

## **Towards a sustainable food system in the United States: Opportunities to address environmental impacts through food and nutrition policies**

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Agriculture has a major impact on the environment, contributing to extensive clearing of forests, overuse of water resources, water pollution, biodiversity loss, and climate change (Foley, 2011). Globally, the agriculture sector, including forestry and land use, account for about a quarter of greenhouse gas emissions (IPCC, 2014). The United States (US) is the second largest contributor to global greenhouse gas emissions. Its food and agriculture sector contributes sizably to this, as well as other environmental impacts.

Recent surveys of the American public have demonstrated a strong acknowledgement of climate problems and a demand for action to be taken (Leiserowitz et al, 2018; EPIC, 2018). Despite this public opinion, policy action at the federal level is stalled. The current administration plans to withdraw from the Paris Agreement and has substantially cut funding for the US Environmental Protection Agency. Debate about a Green New Deal, a dramatic resolution to move the economy towards zero-carbon emissions in a decade, was voted down in the Senate on a procedural motion (Daly, 2019).

This paper highlights food and nutrition policy opportunities throughout the US food system that could result in more environmentally sustainable alternatives to the system's current path. Consumption, marketing, distribution, and production policies are discussed. Where sustainability concerns have been absent from such policies, potential adaptations are outlined. The main focus is on federal policies, but given the current intransigence at this level, the paper also illustrates examples of state and local policy initiatives that could fill the federal policy vacuum and precipitate action in the short-run.

Three important objectives for improving the environmental sustainability of the American diet are to reduce excess ruminant animal consumption, food wastage, and overeating. Federal policies that could support such consumer choices include dietary guidance and consumer education. The Dietary Guidelines for Americans (DGA) are developed and published every five years (DHHS & USDA, 2015). The DGA not only informs consumers about healthful choices but also guides other national nutrition policies, including dietary requirements for the National School Lunch Program and other programs. Unfortunately sustainability considerations were not included in the latest version of the DGA, despite expert committee advice that a US diet which is more plant-based could improve health and reduce environmental impacts (DGAC, 2015). Future inclusion of sustainability as part of the DGA would signal the importance of the issue to the American public.

Consumer education programs supported by the federal government are integrated with low-income nutrition assistance, including the Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Operating throughout the country, these and other USDA assistance programs have a wide reach, serving close to a quarter of Americans (USDA, 2017). The education components of these programs are much smaller in scope. Although there has been significant efforts to increase fruit and vegetable consumption through these components, they have not been oriented around replacing animal with plant protein foods, nor have they focused on the sustainability of foods. Inclusion of such information with practical advice, including cooking tips, could also assist in increasing consumer acceptance of alternative protein sources.

These assistance programs do offer the potential for subsidizing sustainable foods, a stronger mechanism for influencing consumption than education. A number of local SNAP pilot projects have sought to increase fruit and vegetable consumption by incentivizing SNAP purchases of these foods with additional matching funds. If scaled up and expanded to include plant protein foods, such as legumes, they could support consumer substitution away from beef. Taxes on high-

carbon foods might have more impact on consumption, but they are unlikely to garner popular or political support, at least in the short run.

Food labeling is a marketing policy that could signal consumers about sustainability. Although there are well-developed regulations for mandatory nutrition labeling of foods, sustainability has been addressed through voluntary mechanisms. USDA has an organic certification program with a front-of-package seal (USDA, 2019). This informs consumers of foods produced through approved methods that promote ecological balance and conserve biodiversity. At least six private organizations certify the sustainability of seafood and use front-of-package seals. However, these can be confusing for consumers and there is a lack of transparency in their development (Food and Water Watch, 2010). Public standards for certification, analogous to the USDA organic certification program, could address some of these problems.

Other federal marketing policies have sought to strengthen local and regional food systems. For example, since the mid-1990s, USDA has supported direct marketing from farmers to consumers, schools, or military installations (Martinez et al, 2010). However, these are relatively small-scale compared to the overall federal investment in agriculture. Increased spending on these initiatives could strengthen small farms through these direct marketing approaches.

Overall US agricultural policy has facilitated large scale mono-cropping with vast transportation networks for distribution of commodity crops. This has had detrimental environmental effects as described above. However, there have been positive contributions to some agricultural policies. USDA conservation spending has grown over the years and is now projected at \$6 billion per year for the latest Agricultural Act of 2018 (CRS, 2019). Originally developed as a response to the "Dust Bowl" environmental catastrophe of the mid-1930's this set of programs includes support payments for: cover crops, resource-conserving crop rotations, and management-intensive rotational grazing; improvement of water quality and wildlife habitats on or surrounding farms; transitions to organic farming; and development of comprehensive farm-level conservation plans (CRS, 2019). This is the best current example of federal policy directed at improving sustainability. Future spending increases on these programs could expand their beneficial effects.

Although federal policies outlined above might ultimately have the strongest impact on moving towards a sustainable US food system, additional action at this level is unlikely until the current political configuration changes. In the meantime, advances are more likely to be made by state and local governments in conjunction with private partners. Significant political will to promote environmental objectives already exists among states, counties, cities, and other institutions, as evidenced by the US Climate Alliance, the 'We Are Still In' Declaration, and other agreements that sprouted in response to the current administration's decision to withdraw from the Paris Agreement (USCA, 2018; WASI, 2018). Significant food system policies have already been enacted at state and local levels. For example, California passed legislation in late 2016 giving its air regulatory board authority to set goals for reducing short-lived climate pollutants, including substantial reductions of methane emissions from dairy (CDRF, 2017). In New York City, the Mayor's 'green new deal' has set out to reduce emissions in the food sector by cutting the purchase of beef by 50% in city-controlled agencies such as hospitals, schools, and correctional facilities (NYC, 2019). A number of universities and private corporations have signed onto the World Resources Institute's Cool Food Pledge, which seeks to reduce the carbon footprint of institutional food services. States could also use tax incentives to support the development of clean alternatives to beef, such as plant-based products (Dutkiewicz, 2019).

In sum, there are opportunities throughout the food system for federal food and nutrition policies to improve sustainability, but current political will is lacking to make this happen. Actions at the state and local level, in conjunction with private organizations, could facilitate short run improvements in sustainability. Consumer-based initiatives can drive this process because producers will follow consumer demand and because American consumers are motivated by sustainability concerns.

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