S. diet. A diet that is more environmentally sustainable than the average U.S. diet can be achieved without excluding any food groups. The evidence consists primarily of Life Cycle Assessment (LCA) modeling studies or land-use studies from highly developed countries, including the United States.[59]

The Committee went on to recommend incorporating sustainability because they can also serve as a motivator to better eating. Further, the Committee identified that the overlap between health and environmental outcomes data was mutually reinforcing thus arguably creating a preponderance of scientific knowledge compelling USDG recommendations based in part in sustainability. [60] However, as the reader knows sustainability was *not* included in the 2015 USDG and in fact was specifically identified by the Secretaries as an important topic and one that is being addressed through sustainability programs for food production, renewable energy, water systems, and preservation funded by USDA.[61] These programs are laudable and essential. Given this, it is challenging to understand why the federal government invests billions in sustainability programs but refuses to reflect the importance of the investments in the USDG – a

[58] DGAC Report *supra* note ** at 5:186-87.
[59] DGAC Report, *supra* note ** at 5:310-317.
[60] *See* DGAC Report, *supra* note ** at 5:329-350.
[61] Secretaries Vilsack and Burwell, *2015 Dietary Guidelines: Giving you the tools you need to make healthy choices*, USDA Oct. 6, 2015 http://blogs.usda.gov/2015/10/06/2015-dietary-guidelines-giving-you-the-tools-you-need-to-make-healthy-choices/.

powerful tool to not only educate citizens about the linkages between diet, health, and environment but also to align consumer demand with the sustainability infrastructure the billions invested create.

While the Secretaries position is certainly debatable, it is also not subject to judicial review (and even if it were, *Chevron* and its progeny would like dictate courts' deference to the agency interpretation). Thus, if the Secretaries' position is accepted, the next step for those who support the USDG becoming more holistic guidance that can influence production patterns by changing dietary patterns is to focus on effectively advocating for sustainability to fall within the scope of the next DGAC and its NEL. There are excellent global examples of countries that have pursued this path as well as national examples of changing dietary patterns for to improve health and the environment. They are discussed below. Finally, it is worth considering whether if the USDG are not expanded to consider the environmental impact of dietary patterns that they be scrapped in their current form. This radical proposal is discussed more in detail below.

B. Global Examples: China, Brazil, and Sweden

Though global nutrition may seem irrelevant to the USDG, understanding the USDG in a global context provides helpful perspective. First, this paper accepts the premise that science has established climate change is occurring and that agriculture, particularly industrialized agriculture, contributes to it.[62] Further, this paper accepts that changing agriculture production patterns, including the types of crops farmed and animals raised, has the potential to reduce emissions while also benefitting human health because eaters adopt a healthier plant-based diet.[63]

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[62] Intergovernmental Panel on Climate Change, *Working Group III, Mitigation, Technological and Economic Potential of Greenhouse Gases, 3.6 Agriculture and Energy Cropping*, http://www.ipcc.ch/ipccreports/tar/wg3/index.php?idp=115 (concluding that "agriculture now contributes to over 20% of global anthropogenic greenhouse gas emissions" from three primary sources – farm use of fossil fuels, deforestation and changing cultivation methods; rice paddies, land use change, biomass burning, enteric fermentation, and animal wastes; and nitrogenous fertilizers used on cultivated land and animal wastes.)

[63] Anthony J. McMichael et al., *Food, livestock production, energy, climate change, and health*, 370 *The Lancet Series: Energy & Health* 1253, 1253-4 (Oct. 6, 2007)available at https://www.researchgate.net/profile/Ricardo_Uauy/publication/5971535_Food_livestock_production_energy_climate_change_and_health/links/09e4150fe63eabd53e000000/Food-livestock-production-energy-climate-change-and-health.pdf

Next, this paper rests on the premise that dietary guidance from government is useful to citizens and can influence consumption patterns (though this premise is revisited below).[64]

Finally, because of the interconnected nature of the global economy, US behaviors, whether those of the government, consumers, or corporations have meaningful impact around the world. That noted, it is fair to say the US policy makers have thus far ignored the power of the USDG to set a global model for government food policy that integrates human and environmental health. However, many countries have adopted such an approach including China, Brazil, and Sweden among others.[65] How they have done so varies and can provide examples for how the USDG process might evolve to include sustainability considerations outlined in Chapter 5 of the DGAC Report.

In early 2016, China released an update to its 2007 DGs. The western press largely focused on recommended reductions in meat consumption and linked the advice to environmental outcomes, though this is not precisely the case.[66] A closer examination of the DG highlights that they are based primarily on clinical nutrition research, rather than science related to the environment.[67] This is important because though the guidelines may recommend consuming less meat than the 2007 DG, they do so with a focus on individual health outcomes rather than an explicit attempt to include environmental outcomes.[68] However, that the Chinese

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[64] Carlos Gonzalez Fisher & Tara Garnett, *Plates, pyramids and planets – Developments in national health and sustainable dietary guidelines: a state of play assessment* at v(2016) available at http://www.fao.org/3/a-i5640e.pdf ("Food-based Dietary Guidelines (FBDG) are a set of guidance given by the governments on how its citizens can eat well. FBDG are tools that can be used to promote healthy diets and can also serve as the basis for developing food and agriculture policies.")

[65] For a comprehensive overview of countries that are adopting a more progressive approach, *see generally* Fisher & Garnett, *supra* note ** at 15-55.

[66] *See e.g.* Chelsea Harvey, *China is encouraging its citizens to eat less meat – and that could be a big win for the climate*, The Washington Post (May 27, 2016) available at https://www.washingtonpost.com/news/energy-environment/wp/2016/05/27/china-is-encouraging-its-citizens-to-eat-less-meat-and-that-could-be-a-big-win-for-the-climate/?utm_term=.7f5a13600ea4.

[67] Chinese Nutrition Society, http://www.cnsoc.org/en/information/index_208_208.html (The Chinese Dietary Guidelines is an evidence-based guidance in defining healthy dietary choices and adequate physical activities. It applies the scientific studies to daily life).

[68] Food Industry Asia, *New Chinese Dietary Guidelines A Reference for Industry* (June 7, 2016) available at https://foodindustry.asia/new-chinese-dietary-guidelines-a-reference-for-industry.

DG did address food waste and its avoidance as a cultural value is a compelling example of food system issues that are not solely supported by traditional clinical evidence but may have an important role in DG.[69] Thus, the Chinese model represents a primarily traditional focus on individual health advice that, given the size of the Chinese population, will have an environmental impact if followed (even though the environmental outcome is not explicitly included as a reason for adherence).

Brazil's 2014 *Dietary Guidelines for the Brazilian Population* is perhaps the world's best example of explicitly declaring links between individual, public, and environmental health outcomes. The DG incorporate five core principles, two of which are notably progressive – first, "[h]ealthy diets derive from socially and environmentally sustainable food systems" and second, "[d]ifferent sources of knowledge inform sound dietary advice."[70] The DG's explicitly recognize that social justice issues concerning economic and environmental equity particularly for farmers (but also consumers) and then use that principal to expand the DG's focus to not just what people eat, "but how food is produced, distributed and sold" and explicitly favor "those which are socially and environmentally sustainable."[71] Similar to the Chinese DG's inclusion of food waste, social justice considerations are examples of how food policy can (and does) encode social values – a critical question, of course, is whose values are included and how? The democratic process should answer this question, but as global politics illustrate deep divisions over human values mark our times. Sadly, this phenomenon may undermine the democratic process' ability to produce law and policy that is reflective of common, core values.

Unlike social values, scientific evidence is more straightforward in terms of how it is used to inform DGs. As noted above, the US statute specifically requires preponderance of scientific and medical knowledge inform USDG and further, the NEL transparently catalogs

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[69] *Id.*
[70] Ministry of Health of Brazil, Dietary Guidelines for the Brazilian Population 23 (2015) available at http://bvsms.saude.gov.br/bvs/publicacoes/dietary_guidelines_brazilian_population.pdf (hereinafter "BDG").
[71] BDG *supra* note ** at 19.

precisely what knowledge the committee has reviewed. In Brazil, there is a decidedly broader definition of knowledge – the DGs state " . . .the recommendations of these Guidelines are based on the evidence generated by a whole range of experimental, clinical, population, and social studies, and also on the knowledge implicit in the creation and development of traditional dietary patterns."[72]

The outcome of the inclusive Brazilian approach is a comprehensive document that includes ten steps to healthy diets and provides advice not only on specific nutrient intake, but related topics such limiting processed food intake, the importance of eating as a cultural act, preferring food retailers that offer natural/minimally processed foods, the importance of cooking skills, the importance of planning meals and food preparation, consuming fresh foods away from home, and becoming marketing/advertising savvy.[73] Additionally, the DG's suggest pattern in part because "[c]hoosing diets based on a variety of plant origin with sparing amounts of foods of animal origin implies the choice of a food system that is relatively equitable, and less stressful to the physical environment, for animals and biodiversity in general."[74] The Brazilian approach is clearly holistic and inclusive, particularly with respect to social justice issues, but one must wonder whether that approach would be politically viable in the US. The narrow reading of the statute in 2015 is clear evidence that it would not be.[75]

Sweden provides an example of how a government agency tasked with providing nutritional guidance to its people can coordinate that task with environmental quality goals.[76] Like the US, China, and Brazil, Sweden's DG are grounded in nutritional science (meaning specific guidance for nutrient intake based on clinical studies). Prior to 2015, the Nordic Nutritional Recommendations (NNR) were the primary basis for dietary guidance in Sweden. However, since the last DGs were released in to 2005, the Swedish National Food Agency was

[72] BDG *supra* note ** at 21.
[73] BDG *supra* note ** at 125-129.
[74] BDG *supra* note ** at 31.
[75] *See* Vilsack and Burwell, *supra* note ** (citing scope of authority issues with including sustainability).
[76] Asa Brugard Konde, et al. *Swedish Dietary Guidelines – risk and benefit management report* (Livsmedelsverket National Food Agency)(2015) at 2.

one of many agencies specifically tasked with responsibility for meeting the country's environmental objectives.[77] Thus the 2015 guidelines are designed to provide Swedes with advice about "how to eat healthily and at the same time take into account environmental aspects. To integrate health and environment in the work regarding nutritional advice is a new and important step for a sustainable future [for] food consumption."[78]

Compared to Brazil, China, and the US, Swedish DGs outline both the human and environmental health impacts of certain recommendations. For example, they provide the advice to eat 500 grams of vegetables and fruits per day (which is common) and then specifically identify brassicas, onion, legume (pulses) and root vegetables as good choices. Following that advice are the specific nutritional benefits of these choices including that they are good sources of certain vitamins, minerals, and proteins, and scientific evidence has shown they may decrease certain cancer risks and obesity. Next, the DGs list the specific environmental reasons choosing plants-based foods such as a smaller environmental impact compared to animal products. More importantly, the DGs go on to advise selection of root vegetables over fruits or vegetables grown in greenhouses that require fossil fuel. Similarly, consumers are advised to consider the transport impact of their choices (berries may need to use high-emissions transports such as planes because of their short shelf-life) as well as the cultivation method (prefer organic/ecologically produced crops to preserve biodiversity).[79] Most importantly in terms of knowledge/evidence based recommendations, the Swedish government has adopted LCA as an important scientific approach to environmentally based nutrition advice.[80]

The examples of China, Brazil, and Sweden illustrate the promise of DG as core components of national food policy, though with distinctive differences that can be instructive

[77] Konde *supra* note ** at 5.
[78] Konde *supra* note ** at 2.
[79] Konde *supra* note ** at 12-15 (providing specific recommendations on green vegetables, root vegetables, legumes, fruits and berries).
[80] Konde *supra* note ** at 5-6; *see also* Hanna Brolinson, et al. *Methods to Assess Globale Environmental impacts from Swedish consumption (*Naturvardsverket Dec. 2010) available at *consumotionhttps://www.naturvardsverket.se/Documents/publikationer/978-91-620-6395-5.pdf*

for the US in the future. China has the most traditional approach because it is based almost solely on science based evidence concerning individual health – though any reduction in meat consumption in that country is lauded as advancing food system sustainability.[81] As noted above, China's food waste approach does however, open the door to including cultural values as a driver of dietary advice. By contrast, Brazil has thrown wide open the door to including evidence from many different disciplines to create holistic and forward looking DGs designed to incorporate food choice impact throughout the food chain. Finally, Sweden provides an approach somewhere between China and Brazil in that its DGs grow from a traditional approach and through government directive the Swedish National Food Agency has specific authority and responsibility for reaching environmental quality goals. While there are not yet studies of which approach may yield the most respect and adherence from consumers and producers these models illustrate a trend to broaden the base of scientific knowledge to provide dietary advice designed to promote human and environmental health.

III. EATING FOR THE ENVIRONMENT: THE FUTURE

The 2015 USDG process and its aftermath and the three examples of international trends in DG above provide a sense of the current state. This paper's final section focuses on the future. It begins with the inspiring story of how California's Oakland Unified School District ("OUSD") embraced sustainable diets in its school lunch program. The OUSD and many other entities embracing, adopting, and promoting sustainable diets accepts that the impact of food and agriculture as generating a quarter of all greenhouse gas emissions and bearing responsibility for 70% of fresh water use globally. These data and science based facts provide motivation for decision makers – such as those in the Oakland Unified School District – to make food system alterations that have positive environmental outcomes, reduced costs, and the same or higher consumer satisfaction.[82]

[81] See Harvey *supra* note **.

[82] Hamerschlag *supra* note ** at 6; *see generally* Intergovernmental Panel on Climate Change, *Assessment Reports, Working Group III: Mitigation 3.6 Agriculture and Energy Cropping*

In February 2017, Friends of the Earth issued a report that analyzed the OUSD's reduced purchase of meat for school lunches in favor of more plant-based products, referred to as plant-forward meals.[83] The report concludes that over the two year study period, the school district's 30% reduction in animal product purchasing reduced the food service's carbon footprint by 14%, reduced water use by 6% (achieving a 7 gallon reduction per meal or 42 million gallons per year), saved the district $42,000; increased purchases of fruits, vegetables, and legumes by 10%, all while increasing student satisfaction with school lunch meals even though they had less meat or were plant-based meeting or exceeding USDA school lunch meal requirements.[84] The district relied, in part, on the reasoning of the *Menus of Change* project[85], which encourages food services to switch to plant-based meals for better environmental and human health. [86] Imagine the impact of such an approach if America's approximately 300 million eaters adopted similar patterns – particularly if that pattern shift had the endorsement of the federal government, which comes with the power to direct the billions spent on federal feeding programs and incentivize grower and producer behavior to meet demand for healthier foods.

A closer review of OUSD's project reveals that the first step towards adopting sustainable dietary patterns comes in accepting the impact eating has on the climate. The OUSD framed it in this manner:

> Overconsumption of animal foods is unhealthy for us and unsustainable for our planet. Animal products are the most resource-intensive foods in our diet, requiring massive water and energy inputs. Studies show that we cannot avert the worst impacts of climate change or protect future water supplies unless we make

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http://www.ipcc.ch/ipccreports/tar/wg3/index.php?idp=115 (cataloging emissions outputs related to fossil fuels, farming methods, and fertilizer of agricultural production in a variety of sectors).

[83] Kari Hamerschlag and Julian Kraus-Polk, *Shrinking the Carbon and Water Footprint of School Food: A Recipe for Combating Climate Change* (Friends of the Earth, Feb. 2017) available at http://webiva-downton.s3.amazonaws.com/877/8b/1/9786/FOE_FoodPrintReport_7F.pdf.

[84] *Id.* at 3.

[85] *Menus of Change*, http://www.menusofchange.org/principles-resources/moc-principles/ (a well-known resource for food outlets to create healthy, sustainable menus – it is a joint project of Culinary Institute of America and Harvard's TH Chan School of Public Health).

[86] *See e.g.* Menus of Change, *Consumer Attitudes and Behaviors About Health and Sustainable Food* (June 14, 2016) and *Chefs' Influence on Consumer Attitudes* (June 14, 2016) (advising chefs and food service providers to promote understanding of healthy food including more plant-based meals by sharing scientifically validated recommendations with their customers).

food production for sustainable, waste less food, and reduce meat and dairy consumption in favor of plant-forward meals.[87]

The report documents very concrete information about "plant-forward meals". For example, in OUSD the carbon footprint of purchased animal products was three times higher than all other categories combined.[88] The menus did not eliminate meat but did serve smaller amounts and created plant-based protein meals that still met the National School Lunch Program standards. Using life-cycle assessment, data analysis revealed that a beef hot dog recipe has a carbon footprint seven times higher than a plant-based recipe for Indian spiced tofu and vegetable rice stir-fry.[89] Similarly, the animal products contributed nearly 60% to the OUSD's food water consumption.[90] Finally, the plant-forward menu pattern allowed OUSD to save a relatively small amount -- $42,000 over three fiscal years.[91] However, this cost savings occurs in a system that subsidizes meat production costs rather than plant-based ones – so that the cost savings is notable. It also raises an important question concerning what the financial impact might be if dietary patterns were more closely aligned with agricultural production particularly when the federal government has been estimated to reimburse over $500 million in meat purchases in the NSLP in 2013.[92]

The question remains why the Secretaries declined to take a similar approach, despite the strong recommendation of the Advisory Committee that it do so. Interestingly, the OUSD report cites the DGAC Scientific Report as an important source of information and motivation for

[87] Hamerschlag *supra* note ** at 3 (citing B. Kim et al. *The Importance of Reducing Animal Product Consumption and Wasted Food in Mitigating Catastrophic Climate Change*, Johns Hopkins Center for Livable Future, December 2015).
[88] Hamerschlag *supra* note ** at 10.
[89] Hamerschlag *supra* note ** at 11, fn 37 (citing the source of greenhouse gas emissions data as M.C. Heller and G.A. Keolian, *Greenhouse Gas Emission Estimates of U.S. Dietary Choices and Food Loss*, 19 J. of Industrial Ecology 391- 401 (2015))(an additional note for readers: the nutritional profile of the hot dog and stir fry are not compared in the report and though both are NSLP/Healthy Hunger Free Kids Act compliant, the stir fry includes whole grains, proteins, and vegetables).
[90] Hamerschlag *supra* note ** at 12 (agricultural water consumption is beyond the scope of this paper and not addressed in the USDG however, as the OUSD data illustrates there are additional environmental benefits to reduced water inputs – though different plant based crops have dramatically different water use impacts).
[91] Hamerschlag *supra* note ** at 13.
[92] Hamerschlag *supra* note ** at 13.

change, not the USDG.[93] As noted earlier, the Secretaries concluded that recommending dietary patterns based on sustainability analysis is beyond the scope of the statute, but as examples such as Oakland illustrate changing dietary patterns can have beneficial impacts on the environment while at the same time providing nutritious food at a lower cost.

First, it is clear that data supports that plant based food production reduces both water and green house gas emissions. Second, it is clear that plant based foods are cheaper for the consumer. Finally, nutritional studies and recommendations have consistently identified that diets higher in plant-based proteins and lower in animal products have beneficial health outcomes including reduced incidence of heart disease, diabetes, and obesity.

The question for the USDG in 2020 and beyond is whether the US government can take steps to influence dietary patterns in ways that improve human and environmental health. There are two paths: (1) stay the course and work to improve the USDG process, reliability, and holism; or (2) consider jettisoning the USDG in favor of simple dietary guidance from NIH and CDC and leave HHS and USDA to provide block grants to states or local government agencies that meet nutrition and environmental outcomes specified in other governmental programs.

By 2020, science will certainly have further understood the nexus between dietary patterns, agricultural production, and health outcomes. It is indisputable that scientific evidence must remain the foundation of all DG around the world, though how values are encoded in that science remains to be seen. For example, the focus of nutritional science directly correlates with the amount and source of funding available for it. Some policymakers have criticized nutritional science as recommending one thing as healthy following one study, only to reverse such findings in the future. Such is the nature of science and in fact this phenomenon is actually one strong argument for broadening the focus of the USDG and allowing for linkages between clinical studies, epidemiological studies, and environmental science.

[93] Hamerschlag *supra* note ** at 15.

Finally, the topic left largely unaddressed in this paper is the profound role that special interests and politics play in the USDG. Food is political because it is often profitable – whether in subsidies for farmers, revenue for advertising agencies, or income for corporate food giants – and until this issue is addressed squarely by policy makers, USDG will be mired in complaints of bias/conflict of interest and a drive to construe the USDG as a vehicle for driving consumption higher rather the providing legitimately objective dietary advice designed to insure individual human health during life and an environmental healthy enough to sustain the population well into the future. Ignoring the link between dietary patterns and environmental health, as the Secretaries did in 2015, weakens US food policy to the detriment of its citizens. Though a more rigorous DGAC process may create opportunities for improved USDG, unless sustainability is included US food policy will continue to miss the valuable opportunity to align its consumption patterns with its production patterns for increased human and environmental health.

IV. Conclusion

In the 21st century, the USDG should be recognized as an essential piece of US food policy. They should be broadly viewed as a vehicle for aligning production with consumption and the recommendations should rest on sound science from a variety of disciplines that inform human health outcomes (again, keeping in mind that environmental health has a profound influence on human health). However, for now there are significant hurdles to overcome in order for the USDG to their place in US food policy. Politics, science, and values are all relevant to developing USDG and unless the national dialogue turns to transparently addressing how these components of the USDG relate to sustainability, the opportunity for inclusion in the 2020 USDG will likely be lost.