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Environmental and Food Justice: Where Things Stand Now, and How to Engage Dietetics Professionals and the Public

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In 2000, the journal *Race, Poverty, and the Environment*, the editors observed that the environmental justice slogan describing the environment as “where we live, work, and play” could be broadened to “where, what, and how we eat”.

That is, food justice (Gottlieb & Joshi 2013).



The objectives of this article are: 1) illustrate the conceptual basis of environmental and food injustices using national and international case studies; 2) articulate three positive steps to support environmental food justice; 3) describe considerations for food choices that positively impact both environmental and food justice.

Environmental and Food Injustice: Case Study – Confined Animal Feeding Operations (CAFOs) and Environmental Justice: A Case Study from North Carolina

Concentrated animal feeding operations (CAFOs) are industrial-scale operations that house thousands of animals whose waste is periodically applied to “spray fields” of Bermuda grass or feed crops. The waste can contain pathogens, heavy metals, and antibiotic-resistant bacteria, and the spray can reach nearby homes and drinking water sources. The odor plume that often pervades nearby communities contains respiratory and eye irritants including hydrogen sulfide and ammonia. In fact, a growing body of research suggests that these emissions may contribute to decreased quality of life, mucosal irritation, respiratory ailments, and elevated blood pressure (Nicole 2013).

Although the Midwest is the traditional home for hogs, with Iowa still the top-producing state, North Carolina went from fifteenth to second in hog production between the mid-1980's and the mid-1990's. This explosive growth resulted in thousands of CAFOs located in the eastern half of the state in the so-called ‘Black Belt,’ a crescent-shaped band throughout the South where slaves worked on plantations (Nicole 2013). After emancipation, many freed slaves

continued to work as sharecroppers and tenant farmers. A hundred years later, black residents of this region still experience high rates of poverty, poor health care, low educational attainment, unemployment, and substandard housing (Nicole 2013). The clustering of North Carolina's hog CAFOs in low-income minority communities, and the associated health impacts, raises environmental injustice and environmental racism concerns. In September 2014, The North Carolina Environmental Justice Network and the Rural Empowerment Association for Community Help and Waterkeeper Alliance, supported by Earthjustice, filed a complaint with the Environmental Protection Agency's Office of Civil Rights (OCR) alleging that North Carolina's lax regulation of hog waste disposal discriminates against communities of color. The complaint is the latest chapter in a longstanding struggle “to address the community health impacts posed by massive amounts of fecal waste from industrial hog facilities” (Earthjustice 2015).



The Solution: A Food Justice Framework Based on Four Pillars-Diversity, Justice, Resilience and Health

The Berkeley Food Institute at University of California proposed a conceptual framework to support healthy food, healthy farms, and healthy people (See Figure 1). This framework contributes solutions to the types of environ-

mental and food injustices described in the previous section. In this framework*, “access to healthy, affordable, and culturally appropriate food is considered for its relationship to patterns of racial and class-based inequalities within society, from the built environment to institutional policies” (Chen, Clayton, and Palmer, 2015). According

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to Gottlieb and Joshi (2013), "Food justice, like environmental justice, is a powerful idea. It resonates with many groups and can be invoked to expand the support base for bringing about community change and a different kind of food system. It has the potential to link different kinds of advocates, including those concerned with health, the environment, food quality, globalization, workers' rights and working conditions, access to fresh and affordable food and more sustainable land use."

In the Berkeley Food Institute framework, overlapping circles include sustainable agriculture and ecosystems with agroecology as an example. Agroecology is defined as, "the integrative study of the ecology of the entire food system, encompassing ecological, economic, and social dimensions" (Francis et al. 2003). It focuses on working with and understanding the interactions between plants, animals, humans and the environment within agricultural systems. By bringing ecological principles to bear in agroecosystems through ecological intensification, novel management approaches can be identified, building on key interactions and strengthening "virtuous cycles" in agricultural production that would not otherwise be considered (FAO, 2015). According to Gliessman (2013), agroecology has become much more than a science for developing better, safer and more environmentally sound food production technologies. Within its ecosystem foundation, the science of agroecology has become a powerful tool for food system change when coupled with an understanding of how change occurs in society (Gliessman 2013). Agroecology is also a social movement with a strong ecological grounding that fosters justice, relationship, access, resilience, resistance, and sustainability. Agroecology seeks to join together the ecological and social cultures that helped human society create agriculture in the first place (Gliessman 2013).

A second circle in the framework is policy and justice, which encompasses workers' rights and health in food systems. Economics and business is another framework circle that will be described later by utilizing an innovative food

markets example.

Within the society and culture circle, food sovereignty is defined as "the right of persons to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agricultural systems". It focuses on examining the distribution of power in a food system and intervening to build local and community-based food systems that guarantee economic, social, and cultural rights, including rights for women, indigenous groups, and racial minorities. Some researchers describe the work of labor rights activists as falling under the food sovereignty frame (Holt-Gimenez and Wang 2011; Chen, Clayton, and Palmer 2015).

A master's thesis in Brazil explored the role of Brazil's Food Acquisition Program in facilitating food security and food sovereignty. This program examined how the government program sources food from small farmers on agrarian reform settlements in the Pontal do Paranapanema region of Sao Paulo state to feed local, food vulnerable populations. There were two case studies. One case study in Brazil examined the use of agro-forestry and The Food Acquisition Program (PAA) in the Assentamento Margarida Alves. Based on qualitative interviews with small farmers there, the PAA appears to fit within a food sovereignty framework in practice. However, more investment needs to be made in the program as well as government support programs to transition towards a food sovereignty regime. While the state has set up guidelines for the program, it does not provide enough support to sufficiently activate the food sovereignty framework based on La Via Campesina's pillars of food sovereignty. This is because the ability of a locally focused food regime to promote sustainable livelihoods had been ecologically destroyed by exploitative monocultures for export. More funding and training in agroecological methods and biodiversity in production by state agencies are needed to improve the situation in the Pontal do Paranapanema region of the Sao Paulo state (Anton 2011).

EXAMPLE #1: Agriculture Justice Project and Food Justice Certification

One way to support healthy farms, healthy

HEN MISSION

To empower members to be leaders in sustainable and accessible food and water systems

HEN VISION

To optimize the nation's health by promoting access to nutritious food and clean water from a secure and sustainable food system

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CONCEPTUAL FRAMEWORK

***BERKELEY FOOD INSTITUTE:**
Four Pillars - Diversity, Justice,
Resilience, and Health



Figure 1: Available at <http://food.berkeley.edu/>

food, and healthy people, is through supporting the Agriculture Justice Project, and Food Justice Certification if available where you live. The www.agriculturaljusticeproject.org lists supporting states and countries.

The reason for the food justice certified label is that transparency equals trust. The Food Justice Certified Label sets rigorous standards for the respectful treatment of farmworkers, living wages, safe working conditions, collective bargaining rights, fair and equitable contracts for farmers and buyers, and clear resolution policies for farmers and business owners. These standards include a ban on full-time child labor altogether with full protection for children on farms.



EXAMPLE #2: Building Community Food Sovereignty - Tierra Negra Farms

Tierra Negra Farms, which is located near Durham, North Carolina, works to build food sovereignty at the community level. Key elements of their work include inter-generational connections, relationship and trust building, 'healing work,' and the 'right solutions,' that is, solutions have to come from the community (Bowens 2015). According to Cristina Rivera-Chapman, "[j]oining a community of farmers or community garden project with a diverse group of people and not acknowledging the internalized oppression and racism that folks are carrying around is absurd. Sometimes when we are fighting against it, we still pass it down if we're not doing the processing. It's not something that you can check off a list. There aren't road maps; it's different for different people." (Bowens 2015).

EXAMPLE #3: Environmental Justice and Seed Sovereignty, Dr. Debal Deb's 'Seed Ark'

According to Dr. Debal Deb – an ecologist turned farmer in India – "[e]nvironmental justice means that every member of society, of the current as well as future generations, has the right to clean water to drink, pure air to breathe, lifelong food security, and all the richness of biodiversity to live with" (Deb 2014). Deb's 'Seed Ark' is a "testament to nature's mind-boggling fecundity and ancient farmers' horticultural knowledge. Stored in the earthen pots are varieties that can withstand changes in temperature and climate, differences in soil nutrients, and water stresses,

and even varieties with much-valued special aromas" (Varma 2014). Stemming the loss of rice biodiversity, Deb maintains a collection of 940 varieties while India's commercial production has dropped to 10 varieties (Varma 2014).

Conclusions

Here are several action steps that you can take to support food and environmental justice:

- Become a 'seed keeper' – <http://www.seedsavers.org> or start a 'seed library' – <http://seedlibraries.weebly.com>
- Grow a garden in your backyard or with a diverse group of people where you live (e.g., community and/or school garden)
- Purchase agricultural products from the Agriculture Justice Project – via the Food Justice Certified label, farms and businesses, if available where you live. Learn more at: http://agriculturaljusticeproject.org/?page_id=13. Learn more about fair trade certified labels, from Equal Exchange at: <http://equalexchange.coop/>
- Host a screening of a food system documentary whose aim is to bring about food system change such as: *Food for Thought – Food for Life; Growing Cities;*
- Discuss the topic of seed sovereignty with students and peers after viewing films such as *Seeds of Freedom* or *Seeds of Sovereignty* (both are available from www.gaiafoundation.org).

Footnote:

For a schematic representation of an alternative framework on sustainable diets put forth by Dr. Denis Lairon, University Aix-Marseille, Marseille, France, please see chapter 1 of the report titled, "*Sustainable Diets and Biodiversity: Directions and Solutions For Policy, Research and Action*" (FAO and Biodiversity International 2010). The components of this particular sustainable diets framework include: food and nutrient needs, food security, accessibility; cultural heritage, skills; eco-friendly, local, seasonal foods; equity, fair trade; biodiversity, environment, climate; and well-being, health (FAO and Biodiversity International 2010).

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