

Why A Climate Foodprint Resolution for NYC?

New York City has approved a number of directives to reduce global warming and encourage environmental awareness. PlaNYC aims to reduce New York City's greenhouse gas (GHG) emissions by 30% by 2030 including improved fuel efficiency of cars, transportation alternatives, and cleaner energy sources.ⁱ Executive Order 109 directs the City to reduce greenhouse gas (GHG) emissions from municipal buildings and operations by 30% by 2017.ⁱⁱ And the GreeNYC marketing campaign encourages New Yorkers to make lifestyle changes, from using green cleaning products to switching to paperless bank statements, to reduce their environmental impact.ⁱⁱⁱ

Yet neither PlaNYC, Executive Order 109 nor GreeNYC address the enormous role food and agriculture has in accelerating or mitigating climate change. Globally, an estimated one-third of all human-caused greenhouse gas (GHGs) emissions are from our food system and land use changes^{iv}—from pesticides and fertilizer production to how food is produced, processed, packaged, transported, stored and disposed.

Food and farming are key factors in climate change, and by addressing their impacts, the City can better achieve its established goals for reducing GHG emissions while improving the environmental, health and economic needs of New Yorkers. City Council passage of a global warming “foodprint” resolution is a first and crucial step to ensuring our food system better meets these goals.

Definitions

Community Supported Agriculture (CSA): an urban-rural partnership that allows city residents to buy fresh, often organic food directly from a local farmer

Cool food: a food that is produced with minimal greenhouse gas emissions, the ‘coolest’ of which are organic, local and whole foods

Food miles: the distance food travels from production to consumption

Foodprint: our food system's contribution to greenhouse gas emissions and global climate change

Foodshed: an area which can, or is sufficient to, provide food for a given location

Heat island effect: the condition in which an urban area is much warmer than its surrounding rural areas

Global warming: an average increase in the temperature of the Earth's near surface air, which can cause changes in the global climate

Greenhouse gas (GHG): chemical compounds that trap heat in the Earth's atmosphere, most common of which are carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons and water vapor

Greenhouse gas emissions: the release of gas contaminants into the atmosphere—which often occurs from human activity—that can cause an increase in the global temperature and climate fluctuation

Green jobs: work in agriculture, industry, services, and administration that contributes to preserving or restoring the quality of the environment

Local: a component of food security, in which food is produced within a limited distance of its consumption

Organic: food produced emphasizing the use of renewable resources and conservation of soil and water

Our Food System and Global Warming: Impacting NYC Health, Environment, Economy

Production of crops and livestock are responsible for an estimated one-third of all human-caused GHG emissions.^v The three principal GHGs that result from the food system include the best-known GHG, carbon dioxide (CO₂), as well as two other GHGs that are far more potent in their global warming impacts: methane (23 times the global warming impact as CO₂) and nitrous oxide (296 times the global warming impact of CO₂). In the U.S., approximately 12% of total GHG emissions per household result from growing, preparing, and shipping food.^{vi}

New York City's 8 million residents collectively have an enormous ecological "foodprint" that affects the environment at local, state, and global levels. A low-GHG emissions food system, also known as a "cool foods" system, requires a priority on local, organic production, and encouragement of cool foods diets that have the added value of promoting public health.

Many New Yorkers, especially those who live in low-income neighborhoods or depend on institutions such as schools or city facilities for a majority of their meals, lack access to organic and/or locally-produced foods, particularly fresh vegetables and fruit;^{vii} and studies indicate that about one-half of New York City children are overweight and therefore at higher risk of developing heart disease, diabetes, asthma, cancer, and other chronic health problems often tied to poor diets.^{viii}

Making more fresh, local and preferably organic plant-based foods available to all City residents could have a significant impact on public health. A growing body of research shows that fruits and vegetables are critical to preventative healthcare, and most people need to increase the amount of fruits and vegetables they currently eat every day^{ix} and reduce their red meat intake.^x

Consumption of local produce also supports State small-scale, family farmers and City community gardeners and urban farmers, helps protect rural and urban environments, and requires far fewer fossil fuels than transporting food long distances. A New York City food system that is more focused on local and sustainable production would bring "green jobs" to the City, and protecting our foodshed would improve access of City residents to cool foods by providing a greater market for peri-urban small-scale farmers.

Six Ways to Reduce NYC's Foodprint!

1. Adopt Foodprint legislation

Despite the enormous role our food system has on climate change, this has yet to be addressed in City responses to global warming. Neither PlaNYC, Executive Order 109 nor GreeNYC address food and agriculture, thereby limiting our response to the major environmental and economic challenge of our times.

What can NYC do?

City Council can:

- Adopt the proposed Foodprint Resolution

Individuals can:

- Join the campaign for the Foodprint Resolution! See contact details in "Resources" section

2. Expand Urban Agriculture and Green Jobs

City planners and elected officials increasingly understand urban farming as key to addressing a range of environmental, social, economic and health challenges, including sprawl, malnutrition and preventative health care, swelling landfills and food security. New York City already has over 560 active community gardens and urban farms with an enormous potential for food production. The nearly 20,000 members of NYC's gardens grow food for their own consumption, their neighbors, emergency food programs, and for sale at market. Meanwhile, food grown at these sites often uses organic methods and converts compost to

fertile soil, thereby bypassing the emissions generated by food production, transport and waste. This also improves our urban environment as green vegetation can reflect as much as 20% to 25% of radiation from the sun, thus reducing the “heat island effect” in cities and cooling the climate in urban areas.

What can NYC do?

City Council can:

- Increase its support for community gardening and urban farming initiatives by mapping gardens as parkland, passing City Council Resolution 1033 to increase their permanence, assisting the Parks Department to create a third jurisdiction under GreenThumb for plots that are run as urban farms, and improving maintenance for gardens by providing them with perimeter ratings similar to city parks
- Resume and expand the NYC Composting Program to provide more compost to gardens while diverting compostable waste from landfills
- Increase Parks Department support for community gardens and urban farms, and create jobs in warehouse, storage, and distribution of local foods
- Support a NYC Farm School to empower diverse local communities in creating environmental, nutritional, economic, and social well-being by building the urban agriculture movement in NYC

Individuals can:

- Join and support a community garden
- Start a community group to launch a new garden in your neighborhood
- Grow your own food in home, yard, windowsills and/or rooftops
- Compost your food waste, and sign the online petition to reinstate the NYC Composting Program, www.gopetition.com/petitions/bring-back-composting-to-nyc.html
- Conduct a community food assessment
- Meet with your City Council representative to support expanded urban agriculture opportunities in your community
- Call City Council Speaker Christine Quinn and voice your support for Resolution 1033 to give gardens in New York City permanent status, www.nyccgc.org
- Support honeybee pollination of urban parks, farms and gardens by signing the online petition to legalize beekeeping in New York City, www.gopetition.com/petitions/legalize-beekeeping.html
- Advocate for increased green jobs and labor rights in food processing, packaging and service work

3. Expand and Protect NYC's Foodshed

US-grown plant-based food alone travels 1,500 miles from farm to plate. This figure does not even calculate domestic animal-based food transport, or imported foods which comprise 18% of US food consumption, adding on transport-related emissions to the American meal.^{xi} NYC's foodshed currently provides city residents with a relatively small but growing supply of fresh food that does not have to travel long distances and is often grown using organic methods, thereby releasing fewer GHGs than conventionally-grown and transported food. Farmers markets and Community Supported Agriculture (CSA) programs offer healthy, fresh, local, and often organic food at lower prices than many supermarkets and also offer one of the most direct routes from farm to fridge, avoiding many of the GHG emissions associated with the transport, packaging, and selling of produce.

What can NYC do?

City Council can:

- Support a foodshed analysis proposed in the Manhattan Borough President's Report “Food in the Public Interest”^{xii} to determine and identify the amount of food produced in the NYC foodshed, the extent the foodshed can serve the needs of local residents, and ways to protect the foodshed from threats of development and contamination, including zoning laws and addendums to existing environmental laws

- Set an initial goal for 30% of food served in city-run institutions (*inter alia* schools, colleges, hospitals, and prisons) to be local and preferably organic within ten years, 15% within five years, and provide the necessary budget allocations to make this possible
- Support venues purchasing local and/or organic produce and the expansion of their numbers, including the number of farmers' markets from the current 87 to 100 by 2015 and to 130 by 2020, CSA programs from the current 80 to 120 by 2015 and to 150 by 2020, focusing particularly in underserved communities, along with the broader infrastructure, such as wholesale farmers' markets and kitchens in government buildings
- Improve the coordination of deliveries to farmers markets and CSA's by exploring the provision of 'green EZ-passes' for NYC's foodshed farmers and micro-loan programs that subsidize local farmers to convert their trucks to waste-based bio-diesel^{xiii}

Individuals can:

- Join or start a CSA in your community, www.justfood.org/csa
- Advocate for labor rights and immigration laws that support local agricultural workers
- Support your local farmer's market

4. Reduce or Eliminate Animal Food Consumption

The United Nations Food and Agriculture Organization (FAO) calculated that the global livestock sector is responsible for 9% of the world's carbon dioxide (CO₂) emissions, 37 % of global methane emissions, and 65% of global nitrous oxide emissions,^{xiv} totally 18% of all global GHGs, more than even transportation (14%). Globally, the US is responsible for the greatest emissions of methane from farm animal manure, nearly 1.9 million tons.^{xv} The average American diet is responsible for around 6% of total national GHG emissions,^{xvi} and almost 58% of greenhouse gas emissions from food are from meat, poultry, eggs, fish and dairy.^{xvii} A Cornell University study found that food production for a low-fat, plant-based diet would require less than half an acre of New York State land per person each year, while a diet high in fats and meat requires nearly five times as much land, or 2.11 acres per person.^{xviii}

What can NYC do?

City Council can:

- Adopt City policies to promote increased production, purchasing and consumption of plant-based, preferably local and organic foods by City institutions (including government agencies, schools, hospitals, detention centers) and among City residents
- Set an initial goal to reduce the use of animal-based foods by 20% of food served in city-run institutions (*inter alia* schools, colleges, hospitals, and prisons) and replace with preferably local and organic plant-based foods within ten years, 10% within five years, and provide the necessary budget allocations to make this possible

Individuals can:

- Reduce or eliminate the amount of animal products in your diet

5. Support Organic Agriculture

Studies have shown that organic agriculture systems emit 48–66% less carbon dioxide per hectare (about 2.5 acres) than conventional farming systems that rely on chemical pesticides and fertilizers.^{xix} Organic farming methods also often employ methods of soil management that result in the capture, instead of the release, of GHGs, particularly CO₂. However, only 0.5% of U.S. cropland was certified organic in 2005, and New York State was ranked sixth nationally in the number of certified organic operations (less than 500).^{xx} In 2001, the last year for which the Environmental Protection Agency has published data, 675 million pounds of chemical pesticides were used in U.S. agriculture.^{xxi}

What can NYC do?

City Council can:

- Set an initial goal to increase organic and preferably local foods by 40% of food served in city-run institutions (*inter alia* schools, colleges, hospitals, and prisons) within ten years, 20% within five years, and provide the necessary budget allocations to make this possible

Individuals can:

- Support local, organic farmers by using our dollars and food stamps at farmers markets and CSAs
- Encourage supermarkets and bodegas to stock fresh, organic foods

6. Manufacturing and Refrigeration

In the US, about 80% of energy used in the food supply system goes for food processing, packaging, storage and distribution to retail stores. Much of that energy goes for transport from farm to processors to wholesalers to retailers.^{xxii} The refrigeration and air conditioning equipment of supermarkets containing hydrofluorocarbons (HFCs) produces the equivalent of two million tons of CO₂ every year.^{xxiii} Grocery stores, food markets, and convenience stores emit approximately 85 pounds of GHGs per square foot of floorspace, more than any other commercial sector, and more than 2.5 times the average. Fast food establishments, restaurants, and cafeterias account for the second highest rate of emissions per square foot of floorspace, emitting about 75 pounds of GHGs which exceeds the average by 2.2 fold.^{xxiv}

What can NYC do?

City Council can:

- Reduce purchasing of processed foods in city institutions by 20% within ten years, 10% within five years
- Allocate stimulus and other funds for green infrastructure to reduce harmful refrigeration emissions
- Allocate stimulus or other funds to encourage the adoption of closed refrigeration sections within grocery stores

Individuals can:

- Reduce or eliminate their purchases of processed foods
- Buy local foods to reduce transport and storage refrigeration emissions, such as by patronizing local farmers' markets, joining or starting a CSA, or growing their own food in community or home gardens

Initiatives from Other Cities

Cities worldwide produce about one-third of food consumed, and a small but growing number of cities in the U.S. and abroad are working to address the links between food, agriculture and climate change. These cities are seeking innovative solutions to deal with the climate impacts of food production, processing, packaging, transport and waste. The Foodprint resolution presented to the New York City Council would add to these efforts, and become the most comprehensive action by any city thus far in addressing urban foodprints.

City Climate Action Plans: In Berkeley on May 5, 2009, City Council unanimously approved its Climate Action Plan and consequently moved one step closer to becoming one the first governments in the country to address climate change by developing a more local, sustainable food system. Berkeley's Climate Action Plan is primarily focused on transportation, building efficiency, and land-use planning changes, but also has proposals to build a more sustainable, local food system, and more recycling. These proposals include: supporting the development of community gardens; supporting the development of local food businesses; encouraging government agencies and contractors to purchase local food; encouraging and providing guidelines consistent with building codes for buildings to incorporate rooftop food gardens; and encouraging and providing trainings to residents to grow their own food. The plan was developed through a two-year process that involved a broad community input process.^{xxv}

London's original 2007 Climate Change Action Plan focused on key target sectors: domestic, commercial, energy supply, and transportation. Food was invisible. Thanks to community pressure to address the food and climate change connection, the city commissioned Brook Lyndhurst consulting firm to rectify this gap. The firm completed a greenhouse gas "footprint" report for London's food sector, taking a "responsibility" approach, meaning they looked at the emissions for all food consumed in the city, adding up to 8 billion meals a year, whether the food was grown in the city or not (and it was most often not) and its whole life cycle: from agricultural production and manufacturing emissions to transportation and home use. They proved in the process that the impact of London's food sector spans all the major areas identified by the city's action plan and makes "a significant contribution to the capital's greenhouse gas emissions." The biggest sources of emissions were from the production and manufacturing of food, which accounted for more than two-thirds of total, and transport, which accounted for one-fifth. At the other end of the food chain, one-tenth of total emissions came from storage and cooking food at home. Through this research, they were able to identify some of the best opportunities for the city to reduce emissions. ^{xxvi}

Green food resolution: In Chicago, where many communities are considered "food deserts", with lack of readily affordable fruits, vegetables, and other plant-based foods, citizens have introduced a resolution to promote "health, nutrition, and lifestyles that are ecologically sustainable." The resolution, introduced in March 2009, calls for the City of Chicago to promote "the expansion of Farmers' Markets, Community Supported Agriculture (CSA) programs, community garden, and other venues which provide healthful plant based foods."^{xxvii}

Food waste: Seattle adopted a resolution to improve the sustainability and security of its food system in April 2008. It establishes goals, a policy framework and a set of actions to "strengthen community and regional food systems by linking food production, processing, distribution, consumption, and waste management to facilitate, to the extent possible, reliance on" Seattle's regional food resources; to assess and mitigate the negative environmental effects of food system activities; to support food system activities that encourage the use of local, renewable energy resources; to discourage food waste and environmentally-unfriendly food packaging at all levels of the food system; to reduce the climate impacts of Seattle's food systems; and to both stimulate demand for and increase access to healthy, local foods for all Seattle residents, particularly those in low-income communities.^{xxviii}

Packaging ban: In January 2007, the City of Santa Monica adopted an ordinance banning the use of polystyrene and non-recyclable plastic containers for businesses. Effective in February 2008, businesses were given one year to phase out the use of non-recyclable "to-go" food and beverage containers, namely expanded polystyrene (EPS—better known as Styrofoam) and clear polystyrene. The ban is aimed at reducing the presence of one of the most frequently found items of debris on Santa Monica Beach and in the bay. Polystyrene is particularly harmful because it does not degrade and can persist in the environment for hundreds, if not thousands, of years. U.S. Environmental Protection Agency reports 32% of waste in landfills is made up of PVC containers and discarded packaging. As of 2007, City staff was "in the process of developing a notification and outreach program to encourage citywide compliance. The California Restaurant Association has also begun to coordinate anti-litter campaigns with the city."^{xxix}

Composting program: San Francisco has set a self-imposed goal of reducing its landfill waste 75% by 2010. To help meet this goal, garbage and recycling companies are collecting food scraps from hundreds of thousands of residents and more than 2,000 businesses, and producing high-quality compost for Bay Area growers. In one year, 105,000 tons of food scraps and yard trimmings - 404 tons each weekday - get turned into 20,000 tons of compost for 10,000 acres.^{xxx} Creating compost from food waste, instead of allowing materials to decompose in landfills, reduces methane emissions, and helps build nutrient-rich soil with an enhanced capacity to sequester carbon. Overall the City of San Francisco is curbing its landfill waste and greenhouse gas emissions, while at the same time providing a valuable product to local farms and, in return, fresh, local food to city residents.

Resources

Brighter Green, brightergreen.org
Cool Foods Campaign, www.coolfoodscampaign.org
Eating Liberally, livingliberally.org/eating
East New York Farms, www.eastnewyorkfarms.org
Farm Sanctuary, www.farmsanctuary.org
Just Food, www.justfood.org
Kind Green Planet, www.kindgreenplanet.org
New York City Community Gardens Coalition, www.nycgcg.org
Take a Bite out of Climate Change, www.takeabite.cc

For more information on the proposed resolution or to contact supporting organizations, contact:
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