

An edited version of this paper was later published as:

Freeman, C. P. (2010). **Meat's Place on the Campaign Menu: How U.S. Environmental Discourse Negotiates Vegetarianism.** *Environmental Communication: A Journal of Nature and Culture*, 4(3), 255 - 276.

FROM VEGETARIAN-FED FISH TO A VEGETARIAN-FED AMERICA:

DIETARY SOLUTIONS PROMOTED BY US ENVIRONMENTAL ORGANIZATIONS

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Given the impact of America's food choices, particularly animal-based foods, on life-sustaining systems, to what extent is the environmental movement making meat-based diets an issue? This research analyzes websites of 15 U.S. environmental advocacy organizations (EOs) to examine how they negotiate the question of animal versus plant-based diets and propose solutions for food producers and consumers. EOs proposed that industrial agriculture and commercial fishing/aquaculture severely limit destructive practices to more sustainably meet consumer demand for animal products. EOs offered consumers choices, including: 1) replacement of much industrial food with local, organic, and/or sustainable animal or plant foods, 2) reduction of animal products, and, to a lesser degree, 3) vegetarianism. To more consistently promote justice and well-being, the author recommends environmental rhetoric more directly critique animal agriculture/fishing as a primary source of environmental problems, consider food needs not just preferences, and promote fundamental lifestyle changes toward a plant-based, largely organic diet.

Keywords: plant-based diet; vegetarianism; meat; environmental campaign; rhetoric

Environmental crisis is garnering increased media attention, but food is often left out of environmental discussions despite growing food movements and best-selling books making dietary choices a political and ethical issue. Consider that between 2005-2008, fewer than 3% of climate change articles in U.S. newspapers mentioned food and agriculture, with much fewer mentioning food-*animal* contributions specifically (Neff, Chan & Smith, 2009). And *The New York Times* only covered meat's connection to climate change three times between 2006-2008 (Kiesel, 2009).

As leaders craft global climate-change and sustainability policies, the agenda-setting function of the media is needed to instigate more education, debate, and critique on the topic of how animal agriculture and fishing significantly contribute to our current environmental crisis. As an animal advocate and communication scholar, I wonder if the animal rights movement is the only social movement significantly agenda-building for the sustainability and ethics of plant-based diets. That isolated voice is likely not enough to create major awareness and change; the booming voice of the environmental movement seems urgently needed. So to what extent are environmental organizations (EOs) heeding the call?

While meat-based diets are sometimes critiqued in environmental advocacy, other times the topic is overlooked. For example, a recent "vegetarian" keyword search on the Sustainable Table website led to their dictionary term "100% vegetarian," ironically referring only to the diet for farmed animals destined for non-vegetarian human consumption. And a search for the term "vegan" on the website of the Center for Biological Diversity only revealed an article on a member from Nevada – a "Las Vegan."

To investigate how issues of vegetarianism are being negotiated in proposed solutions to environmental problems, this research employs textual analysis of the websites of 15 environmental protection organizations in the United States. To provide context for this investigation, I begin by detailing literature on: environmental impacts of producing animal products; statistics on consumption and attitudes toward dietary change; values-based framing of advocacy messages; similarities between environmental and animal ethics; obstacles in environmental and animal organizations working together to promote vegetarianism; and the need for a rhetoric proposing fundamental change as opposed to small steps in green consumerism.

Literature Review

While food is a biological need, the choices we make about food are cultural and increasingly political, as diet can have devastating environment impacts, especially in an age of growing populations and industrialized agriculture (Retzinger, 2008). Environmental impact varies based on food choices and production methods, with animal products being a significant culprit. Magazine editors at the Worldwatch Institute (2004) concluded:

The human appetite for animal flesh is a driving force behind virtually every major category of environmental damage now threatening the human future – deforestation, erosion, fresh water scarcity, air and water pollution, climate change, biodiversity loss, social injustice, the destabilization of communities and the spread of disease. (p. 12)

Similarly damning, a report by the United Nations' (UN) Food & Agriculture Organization (FAO, 2006) described animal agriculture as “one of the most significant contributors to today’s most serious environmental problems” (para. 2), acknowledging it as a major contributor to water pollution, land degradation, loss of biodiversity, and deforestation, including tropical

rainforest destruction. The UN reported that “livestock now use 30 percent of the earth’s entire land surface, mostly permanent pasture but also including 33 percent of the global arable land used to producing feed for livestock” (para. 8). Confined animal feeding operations, also called “factory farms,” and all the plant crops required to feed these billions of animals, cause pollution and use significantly higher amounts of resources such as soil, water, land, and energy than does agriculture geared toward a plant-based human diet (Singer & Mason, 2006). Rather than using land to grow plants to feed “food-animals,” Americans could eat those crops directly, thereby utilizing food calories more efficiently, using fewer resources (such as water and energy), and causing less pollution (greenhouse gases, excrement, chemicals, etc).

The human demand for food from the sea has also caused serious crisis in ocean life, particularly due to overfishing. The PEW Environmental Group (2007) reports that:

90 percent of the world’s large fish have disappeared, that close to one-third of the world’s commercial fisheries have collapsed, and that, unless current trends are reversed, all of the world’s remaining commercial fisheries are likely to collapse by 2048 (p. 7).

Only 23% of monitored fish species are not overexploited (p. 7). PEW expressed major concerns about destructive fishing methods that lead to wasteful bycatch (unmarketable animals thrown back, often dead or injured), such as trawlers that “crush everything in their path” (p. 20) and nets that “indiscriminately strip life from the sea” (p. 6). Increasingly, almost half of seafood is farmed. Irresponsible aquaculture practices cause pollution, spread disease and GMOs into wild populations, and raise carnivorous fish that inefficiently require “the need for three or more pounds of wild forage fish to make enough fish meal and oil to produce one pound of farmed fish such as salmon” (p. 19). Lack of regulation in fishing and in food labeling make it difficult for consumers to be assured that their seafood choices are not part of the problem. In fact, shrimp is

the most popular seafood in America, much of it imported, and that is one of the most eco-unfriendly choices, particularly due to destruction of mangrove forest and the largest bycatch ratios of all seafood (Singer & Mason, 2006).

Animal-based diets have also been linked to the largest crisis facing living beings – human-induced climate change; the UN concluded that a meat-based diet is a major culprit in contributing to global warming because raising livestock generates 18 percent of the world's greenhouse gas (GHG) emissions, proving even more damaging than transportation (FAO, 2006). To corroborate this, Eshel & Martin (2006) determined that the GHG emission savings of Americans switching from a meat-based to plant-based diet was as important as switching from a gas-guzzling SUV to a fuel-efficient car. A public health report related to food and energy issues concluded “for the world's higher-income populations, greenhouse-gas emissions from meat-eating warrant the same scrutiny as do those from driving and flying, (McMichael et al. 2007). Along with recommendations to reduce emissions in livestock production, report authors suggest greatly reducing meat (especially red meat) and milk consumption in high-income countries (who average roughly 224 g daily) and tapering it in developing countries (averaging 47 g daily), so it equitably converges around 90g per day (p. 60).

Americans alone consume an average of 200 pounds of red meat, poultry, and fish annually, up from 190 pounds in 1995 (USDA, 2009). Almost 30% of the average American's dietary calories are comprised of animal products (Eshel & Martin, 2006). Unchecked, global consumption of animal products is expected to double halfway through the century (FAO, 2006). Currently, over 50 billion land animals are slaughtered worldwide. The U.S. alone kills more than 10 billion, including millions of farm mortalities and the millions of male chicks discarded

at egg hatcheries (FARM, 2007). Additionally, Americans annually consume an estimated 17 billion aquatic animals (Singer & Mason, 2006).

A quarter of Americans say they are reducing meat consumption (HRC, 2007), but the percentage of Americans who actually abstain from animal flesh is likely only around 3%, with approximately a million people eating a vegan diet containing no animal products (Maurer, 2002; Singer & Mason, 2006). A survey of meat-eaters found 80% do not intend to ever fully eliminate meat, based on their belief of its necessity and their taste preferences (HRC, 2007). Yet researchers also concluded that Americans are more motivated to fully *eliminate* meat based on an animal suffering/moral rationale, more so than a health or environmental rationale (which are the three main appeals made to consumers by vegetarian advocates). Maurer (2002) suggested that a substantial number of Americans will not go vegetarian unless they are convinced meat is either dangerous or immoral, concluding that “promoting concern for animals and the environment is essential to the advancement of the vegetarian movement” (p. 45). If vegetarianism becomes just another healthy or trendy lifestyle choice for consumers, it loses its ideological edge as a “public moral good” (p. 126).

Maurer’s moral appeals to vegetarianism fit within Jamieson’s (2007) recommendation that environmentalists should frame climate change as a moral issue, appealing to such values as care, empathy, and responsibility in calling for “long-term sustainable changes in the way we live” (p. 481). This more broadly reflects Lakoff’s (2004) strategy that advocacy organizations talk in terms of a clear set of simple *values* that accurately reflect what the organization stands for and express its “moral vision” (p. 74), rather than speaking primarily in factual/scientific terms. Agyeman (2007) lamented that the values of justice and well-being were deficient in environmental rhetoric. While Agyeman’s focus was on aligning *human* social justice

movements with the environmental movement, the notion of environmental justice and equitable distribution of life-sustaining resources can be extended to the *nonhuman* animal (NHA) aligning it with the ideology of the animal rights movement.

While animal and environmental ethics are often positioned at odds, based on different prioritizing of well-being for individuals versus the whole species-group, respectively (Callicott, 1993; Sagoff, 1993), their values can be perceived as overlapping. For example, Jamieson (2002) noted both movements share a desire to protect habitat; in doing so, he proposed nature be valued as a home for animals who are valued more intrinsically as individuals. And Regan (2002) argued that caring for individuals can lead to a greater good for the whole group, expressing concern that the holistic environmental ethic, if applied to the human animal, would equate to a fascist disrespect for human rights. Similarly, Schutten (2008) noted the hypocrisy of perpetuating a nature/culture dualism in our reluctance to acknowledge that the human is an animal who can become prey in the wilderness. When a man is eaten by a grizzly bear, for example, we lament that he is reduced to a mere “piece of meat” (p. 204), objectified to “nothingness” (p. 205), all body and no mind. Yet, conversely, that same concern is not expressed, outside of animal rights, for viewing NHA bodies as human prey. Drawing on Plumwood, Schutten noted that deconstructing the nature/culture binary will require some sacrifice on the part of humans and the humility to admit our own vulnerability as a member, not a master, of nature.

Animal rights advocates, who often see themselves as environmentalists, lament the environmental movement's reluctance to embrace vegetarianism. Holt (2008) called for increased coalition-building between animal rights and environmentalists to fight the proliferation of factory-farms but found that environmentalists shied away from animal rights

coalitions out of fear it might alienate their hunting and farming members. *E Magazine* editor Motavalli (2002) investigated this “great divide” over vegetarianism. Motavalli described environmental strategy and priorities as broader and more flexible, as they are looking at the big picture and trying to create wide appeal, while animal rights’ strategy and priorities were narrower and often more alienating in their absolutism. Whereas animal rights advocates request veganism, based on justice for NHAs and environmental responsibility, environmentalists would be satisfied if people collectively reduced meat consumption. This is because environmentalists, who protect only wild not domestic animals, are not primarily motivated by sentimentalism or compassion over the suffering of individual NHAs. Informal polls revealed that most environmentalists and their leaders were not vegetarian, although they were supportive of that diet’s sustainability. The President of Worldwatch Institute, Christopher Flavin, was quoted declaring that eating less or no meat “is one of the most positive lifestyle changes a person could make in terms of reducing one’s personal impact on the environment” (p. 36). Motavalli concluded that the environmental movement should begin to more openly acknowledge the extent of meat’s impact but called for animal activists to be more flexible on vegetarianism.¹

In a country where meat is so ingrained in our cultural narrative (Willard, 2002), the idea of activist organizations requesting vegetarianism seems like a much less pragmatic strategy than asking people to just switch to greener meats or reduce meat (HRC, 2007). These small dietary changes are part of a “foot in the door” strategy to behavior change, believing that if people take a small virtuous step in the right direction, they will inevitably take much greater steps. Research from Crompton (2008), a change strategist for the World Wildlife Fund, challenges the small steps myth, proposing that environmentalists should suggest solutions that go beyond that of the private sector. Crompton argued that the severity of environmental crisis requires drastic changes

and shouldn't continue to be reliant on a green consumer movement nor expedient appeals to whatever works, such as appeals to self-interest: "Current behaviour-change strategies... often take as a given the 'sovereignty' of consumer choice, and the perceived need to preserve current lifestyles intact" (p. 3). Changes necessitate a reevaluation of our values, particularly materialism, as having intrinsic motivations is critical to inspiring changes that may be difficult. Moser & Dilling (2007) echoed this strategy, specifically relating to climate change communication, as deeper changes should not be overlooked in favor of asking for small, easy steps. This seems to suggest that what Cox (2006) referred to as "critical rhetoric," an ideological critique of the status quo, should more directly influence "campaign rhetoric," or goal-oriented appeals, so that activists aren't too restrained in asking for major change.

Regarding campaigns to change America's meat consumption, McMichael et al. (2007) argued that, even though consumer preference for meat poses an obstacle, "the unprecedented serious challenge posed by climate change necessitates radical responses" (p. 63). For them that radical response is suggesting a massive reduction in the amount of meat Americans consume, for other environmental and animal activists, it may be promoting a plant-based diet.

Methodology

Regarding EOs' web discourse on issues with human diet and agriculture, I wanted to ascertain how and to what extent their solutions addressed animal-based versus plant-based consumption and production.

My focus on solutions originates from Snow & Benford's (1988) theory that to encourage collective action, social movement organizations construct persuasive messages around framing components designed to: diagnose the problem and culprits, propose solutions, and motivate

action. While space limited me to focusing on the solutions component, within that, elements of the problems, culprits, and motivations often revealed themselves. The textual analysis I conducted of U.S. EO websites in August 2009 followed Stuart Hall's (1975, 1997) cultural studies method where the researcher conducts several readings that get progressively tighter, examining verbiage and imagery in context to uncover the themes and assumptions grounding the construction of meaning.

To search for food-related discourse, I would follow any related links on the EO's home page, however deep, until I discovered a relevant discussion. Additionally, to ensure I was not missing anything highly relevant, I would conduct a site-wide keyword search for *vegetarian*, *vegan*, or *plant-based*. Often, these searches only led to informal forums and blog discussions from members. However, I chose not to include these participatory forums in my analysis. Instead, I focused on the advocacy information intentionally constructed by the EO leadership and employees as presumably most representative of their ideology and "official" stance on the issues – including photos, charts, videos, reports, program or campaign descriptions, brochures, and tipsheets. When viewing the web data, I typed up descriptions of the food-related discourse and cut and paste parts of it verbatim into a separate document, both for easy referencing in future readings and so that I could examine the discourse collectively between EOs.

To select advocacy organizations for inclusion, I examined over 25 national (non-governmental) organizations' web sites, eventually excluding those with little to no food discourse, including: Alliance for Climate Protection, Defenders of Wildlife, EarthFirst!, Earth Justice, Friends of the Earth, National Wildlife Federation, Earth Charter Initiative, and the Union of Concerned Scientists. The 15 EOs that did remain in the sample represent a diverse range of environmental perspectives and food emphases. They are: Center for Biological

Diversity (CBD), Center for Food Safety (CFS), Center for Science in the Public Interest (CSPI), Environmental Defense Fund (EDF), Food & Water Watch (FWW), Global Resource Action Center for the Environment (GRACE), Greenpeace, Nature Conservancy (NC), National Resources Defense Council (NRDC), Rainforest Action Network (RAN), Sierra Club (SC), Small Planet Institute (SPI), Waterkeeper Alliance (WA), Worldwatch Institute (WI), and World Wildlife Fund (WWF).

Findings

Here I discuss production and consumption solutions proposed by EOs. First I briefly put that into context in terms of problems to be solved by summarizing that EOs defined problems with conventional human diet/agriculture as several or all of the following: polluting and altering nature (through chemical-use, genetic modification, and climate change); misusing and wasting resources (such as land, water, fossil fuels, and marine bycatch); destroying life and life-sustaining systems (through deforestation and species extinction); threatening human health, rights, and opportunities (corporate agribusiness squelching small farming and putting profits before people); and mistreating domestic land animals and marine mammals. Blame is largely placed on the production/supply-side, particularly industrial agriculture and commercial fishing/aquaculture, as opposed to consumer demand.

Production-Based Solutions

Solutions aimed at industrialized agriculture varied from more voluntary/cooperative to more regulatory/abolitionist. Solutions implied a switch to sustainable small-scale, community-based farming, especially organic, although that is made more explicit in consumer-based solutions. EOs demanded industry provide more transparency in food labeling and use less

destructive agriculture and fishing practices, often requesting more government regulation and protection for people and habitats.

Seafood Industry

Most EOs harshly critiqued the commercial fishing industry for their use of bottom trawlers, nets, and long-lines because the bycatch causes so much devastation and waste of life, with special emphasis put on marine mammals and birds instead of fish. Greenpeace's Bycatch section estimates that one pound of marine animals are thrown away for every four pounds of caught fish, with shrimp bycatch being worse, at four pounds of "unwanted creatures" dying for every pound of shrimp trawled. Greenpeace uses the harshest rhetoric for commercial fishers, calling them "pirates" and "factory fishers" who rob the oceans and vacuum up its inhabitants. Greenpeace's Oceans campaign page opens with the declaration that:

Throughout the seven seas, there are many industries committing crimes against nature, but no one is holding them accountable. Even the deep and remote areas that once served as refuges from fishing are no longer safe havens; today the fish have no place to hide.

WI's "Oceans in Peril" report says "76% of the world's fish stocks are fully exploited or overexploited, and many species have been severely depleted, largely due to our growing appetite for seafood." WI declares that a shift in attitude is necessary: "current presumptions that favor freedom to fish and freedom *of* the seas will need to be replaced with the new concept of freedom *for* the seas." WI's "Catch of the Day" report declares an educated public should help governments "pass legislation to ban destructive fishing, mandate seafood labels, decrease consumption of endangered fish, and create sustainable marine preserves." As solutions, Greenpeace also supports creating marine reserves, avoiding fishing in bycatch hotspots, and

using extraction devices in netting to aid mammals and birds. EDF proposes catch limits, controls on bycatch, protection of marine habitat, and economic restructuring through instituting catch shares (limited access privilege programs).

EOs criticize the booming aquaculture industry for its pollution, ecosystem damage, and inefficiency in feeding carnivorous farmed fish unsustainable wild-caught fish. Yet WI, WWF, and EDF support sustainable aquaculture as a solution. WI's "Farming Fish for the Future" report claims:

Properly guided, the explosive growth in fish farming may in fact be the most hopeful trend in the world food system. Compared to raising cows, pigs, or even chicken, aquaculture is remarkably efficient in its use of feed and water. And farmed fish are still generally lower on the food chain and less resource-intensive than the big predatory fish we catch in the seas. Rather than contributing to environmental degradation, fish farming can be a critical way to add to the global diet.

Similarly, EDF states that "consumption is expected to keep rising," and the only way to meet increasing demands for fish is through aquaculture – putting "more seafood on more plates." EDF aims to "show that seafood can be farmed in a profitable, eco-friendly way," so they advocate aquaculture regulations such as: farming vegetarian fish or using vegetarian feed-fillers, instituting protections to prevent fish escapes that contaminate wild species, and limiting use of chemicals and antibiotics. WWF is "committed to making sure aquaculture is good for people and nature" because seafood is "one of the healthiest and most popular sources of protein worldwide." So they work with farmers and regulators on production methods as well as

encouraging product labeling and certification standards. CFS seems to be less supportive of aquaculture expansion and works on restrictions on aquaculture and its GM fish.

Land-based Agriculture

EOs were critical of corporate/industrial-scale farming and sought reform for: pollution of water and air (GHGs), agri-sprawl and deforestation, genetic modification of life, inefficient animal feeds, and displacement of family/indigenous farming. EOs such as FWW, SC, & WA explicitly critiqued factory animal farming. WA's "Pure Farms Pure Waters" campaign "helps protect rural watersheds by working to prevent the spread of factory-style agriculture and promoting the security of family-owned, sustainable farms." WA & FWW both took a more government-regulatory approach to solving the problem.

A more radical group, RAN works to stop "corporate agribusiness" from: clearing the Amazon rainforest for soy, palm oil, and cattle; exploiting laborers and denying land rights to indigenous people; and using chemicals and GM crops. A recent Greenpeace campaign to save the rainforest took an indirect economic approach by pressuring corporations, such as Nike, to stop purchasing leather from the Brazilian cattle industry.

In EDF's Land Water and Wildlife section, agricultural reform is prominent and cooperative, particularly creating policy reform to reward conservation-minded farmers and clean up water pollution caused by hog manure lagoons. Their solution does not involve reduction or moratoriums on hog farms (avoiding the derogatory term "factory farms") but rather works with corporate farmers to update "hog waste technologies."

WWF has an extensive section on agriculture and their work with agribusiness and regulators but seems to focus on plant-crop commodities that they typically don't rhetorically

connect with animal agriculture, except in this isolated statement: “rising incomes allow people to eat more animal protein--milk, eggs, fish and meat--the production of which requires large amounts of feed grain.” Both NC and CBD occasionally discuss the need for sustainable agribusiness but ambiguously do not differentiate between issues in animal versus plant agriculture. However, CBD does speak strongly against cattle grazing on Western public lands and promotes eliminating federal subsidies and low grazing fees. They critique ranching’s lobbying efforts fighting environmental initiatives, such as wolf reintroduction, and favoring government “predator control” services to kill wildlife -- a program few EOs mention.

While no EO promoted GMOs, only certain EOs emphasized anti-GMO campaigns, such as CSPI and CFS.

Consumption-Based Solutions

Consumer solutions, in order of prominence, were 1) *replacement* of much industrial food with local, organic, and/or sustainable animal or plant foods, 2) *reduction*, particularly of red meat and unsustainable sea animals, and, to a lesser degree 3) *vegetarianism* (total replacement of animal products with plants).

Replacement

The most popular recommendation for consumers was to replace industrialized animals or plant foods, which doesn’t ask them to give up any favorite foods but rather just switch to greener sources/species of land and sea animals. Consider this WI report titled “Meat and Seafood: The Most Costly Ingredients in the Global Diet” which assumes this demand must be met:

Consumption of fish and meat is growing fast worldwide, but producing these in huge livestock-raising operations generates enormous health and environmental problems.

Alternative ways of meeting demand for meat and fish can protect the environment and small farmers.

When considering sea animals specifically, Several EOs dedicate much space to listing good versus bad fish to buy. For example, EDF has a “seafood selector” link on the home page that ranks fish species as eco-best (coded green), eco-OK, and eco-worst (coded red), providing pocket guides to buying seafood and sushi as well as mobile phone applications for shoppers use at restaurants/retailers. NRDC has a similar list with a “Sometimes OK” column providing caveats for each species such as “only eat farmed,” “eat American and vegetarian-fed, avoid farmed in Asia,” or “avoid if fished by trawlers.” They also emphasize food safety in avoiding mercury-poisoning in seafood choices. FWW’s “Smart Seafood Guide” allows viewers to click on a photo of their favorite seafood for recommendations of substitute species to eat, such as “if you like shark, try U.S. troll-caught mahi-mahi.” FWW also has a “Fish & Tips” recipe booklet for “seafood lovers” to learn how to cook sustainable seafood. A WI report “Catch of the Day: Choosing Seafood for Healthier Oceans” encourages conscientious fish consumption, assuring readers that “being a more deliberate seafood eater doesn’t mean a Spartan existence; in fact, it could be the only guarantee that fresh and healthy fish continues to appear on our tables.” Its tips for consumers asks “What’s a Seafood Lover to Do?” and instructs readers to eat low on the food seafood chain, support small-scale fishers, and get to know where your food comes from and how its caught, providing external links to seafood guides. They embed this direct fish consumption message with broader clean-water suggestions to avoid non-organic, factory-farmed food. Greenpeace campaigns reach consumers indirectly by targeting *retailers* who sell

unsustainable species, compiling a supermarket scorecard to pressure a change in purchasing policies.

For land-based animal products, the issue is avoiding factory-farmed and non-organic products, sometimes on the grounds of animal welfare in addition to environment and health. WI produces a report titled “Happier Meals: Rethinking the Global Meat Industry” critiquing factory farming as “unsafe, inhumane, and ecologically disruptive” and suggests alternative meat production methods are the solution:

Happier Meals tells you how you can make a difference by supporting local, organic, or pasture-raised animal products; embracing alternative production methods; or including a few vegetarian meals a week to help ensure that meat is made better for people, the environment, and the animals themselves.

Sustainable, local farming is the main focus for groups like GRACE and FWW. GRACE’s projects include: The Meatrix, a series of award-winning anti-factory-farming animated short films; an interactive Eating Well Guide to “local, sustainable, organic” foods; and Sustainable Table, a resource and blog on food issues aimed at creating community movements. These sites critique animal-based foods on the basis that methods of factory-farming, in particular, are inhumane, unhealthy, and polluting, and therefore, GRACE directs consumers to smaller-scale, local animal farmers rather than suggesting plant-based substitutes. GRACE critiques animal cloning (unique in its inclusion of an animal welfare rationale), and is the only EO who interprets endangered species in terms of saving domesticated heritage breeds of farmed animals to maintain genetic diversity for food security.

When discussing food choices directly, SPI often links to other websites, such as GRACE's sustainable table, telling viewers to: "support farmers raising produce and animals sustainably and in the process eschew the factory-farming that contributes to air and water pollution as well as global warming." SPI also showcases how social justice and political structures are related to agro-environmental problems and hunger, asking food consumers to engage civically by voting and supporting independent media, fair trade, and anti-corporate cooperatives. While also vehemently anti-factory farming, WA and FWW less often tell consumers what to eat, as support for small farming and natural animal products is assumed; rather, they encourage citizens to demand that legislators protect public health and the environment by putting restrictions on corporate farm practices and product labels. FWW encourages viewers to find factory farms in their state using a map displaying numbers of animals and farm sites, "top polluters," and they overtly link factory-farms with climate change. Their recommendation is that consumers buy local, organic, and grass-fed animal products.

Reduction

In addition to suggesting a switch to "greener" meats, some EOs suggest that animal product consumption should be reduced, particularly beef and seafood. EOs, such as NRDC and SPI, may allude to reduction once or twice, but that message is largely overshadowed by their emphasis on sustainable meats. Greenpeace critiques the fish industry but does not often suggest consumers eat less, except in this statement at the end of their sustainable seafood page in the green lifestyles section:

Given the crisis facing our oceans from pollution, global warming, bycatch and over fishing, Greenpeace encourages consumers to eat less fish. If you do eat seafood we

encourage you to ask questions; find out where it came from, how it was caught, and what else may have been killed in the process.

SC's sustainable consumption campaign suggests eating local and organic "whenever you can" but is more definitive related to reducing meat, specifically, by saying people should "Eat more vegetables, fruit, and grains and less meat." But then they immediately suggest that you eat meat that is "grass fed, organic, antibiotic- and hormone-free." SC's Green Tips Library's section called "Mind Your Meat" also recommends replacing meat, especially beef, with PB&J, veggies, beans, or "imitation meats," but follows with the option of switching meats: "Not into plants? You can still reduce your carbon footprint by eating chicken or fish rather than beef. Smaller animals consume fewer resources than larger animals."

EDF only discusses meat reduction in its global warming section, and it is buried in the "what you can do" link, in the Home section, as the very last tip "Choose Food Thoughtfully." It sets the tone for reduction by explaining "raising meat contributes more global warming emissions than raising crops. Cutting back on meat even once a week can make a difference." Once the link is selected, the "low carbon choices for dinner" article starts by saying:

There are lots of ways Americans can help fight climate change and reduce U.S. dependence on foreign oil. Buying a car or truck with better gas mileage. Using compact fluorescent bulbs. For those who choose it, even eating just a little less meat can help.

And after a brief explanation of the excessive production of GHG emissions caused by meat, it immediately declares "You don't have to be a vegetarian to make a difference. Even small dietary changes can make a big difference." It goes on to explain how skipping one chicken or meat meal per week would equate to taking millions of cars off the road but does not expand that

line of thinking to explain a vegetarian diet's GHG savings equivalency. Despite this admission of meat's primary role in GHG emissions, EDF's printable tip sheets on global warming fails to mention anything about diet.

Plant-Based Diets

Most EOs do not overtly ask consumers to go veg, but a few do imply that vegetarianism is the greenest diet and therefore any meat reduction toward that goal is beneficial. CSPI uses the most definitive language supporting vegetarianism, saying they “advocate for more healthy, plant-based, environmentally friendly diets.” Their “eating green” link on the home page supports a book by founder Michael Jacobson that promotes veganism for environmental, health, and animal welfare reasons. In fact, their eating green calculator determines impact solely based on one's animal product consumption to determine one's part in manure production and use of cropland, fertilizer, and pesticides. And CSPI's interactive “tour of the food supply” solely demonstrates problems with *animal* agriculture. The resources page links to animal rights and vegetarian organizations, which is rare for EOs in this study, but also links to more common sustainable or “humane” animal farming sites.

While SC supports hunting and fishing and fails to mention plant-based alternatives in their factory farming or global warming sections, their “sustainable consumption” link has a section titled “The True Cost of Food” that includes all-vegetarian recipes and instructs viewers to eat less meat. Although sustainably-raised meat is also touted here, a Q&A section acknowledges the superiority of plant-based diets:

Even when raised in the most sustainable way possible, meat usually requires a greater investment of resources than most plant-based food. ... Cutting back on our consumption

of meat—even sustainably raised meat—is a wise choice, especially since we have been eating much more than our bodies need.

In a separate Green Tips Library, SC does have a brief section titled “Go Vegetarian (at least some of the time),” even proposing people go vegan for a week, as “dairy cows are a major contributor to greenhouse-gas emissions. So try cutting out meat *and* dairy. Check out www.vegweb.com for tips about how to move toward a vegan lifestyle.”

Greenpeace has a page decisively titled “Go Vegetarian” which is buried in a Lifestyles link under the “Get Involved” section. The text mainly suggests consumers “cut down” on animal products and eat more plant-based foods, but the choice of the term “animal products” instead of just “meat” implies a support for veganism. A 2008 Greenpeace report “Cool Farming” is only found via a keyword search, but it specifies that the diet best for reducing GHG emissions is vegetarianism, yet Greenpeace’s current global warming section fails to mention dietary change.

RAN only touts meat reduction and vegetarianism in materials aimed at kids, not adults or teens. One of their steps to protect the rainforest is “eat less red meat,” as South American forests are cleared for cow pasture. The “Kids Activist Toolkit” has a page on meat and vegetarianism that recommends cutting meat consumption in half and provides “meat-free” menu ideas. This is the one place where RAN clarifies that even though the rainforest is also being cleared to grow soy, that soy is typically used for cattle feed not for meat alternatives like tofu. The “Kids Factsheet on Beef” goes beyond red-meat reduction and even links to vegetarian organizations as well as acknowledging vegetarianism’s benefits:

Some people choose to eat more chicken, turkey, and fish instead of red meat. While this will help save the rainforests, it is important to know that eating a plant-based diet is the best thing that you can do for the environment.

The CFS produces a report on reducing your carbon “foodprint,” and its “What You Can Do” section states:

For people who choose to eat meat and dairy products, reducing your consumption of animal foods is the most effective way to reduce your Carbon “FoodPrint.”... One study demonstrated that the fossil fuel requirements of an omnivorous diet were more than twice that of a vegetarian and seven times greater than a vegan.

Yet while vegetarianism is implied, the suggestion is for reduction: “Every meal makes a difference, so you can begin by switching to a veggie option once a week.” CFS primarily promotes reduction of “conventional” meat and dairy in support of sustainable meat saying “There may still be a place in your diet for that hamburger too; but, if you choose to eat it, make sure it’s organic, grass-fed and local.”

NC does not promote meat reduction, and their global warming section only mentions the need to buy local foods. Yet, inconsistent with their rhetoric, NC’s carbon calculator overlooks food miles and only gives credit for any reduction in meat and dairy intake, noting the benefits of vegan diets emitting 72% less carbon than the standard American diet.

Discussion

When EOs addressed the role of agriculture/diet in environmental problems, they did so either within a distinct agriculture section or via one or two of the following sections: global warming, oceans, green living/consumption, or forests. They tended to be harsher on the supply-

side (industry) as the locus of the problem, where solutions were often government regulation or radical changes to business practices, and softer on the demand-side (consumers), where solutions were presented as less radical, voluntary dietary change. Similar to Crompton's (2008) critique of utilizing a marketing approach to environmental change, the rhetoric of consumer choice was prevalent, with EOs providing consumers with a bevy of greener dietary options: eating more local and organic plants and animals, replacing factory farmed meats and unsustainable seafood with more sustainable animal products, reducing consumption of animal products (especially red meat and fish), and/or eliminating animal products. EOs privileged consumer *preference* for animal products over the *need* for them and succumbed to the compromise that we should simply try to meet this preference in the most environmentally efficient way without a major re-evaluation of lifestyles or needed sacrifice.

A contradiction exists between how EOs characterized 1) the environmental impact of animal products/production as severe and 2) consumers' responsibility for solving the problem as modest. Without radical market pressures from *consumers*, it seems unrealistic to expect food *suppliers* to enact the most radical changes. If EOs allow consumers to believe that small dietary changes (particularly switching to "greener" meats) is a viable solution, they may mislead consumers into believing we can all demand the same amount of animal products and they will be delivered unproblematically via sustainable farming/fishing methods (and without a substantial increase in price in many cases). In reality, "sustainable" fishing and farming cannot happen on a large scale. Therefore, I deem messages that promote significant *reduction* of animal products as a more honest and viable consumer solution.

Yet, most EOs, with the exception of CSPI, stopped at promoting reduction and were tentative about recommending that consumers switch to a plant-based diet, even though many

EOs explicitly or implicitly suggested that veganism was the most sustainable choice. Most EOs conveyed an assumption and expectation that people *will* continue to eat animals and did not question their need to eat them. Approached apprehensively, if at all, vegetarianism was often embedded as an extreme or unattainable ideal within rhetoric touting more reasonable, moderate reforms, such as having one meatless meal a week. I suggest that if EOs want to portray a certain diet as ideal on an ecological spectrum, then make it a diet that is *completely*: organic, local, unprocessed, raw, and plant-based. In comparison, promoting a plant-based diet that contains many local, organic, and raw foods could be characterized as more moderate or attainable, yet still asks for necessary change at a more substantive level. This follows the advice of Moser & Dilling (2007) and Crompton (2008) to ask for more fundamental changes.

While it is natural for animal rights organizations to more directly promote *eliminating animal products*, because their priority is protecting individual NHAs from exploitation, it seems on the surface as if environmentalists can more easily just prioritize a collective overall *reduction* or *replacement* in harmful consumption – getting people to eat “better” (small steps) by eating less industrial, conventional food, especially animal-based and non-local. Recommending people simply *limit* animal products, as opposed to eliminating them, appears to sync with EOs’ current appeals to the public’s concerns for the environment, human health and wellbeing, and, sometimes, welfare for land-based NHAs; abolition does not seem as necessary since EOs didn’t use animal rights rationales in favor of *avoiding* unnecessary use and killing of domesticated animals or fish.² EOs only tended to protect the rights of individual animals if they were human, endangered, or charismatic mega-fauna, most of which are not animals Americans typically eat.³

However, in favor of EOs starting to perceive veganism as implicit in an environmental ethic, one should consider a contradiction that occurs between the environmental movement’s

claim to be non-sentimentalist and more holistic in valuing the health and well-being of species/groups over individuals and how their rhetoric expresses concern for the suffering and well-being of human-animals as well as the suffering and killing of charismatic mega-fauna such as seals or dolphins. If these human and nonhuman animals are not to be objectified as meat, and their individual interests are given priority, then what is the justification not to extend that sense of justice out to all animals for moral consistency (in instances where survival doesn't dictate killing to survive)? Some EOs do show concern for the *needless suffering* of land-based farmed animals as an anti-factory-farming appeal, without showing concern for their *needless killing*. And even though environmentalists prioritize the protection of wild not domestic species, EOs show concern for lives of *human* animals (many of whom could be labeled domesticated) but not lives of domesticated NHAs.

The privilege given to the human animal is apparent because even though humans are largely responsible for environmental crisis today, EO solutions rightly do not recommend culling or cannibalism (even though humans are a non-endangered species, some of whom could be considered "invasive" or "non-native"). And while we can pragmatically argue that killing/farming of humans is illegal and morally distasteful, then EOs can only justify their stance in promoting humans' needless killing/farming of NHAs based on an ironic perpetuation of the human/animal and culture/nature dualisms which are at the core of the very environmental problems they seek to remedy.

So, for ideological consistency, rather than just suggesting Americans cut back a burger a week or switch to local, non-GMO, vegetarian-fed fish, EO positions on diet should emerge from a core justice ethic that fairly situates the human as an animal who tends to exploit rather than share the resources of our planetary home; this should build critical rhetoric around notions of

responsibility for solving the life and death problems we cause fellow animals (human and nonhuman). Therefore, EO websites should place more prominence on diet, particularly animal agriculture/fishing, as a primary source of environmental destruction. To address the complexity and severity of food's connection to all types of environmental issues, it should be featured across multiple or all topical platforms – water, forests, energy, wildlife, green living, and especially global warming – rather than existing only in sporadic or isolated areas on the website. Recommended solutions should be proportionate to the problem's severity by asking, in a less tentative and more consistent way, through critical rhetoric, for a needed shift to plant-based agriculture and diets, retaining an emphasis on organic and local. Supply-side campaigns could work institutionally, with public participation, on improving the accessibility and affordability of these plant-foods for public consumption rather than working with existing animal agribusiness to develop less harmful aquaculture or better factory farm waste management. In this way, campaigns could address the public both as consumers and engaged citizens.

Future research could recommend how EOs could ideologically ground vegetarian frames in environmental values and also how organizations supporting environment, social justice, and animal protection could ideologically align food advocacy messages in support of movement fusion around Agyeman's (2007) notion of "just sustainability."

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Footnotes

¹ Motavalli presumably means that animal activists should be flexible about allowing some people to eat meat from *nonhuman* animals, not humans.

² However, EO bycatch arguments seem to critique the unnecessary killing and harm of marine mammals, birds, sharks, and rays, implying they have more inherent value than the fish who are killed, whether as bycatch or for consumption.

³ The exception is endangered/threatened fish species, in which case EOs recommend seafood lovers eat less threatened fish species.

Environmental Organization Recommendations for Consumer Change in Animal Product Consumption (listed by change type and topic area location on their website)

Env Org → Recommended Solution ↓	Center for Biological Diversity (CBD)	Center for Food Safety (CFS)	Center for Science in the Public Interest (CSPI)	Environmental Defense Fund (EDF)	Food & Water Watch (FWW)	Global Resource Action Ctr for the Environment (GRACE)	Green-peace	Nature Conservancy (NC)	Natural Resources Defense Council (NRDC)	Rainforest Action Network (RAN)	Sierra Club (SC)	Small Planet Institute (SPI)	Water-keeper Alliance (WA)	World-watch Institute (WI)	World Wildlife Fund (WWF)
REPLACE with Sustainable SEA Animals		Global Warm.		Oceans	Oceans		Oceans	Oceans	Oceans		Sustainable Consumption. Green Living.	General Action & Global Warm.	Water	Ag	Ag
REPLACE with Sustainable LAND Animals	Global Warm. (1)	Global Warm.			Ag	Ag			Green Living (3)		Sustainable Consumption. & Global Warm. (1)	General Action & Global Warm.	Water	Ag	
REDUCE Animal Consumption		Global Warm.	Ag	Global Warm.			Green Living			Forests (4) (5)	Sustainable Consumption. Green Living.	Global Warm.		Ag (6)	
REPLACE with Plants –VEG			Ag				Green Living	Global Warm. (2)		Forests (5)	Sustainable Consumption. Green Living.				

- (1) Just says buy local (it does not specify animal foods)
- (2) Only in carbon calculator are the benefits of veganism made explicit; otherwise, the global warming section only promotes local food
- (3) Just says organic and local (does not specify animal foods) but did once say people should eat lower on the food chain
- (4) Beef is the main focus because cattle and soy agribusiness is destroying the Amazon rainforest (produced for animal feed)
- (5) Only in materials aimed at kids (not teens or adults)
- (6) Only “Happier Meals” meat report says to include a few vegetarian meals weekly in addition to eating sustainable meats

