

# Trends in Cumulative Impacts Policy

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Nancy Myers, Science & Environmental Health Network  
Presentation to Cumulative Impacts Working Group, September 20, 2011

## I. Communities and environmental justice: best practices

### SEARCH THE COLLECTION

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Select one term or several under "Scope" and "Focus."  
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Scope	Focus					
<input type="checkbox"/> Ecosystems/Climate Change	Studies that recognize problems caused by cumulative impacts:	How to analyze cumulative impacts:	How to reduce and prevent cumulative impacts:			
<input checked="" type="checkbox"/> Communities/Environmental Justice				<input type="checkbox"/> Diseases	<input type="checkbox"/> Methods	<input checked="" type="checkbox"/> Best practices
<input type="checkbox"/> Human Health				<input type="checkbox"/> Socioeconomic	<input type="checkbox"/> Tool & resources	<input type="checkbox"/> Principles
<input type="checkbox"/> All				<input type="checkbox"/> Ecosystem	<input type="checkbox"/> Examples	<input type="checkbox"/> Decision tools
	<input type="checkbox"/> Exposures		<input type="checkbox"/> Current law			
			<input type="checkbox"/> Proposed law			
			<input type="checkbox"/> Planning & strategies			


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Trends in best practices:

- A. Green infrastructure
- B. Food and agriculture
- C. Obesity reduction
- D. Reducing disparities
- E. Crosscutting goals

## A. Green infrastructure

### Biodiversity in cities

[An Urban Jungle for the 21st Century](#). Sonia Kolesnikov-Jessop, New York Times, July 28, 2011. Singapore and other cities see economic advantage in increasing green space and wildlife habitat.

- Scope: Communities/Environmental Justice, Ecosystems/Climate Change
- Focus: Principles, Best practices, Planning & strategies

### Chicago climate change adaptations

[A City Prepares for a Warm Long-Term Forecast](#). Leslie Kaufman, New York Times, May 23, 2011. Repaved alleyways, rooftop gardens and other strategies will help keep Chicago cool when its climate resembles today's Baton Rouge.

- Scope: Communities/Environmental Justice, Ecosystems/Climate Change
- Focus: Best practices, Planning & strategies

### Cities as ecosystems

[As Ecosystems, Cities Yield Some Surprises](#). Hillary Rosner, New York Times, August 11, 2011. Research is underway to understand the nation's cities, home to 80 percent of the population, as functioning ecosystems. The goal is to educate urbanites about their environment and how they can act to make it more sustainable.

- Scope: Communities/Environmental Justice, Ecosystems/Climate Change
- Focus: Best practices, Planning & strategies, Ecosystems

### Community as ecosystem

[Making visible the invisible power of community](#). Hanmin Liu, December 22, 2009. Monograph of the work of [Wildflowers Institute](#). "We have come to see that the community infrastructure is composed of 'informal leaders' who organize social spaces and generative activities and are guided by the beliefs and values of the community. They are the real-time architects for the social safety and social health of the community." Don't skip the embedded videos.

- Scope: Communities/Environmental Justice
- Focus: Best practices, Planning & strategies

### New York City water plan

[Trees grow in Brooklyn: A natural form of relief for overworked city sewers](#). The Economist, November 11, 2010.

- Scope: Communities/Environmental Justice, Ecosystems/Climate Change
- Focus: Best practices

### Philadelphia's water plan

[Philadelphia's ambitious green infrastructure, clean water plan](#). Tyler Falk, SmartPlanet, June 2, 2011. Investing \$2 billion over the next 25 years, Philadelphia will transform at least one-third of the impervious areas (concrete and asphalt) served by its combined sewer system into "greened acres."

- Scope: Communities/Environmental Justice
- Focus: Best practices, Planning & strategies

## *B. Food and agriculture*

### **Kaiser Permanente Community Health Initiatives**

[Kaiser Permanente Community Health Initiatives](#). Describes the large healthcare company's programs linking farmers markets, CSAs, and healthful hospital meals to communities and patient healthcare. The site includes resource guides for implementing such programs.

- Scope: Human Health, Communities/Environmental Justice
- Focus: Principles, Best practices, Planning & strategies

### **Philadelphia Food Trust and soda tax**

**Opinionator: Go Philly!** Mark Bittman, April 5, 2011, New York Times. Thanks to the [Food Trust](#) and a supportive mayor, many of Philadelphia's poorest residents have improved access to supermarkets and farmers' markets; at some of the latter, their purchases are subsidized. Soon the initiative may be funded by a tax on soda.

- Scope: Human Health, Communities/Environmental Justice
- Focus: Socioeconomic, Best practices

### **Urban farming—Cleveland, Ohio**

[Cleveland's for-profit urban gardens are growing](#). Marty Sterpka, The Plain Dealer, July 06, 2009. The city is seeing what they believe is its biggest proliferation of big-lot gardens since the Victory Garden days of World War II.

- Scope: Communities/Environmental Justice
- Focus: Best practices

### **Urban farming—Detroit, Michigan**

[Urban pioneers turn vacant lots verdant](#). Andy McGlashen, Great Lakes Echo, Sept. 8, 2009. The gardens of Peacemakers International, a ministry that helps addicts get off the streets and into jobs, are part of a larger network of citizens, nonprofits, and entrepreneurs working to turn the Motor City's bedraggled wastes into a patchwork of productive green space.

- Scope: Communities/Environmental Justice
- Focus: Best practices

## *C. Obesity reduction*

### **Childhood obesity prevention**

Funded by the Centers for Disease Control and Prevention, [Shape Up Somerville: Eat Smart. Play Hard](#). was a 3-year (2002-2005), environmental change intervention designed to prevent obesity in culturally diverse, high-risk, early-elementary school children.

- Scope: Human Health, Communities/Environmental Justice
- Focus: Best practices, Diseases

### **Light rail reduces obesity in Charlotte, NC**

[The Effect of Light Rail Transit on Body Mass Index and Physical Activity](#). John M. McDonald et al., Journal of Preventive Medicine, Vol. 39 #2 (August 2010), pp. 105

- Scope: Communities/Environmental Justice, Human Health
- Focus: Diseases, Socioeconomic, Best practices

### **Louisville obesity reduction**

[A city tries to slim down](#). Stephanie Strom, New York Times, June 13, 2011. A campaign to reduce obesity in Louisville, Kentucky, involves nearly every agency from the mayor's office to sewers.

- Scope: Human Health, Communities/Environmental Justice
- Focus: Best practices

## *D. Reducing disparities*

### **Green zones in Los Angeles**

[Los Angeles' 'green zone' plan is aimed at low-income, high-pollution areas](#). Louis Sahagun, Los Angeles Times, January 21, 2011. 'Toxic hot spots' Pacoima, Boyle Heights and Wilmington would get incentives to attract clean industries. Polluters would be targeted with tougher inspections and enforcement. See also the [Cleanup/Greenup website](#).

- Scope: Communities/Environmental Justice
- Focus: Best practices, Planning & strategies

### **Non-medical “prescriptions”**

The [Health Leads program](#) mobilizes undergraduate volunteers, in partnership with providers in urban clinics, to connect low-income patients with the basic resources — such as food, housing, and heating assistance — that they need to be healthy. See also this [NYTimes article](#) about the program.

- Scope: Human Health, Communities/Environmental Justice
- Focus: Best practices

### **Toolkit for health and resilience in vulnerable environments (THRIVE)**

[A Community Resilience Approach to Reducing Ethnic and Racial Disparities in Health](#). Rachel Davis et al., American Journal of Public Health Vol. 95 No. 12 (Dec. 2005) pp. 2168

- Scope: Communities/Environmental Justice, Human Health
- Focus: Tool & resources, Best practices

## *E. Crosscutting goals*

### **Buckminster Fuller prize for cumulative solutions**

[Harnessing the multiplier effect](#). Nathanael Massey, Yes Magazine, June 17, 2011. “We're all familiar with vicious cycles. But what happens when solutions build on each other?” Describes Buckminster Fuller prize recipient [Blue Ventures](#), a London-based organization that uses conservation management as a tool for safeguarding ecosystems in poor coastal communities in Madagascar, and others. See also this [Wall Street Journal article](#).

- Scope: Human Health, Communities/Environmental Justice, Ecosystems/Climate Change
- Focus: Best practices

### **Eco-tipping points**

[The EcoTipping Points website](#) features over 100 success stories of strategies for shifting from decline to restoration, all with strikingly similar scripts: human well-being goes hand in hand with the health of the local ecosystem, and both decline and restoration are driven by mutually reinforcing cycles. This Jan. 26, 2011 [article from Yes! magazine](#) describes what the successes have in common.

- Scope: Human Health, Communities/Environmental Justice, Ecosystems/Climate Change
- Focus: Principles, Best practices

### **EPA aging guide**

[Growing Smarter, Living Healthier: A Guide to Smart Growth and Active Aging](#). Addresses the basic principles of “age-friendly” neighborhoods and town designs that are healthier for people of all ages and the environment.

- Scope: Human Health, Communities/Environmental Justice, Ecosystems/Climate Change

- Focus: Principles, Best practices, Planning & strategies

#### **Funders' Network for Smart Growth**

The [Funders' Network for Smart Growth and Livable Communities](#) is a membership organization that helps grantmakers across North America advance strategies to create fair, prosperous, and sustainable regions and communities that offer everyone the chance for a good life.

- Scope: Communities/Environmental Justice

Focus: Best practices, Planning & strategies

#### **Green cities CA best practices**

[Best Practices website of Green Cities California](#). Easily accessible, groundbreaking environmental policies modifiable for other jurisdictions.

- Scope: Communities/Environmental Justice
- Focus: Best practices

#### **Healthy Puget Sound 2020**

[Reducing fecal coliform, poisons among Puget Sound health goals](#). John Dodge, The News Tribune (Tacoma, Washington), July 14, 2011. Sixteen recovery targets give agencies, local governments, tribes, citizens, conservation groups, and businesses something to aim at with their ongoing work to restore and clean up Puget Sound.

- Scope: Human Health, Communities/Environmental Justice, Ecosystems/Climate Change
- Focus: Best practices, Planning & strategies

#### **Sustainable Jersey**

[Sustainable Jersey](#) is a certification program for cities in New Jersey that want to go green, save money, and take steps to sustain their quality of life over the long term.

- Scope: Communities/Environmental Justice
- Focus: Best practices

#### **Vancouver greenest city plan**

[Greenest City 2020](#). Vancouver's action plan for becoming the greenest city in the world. See also this [article in the Vancouver Sun](#), July 13, 2011.

- Scope: Communities/Environmental Justice
- Focus: Best practices, Planning & strategies

## II. Scope “All”: Tools & Resources

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Trends in analytic tools and resources:

- A. Indexes
- B. Mapping
- C. Screening (combined approach)
- D. Crosscutting resources

## A. Indexes

### Community Need Index

In 2005 Catholic Healthcare West, in partnership with Thomson Reuters, pioneered the nation's first standardized [Community Need Index \(CNI\)](#). The CNI identifies the severity of health disparity for every zip code in the United States.

- Scope: Human Health, Communities/Environmental Justice
- Focus: Tool & resources, Socioeconomic, Decision tools

### Green City Index

[US and Canada Green City Index](#). PDF 8.5 MB. The Economist Intelligence Unit, sponsored by Siemens, 2011. Ranks 27 cities overall and in 9 categories, presents a variety of best-practice ideas, describes the methods used for rankings, and profiles each city in detail. This tool is meant to help city leaders learn from each other's experience.

- Scope: Communities/Environmental Justice, Ecosystems/Climate Change
- Focus: Tool & resources, Best practices, Planning & strategies, Decision tools

### Ocean Health Index

The [Ocean Health Index](#) will try to capture and synthesize how people benefit from marine systems and the ways that we interact with and affect ocean health — all in a single number. See also [this article](#), first in a series, on how the index is being developed.

- Scope: Human Health, Ecosystems/Climate Change
- Focus: Tool & resources, Methods, Ecosystem

### Resilience Capacity Index

[The Resilience Capacity Index](#) measures cities' capacity to weather acute and chronic stresses ranging from gradual economic decline to rapid population gains to earthquakes and floods. See also this [July 11, 2011 article](#) about the index.

- Scope: Communities/Environmental Justice
- Focus: Tool & resources, Best practices

## B. Mapping

### Climate change food insecurity

[Mapping hotspots of climate change and food insecurity in the global tropics](#). PDF CGIAR Research Program on Climate Change, Agriculture and Food Security, June 2011 (3.9 MB PDF). This report spotlights global areas where the effects of climate change on agriculture could intensify hunger and poverty. See also this [summary of the report](#) from the BBC, June 3, 2011 and "[A Warming Planet Struggles to Feed Itself](#)," Justine Gills, New York Times June 4, 2011.

- Scope: Human Health, Ecosystems/Climate Change
- Focus: Planning & strategies, Ecosystem

### Climate change threats locally

[Climate change threatens health: Serious threats where you live and what to do about them](#). NRDC website. Click on a state on the map for more information on climate-health threats, actions being taken to prepare communities, and what you can do.

- Scope: Human Health, Communities/Environmental Justice, Ecosystems/Climate Change
- Focus: Tool & resources, Best practices, Planning & strategies, Ecosystem, Diseases

### **EPA Enviromapper**

[EnviroMapper with Envirofacts](#) is “a single point of access to select U.S. EPA environmental data.” The website provides access to several EPA databases of information about environmental activities that may affect air, water, and land. Users can generate maps of specific areas.

- Scope: Communities/Environmental Justice, Ecosystems/Climate Change
- Focus: Tool & resources

### **EJ View mapping tool**

The US EPA's [EJView](#), formerly known as the Environmental Justice Geographic Assessment Tool, allows users to create maps and generate detailed reports based on the geographic areas and data sets they choose. EJView includes data from multiple factors that may affect public and environmental health within a community or region, including demographic, health, environmental, and facility-level data.

- Scope: Communities/Environmental Justice, Human Health
- Focus: Tool & resources

### **Food desert locator**

[This mapping system](#) locates “food deserts.” Part of the First Lady's *Let's Move!* initiative, the proposed Healthy Food Financing Initiative will expand the availability of nutritious food to low-income communities without ready access to large groceries and supermarkets by developing and equipping grocery stores, small retailers, corner stores, and farmers markets with fresh and healthy food.

- Scope: Communities/Environmental Justice
- Focus: Tool & resources, Socioeconomic, Best practices, Decision tools

### **TOXMAP**

[TOXMAP](#) is a US National Library of Medicine system that uses maps of the United States to help users visually explore data from the US Environmental Protection Agency (EPA)'s Toxics Release Inventory (TRI) and Superfund Program. See also the [NLM TOXMAP Fact Sheet](#).

- Scope: Human Health, Communities/Environmental Justice
- Focus: Tool & resources, Planning & strategies, Exposures, Decision tools, Current law

## *C. Screening (combined approach)*

### **C-FERST: Community-Focused Exposure and Risk Screening Tool**

US EPA is developing [C-FERST](#), the Community-Focused Exposure and Risk Screening Tool to help communities identify "community environmental health issues, incorporating the latest research on the science of estimating human exposure to toxic substances in the environment . . . [and make] informed, cost-effective decisions for taking action to improve public health." C-FERST is being developed and vetted in phases. A [Q&A on C-FERST](#).

- Scope: Communities/Environmental Justice, Human Health
- Focus: Methods, Tool & resources, Decision tools

### **Healthy Development Measurement Tool**

The [Healthy Development Measurement Tool](#), developed by the San Francisco Department of Public Health, is a comprehensive evaluation metric to consider health needs in urban development plans and projects. It includes over 100 indicators of social, environmental and economic conditions; a “healthy development” checklist; and a menu of policies and design strategies.

- Scope: Human Health, Communities/Environmental Justice, Ecosystems/Climate Change
- Focus: Tool & resources, Planning & strategies



### **Screening tool, California**

[The Cumulative Impacts \(CI\) screening method](#) being developed by a California academic team, working with environmental justice advocates, is a “visual mapping tool and a scoring procedure that examines cumulative impacts in neighborhoods along four dimensions: proximity to hazards, health risk indicators, social vulnerability indicators, and land use.” This [website](#) includes a wealth of information, especially [December 2010 workshop presentations](#) explaining the method and its evolution, including helpful notes of talks and discussion as well as Power Point presentations. See also the [CalEPA cumulative impacts report](#) endorsing this method.

- Scope: Communities/Environmental Justice
- Focus: Tool & resources, Socioeconomic, Methods, Exposures

### **Screening tool, New Jersey**

[A Preliminary Screening Method to Estimate Cumulative Environmental Impacts](#). New Jersey Department of Environmental Protection, December 22, 2009. Includes an appendix reviewing literature on other screening tools as of that date.

- Scope: Communities/Environmental Justice
- Focus: Tool & resources, Methods

## *D. Crosscutting resources*

### **Encyclopedia of Earth**

[The Encyclopedia of Earth](#) is an expert-reviewed electronic reference about the Earth, its natural environments, and their interaction with society.

- Scope: Human Health, Communities/Environmental Justice, Ecosystems/Climate Change
- Focus: Tool & resources, Ecosystem

### **Macarthur Research Network on Socioeconomic Stressors and Health**

[This website](#) contains useful research summaries with bibliographies citing many important studies, resources, and tools on socioeconomic stressors and health, as well as a sociodemographic questionnaire. See [Reaching for a Healthier Life: Facts on Socioeconomic Status and Health](#), a 52-page summary of findings and policy recommendations.

- Scope: Human Health, Communities/Environmental Justice
- Focus: Tool & resources, Socioeconomic, Principles, Best practices, Planning & strategies, Methods

### **National Ecological Observatory Network (NEON)**

[US launches eco-network](#). Jeff Tollefson, Nature, August 9, 2011. An ambitious project to systematically monitor the environment on a continental scale is finally ready to break ground. The result will be a vast database that scientists can mine to tackle broad questions such as how global warming, pollution and land-use change are affecting ecosystems across the country.

- Scope: Ecosystems/Climate Change
- Focus: Tool & resources, Ecosystem

### **Socio-Environmental Synthesis Center**

[Solving eco-challenges with today's data](#). Dan Watson, Miller-McCune, August 16, 2011. The new [Socio-Environmental Synthesis Center](#), a project of the University of Maryland, will focus entirely on the processing and better utilization of existing information. The center's goal is to fill gaps between scholarship and public policy, and between environmental science and social science.

- Scope: Human Health, Communities/Environmental Justice, Ecosystems/Climate Change
- Focus: Tool & resources, Best practices

### **III. Other interesting searches**

Ecosystems/climate change: Diseases

Ecosystems/climate change: Socioeconomic

Human health: Diseases (multifactor diseases)

Communities/environmental justice: exposures (EJ communities)

Lawsuit (in keyword search)