



## EXECUTIVE SUMMARY

# GLOBAL TRADE IMPACTS:

Addressing the Health, Social,  
and Environmental Consequences  
of Moving International Freight  
Through Our Communities



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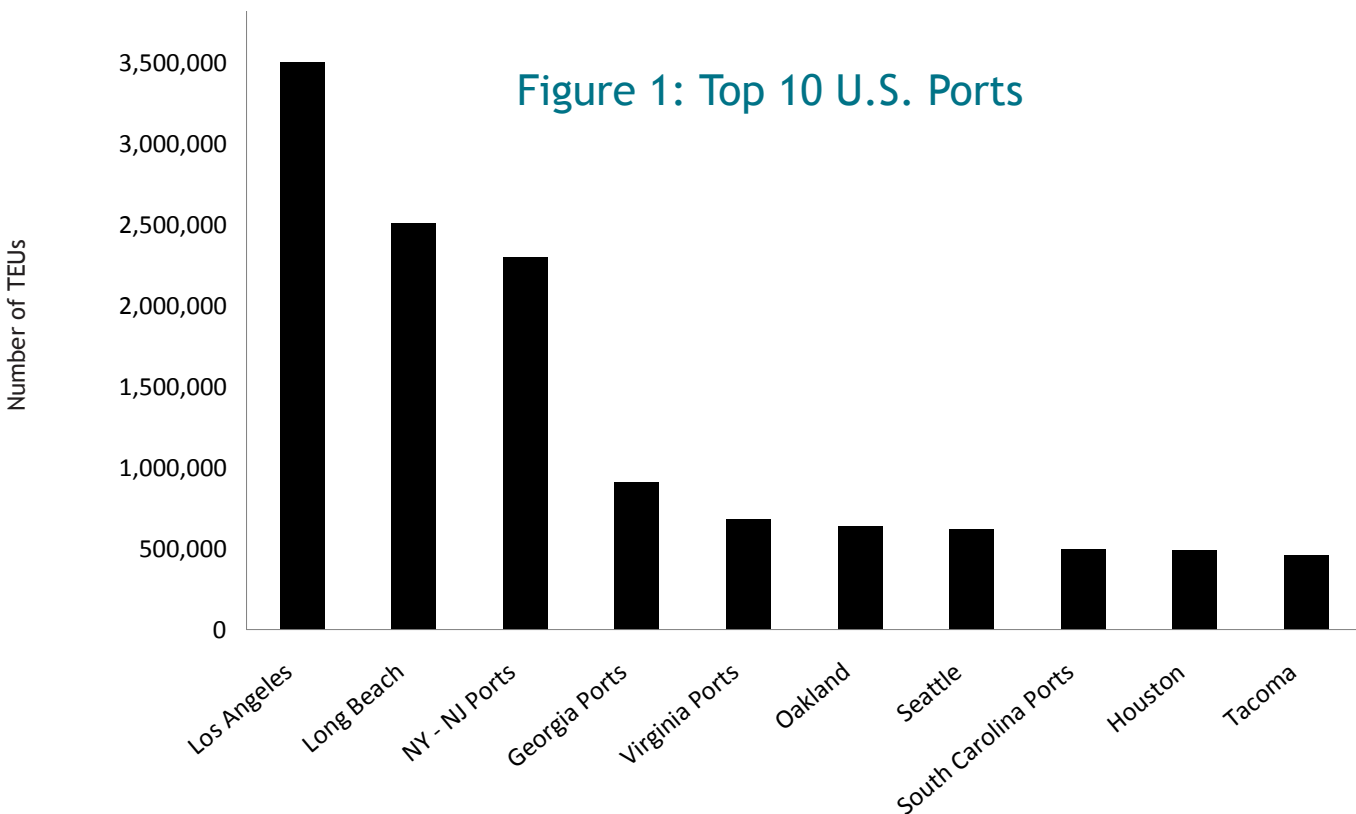


# Executive Summary

We live today in a globalized world where products come from around the planet. In the United States, this globalized world means that we manufacture fewer things, while products are made overseas where labor costs are lower and environmental regulations are sometimes non-existent. As a result, a global trade and freight transportation system has emerged to facilitate the movement of products from where they are produced to where they are consumed. This vast and expanding network of seaports, highways, rail, distribution centers,

and other cargo facilities that moves freight to retail stores increasingly defines and impacts the regions and communities where they intersect.

The greatest volume of the imports entering the United States comes through the Los Angeles and Long Beach Ports, which account for 43% of all U.S. imports. The top 10 maritime container ports in the United States are responsible for 86% of container imports and exports (in number of TEUs, a measurement for the size of containers). See Figure 1.



Source: Data from The Journal of Commerce, May 3, 2010 Adapted by Elba Garcia, USC

# A National Landscape of Freight Transportation: Trends, Impacts and Solutions

The purpose of this report is to: 1) provide an overview of the growth and scale of the freight transportation industries and the U.S. shift from a production to a distribution economy, 2) document examples of organizing and policy approaches that have injected important considerations of health, labor, and community impacts into freight transportation policy and decision-making, and 3) identify new directions so that local and regional communities can better address what is happening in their backyards. The report has been informed by the authors' own participation in defining and supporting these new directions.



More international trade is expected to come. Trends in the industry include: the continuing dominance of Asian imports, particularly from China, the impact of the expansion of the Panama Canal scheduled for completion in 2014, the growth of inland ports, intermodal facilities and related infrastructure developments, and the role of rail and truck transport in moving goods from ports and freight facilities to their end points. Half of the top 10 ports are on the West Coast, four are on the East Coast, and one is on the Gulf Coast. Figure 2 (right) shows the location and volume of imports at the top U.S. container ports in addition to other key inland ports profiled in this report.

This shift from a production to a distribution economy in the United States has led to extensive negative health, community, labor, and environmental consequences for workers and community residents.

Health impacts are broadly defined to include environmental, community, and occupational safety and health as well as public health impacts. It considers disparities in employment status and environmental justice issues faced

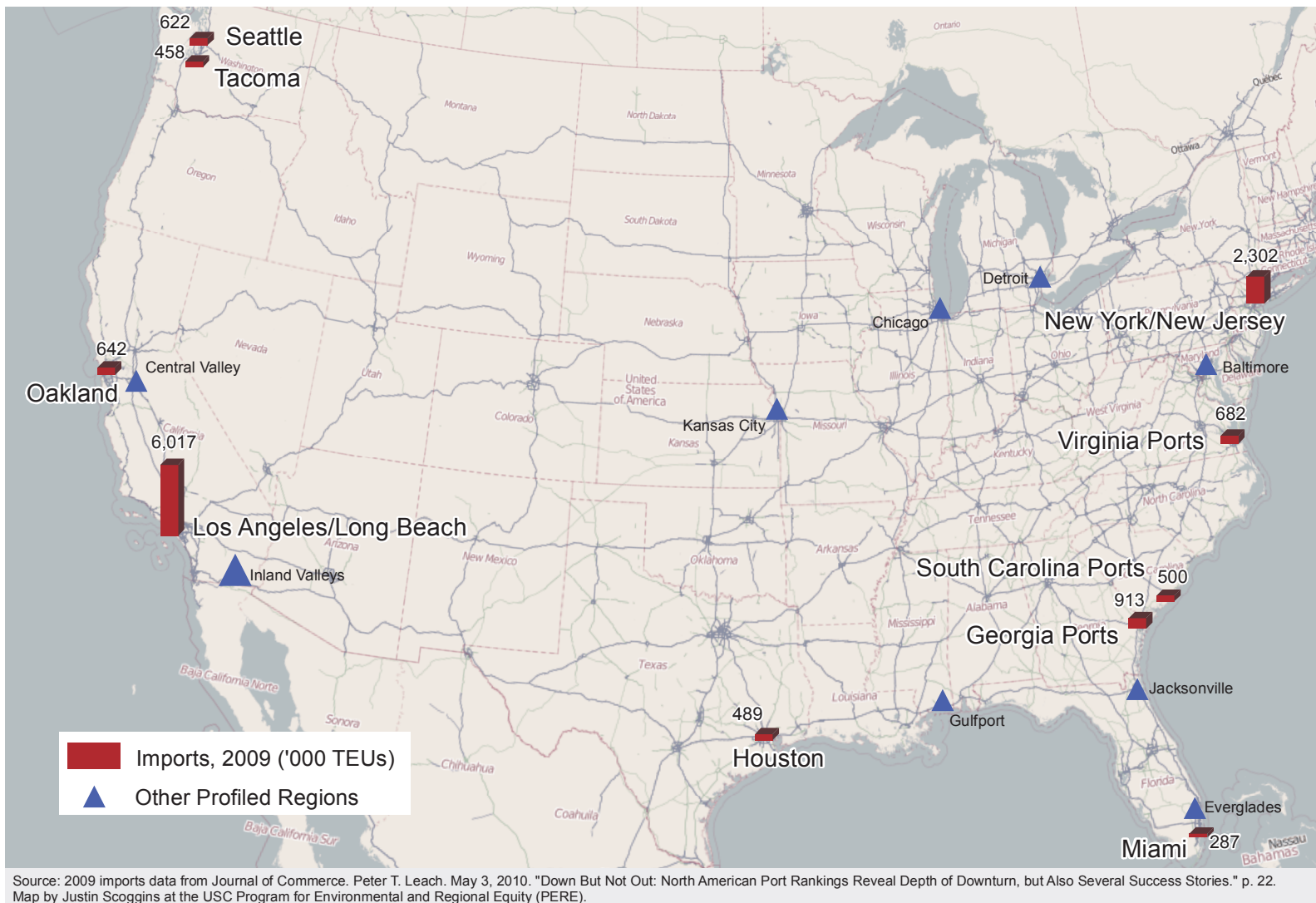
by low-income residents in communities of color adjacent to the ports, highway corridors, distribution centers, rail yards and rail corridors.

Environmental impacts include air and water pollution from major shipping and freight transportation activities, while nearby community residents (or marine life, in the case of ships) are exposed to diesel particulate matter and noise. Research findings now link air pollution to cardiovascular, respiratory and other health problems, and link noise pollution to cardiovascular illness, sleep difficulty and anxiety, in addition to affecting the health of dock and warehouse workers, truck drivers, and railroad employees. Workers in huge distribution centers that usually have no air-conditioning also face heat stress in the warmer months, and there is a higher than average worker fatality rate. New studies also point to problems of 24-hour lighting at port and rail operations, conflicts involving incompatible land uses, the potential for contamination from hazardous spills, traffic safety problems and hefty local costs to repair streets that are damaged by big-rig trucks. At the global level, international trade activities contribute to global warming, with significant emissions of carbon dioxide, black carbon and other pollutants.





**Figure 2: Top 10 U.S. Ports by Imports (2009 TEUs) and Regional Hubs Profiled**



# Selected Health, Worker & Community Impacts - Freight Transportation

	Hazard	Where it's found, who is at risk	Illness or condition that the long-term exposure or impact can cause
REGIONAL AIR POLLUTION	Particulate matter	Elevated levels of PM2.5 in the air	Cardiovascular disease, COPD (e.g., emphysema)
	PM and elemental carbon (EC)	In vehicle exhaust; EC is a marker for diesel	Chronic exposure leads to reduction of lung function in children
	Ultrafine particles (UFPs)	In vehicle exhaust; considered very toxic	When lab animals breathe UFPs, the particles end up in the brain; UFPs can cause artery hardening in lab animals
	Nitrogen dioxide - precursor to ozone	Diesel emissions contains high levels of NO <sub>2</sub>	Increase in school absences is linked to increases in ozone levels
LIVING NEAR TRAFFIC-RELATED AIR POLLUTION	Living close to highways	Children	Increased asthma; exacerbation of asthma (e.g., wheezing) and use of more asthma medication
	Living or going to school near a busy road	Children	More likely to develop new cases of asthma
	Living near busy roads	Pregnant women	More likely to have premature or low birth weight babies or miscarriages, or develop preeclampsia
	Living near a freeway	Adults	Thickening of the artery walls that can lead to heart disease and stroke
	Living within 50 meters of a busy road with more than 15,000 vehicles/day	Women	More likely to develop mild cognitive decline as they age
	Living near busy roadways	Women	More likely to develop new cases of diabetes
HIGH NOISE LEVELS	Living near busy roads	Men and women	More likely to develop stroke and new cases of heart disease
	Community noise pollution	At risk: those living near busy highways, marine terminals, airports, rail yards, and train tracks, and/or construction of the above	Residents near airports and highways show (for adults) an increase in cardiovascular disease and stroke, sleep difficulties and anxiety; and (for children) problems with school behavior and anxiety
LABOR ISSUES; WORKER HEALTH AND SAFETY	Elevated levels of noise in workplaces	At risk: dock workers, railroad workers and truck drivers	Long term exposure can cause hearing loss, stress and high blood pressure
	Contingent employment - e.g., warehouse workers	Workers often hired by agencies as temporary workers with low-pay and no benefits	Stressful, low-wage, insecure jobs without benefits
	Misclassification as independent contractors rather than employees	Port truck drivers	Lack of basic worker protections, such as hourly wage, overtime, health insurance, unemployment benefits, right to organize, and OSHA protections
	Diesel exhaust	Dock workers, railroad workers, truck drivers and workers at trucking operations	Increase in lung cancer in all three occupations; increase in COPD (e.g., emphysema) among railroad workers
	Heat	Lack of air conditioning in cabs of trucks and locomotives and inside huge distribution centers	If outdoor temperatures are extremely high and there is no relief or mitigation, workers can suffer from heat stress illnesses
COMMUNITY IMPACTS	Injuries/fatalities	Some parts of the freight transportation industry are considered "high hazard"	The 2009-2010 California OSHA highest hazard industry list included warehousing and truck transportation
	Industrial blight	Empty containers in lots near homes; views of industrial cranes; truck driving schools operating in neighborhoods	Decreases home values and quality of life
	Traffic Congestion	Cars must travel with big-rig trucks; expanding number of heavy duty trucks hauling containers	Stress from congestion; increased commuting time means longer times on the road breathing air pollution in exhaust from cars and trucks
	Cars traveling in same lanes and on same highways	Drivers of cars have a hard time seeing traffic signs over big-rig trucks; trucks take up a lot of room on highways	Injuries and fatalities in car-truck accidents. Big-rig truck accidents on highways tie up traffic for hours.
	24-hour lighting	Lights shine in windows	Difficulty sleeping at night
	Road repairs	Highways, truck routes, residential streets near rail yards, ports and warehouses	High cost to local and state taxpayers to repair the roads and highways from big-rig truck damage
Eminent domain	Exerts the right of railroads or governments to appropriate private property (e.g., to build a highway)	Community residents can lose their homes	

Labor impacts include how the freight transportation and logistics industries that manage the flow of goods from overseas to U.S. consumers have produced a new generation of contingent workers. These workers have low wages and are often used seasonally or hired periodically as the economy ebbs and flows. Many of the jobs involve temporary workers who have fewer benefits and far less job security, particularly those associated with the massive distribution centers that constitute a key part of the freight transportation system. Port truck drivers are misclassified as independent contractors and lack basic worker protections such as hourly wage, overtime, health insurance, unemployment benefits, OSHA protections and the right to organize. The global shift of production away from higher paying manufacturing jobs in the United States to this contingent or “flexible” labor work force has therefore emerged as a key outcome of the rapid growth of the global freight transportation system.

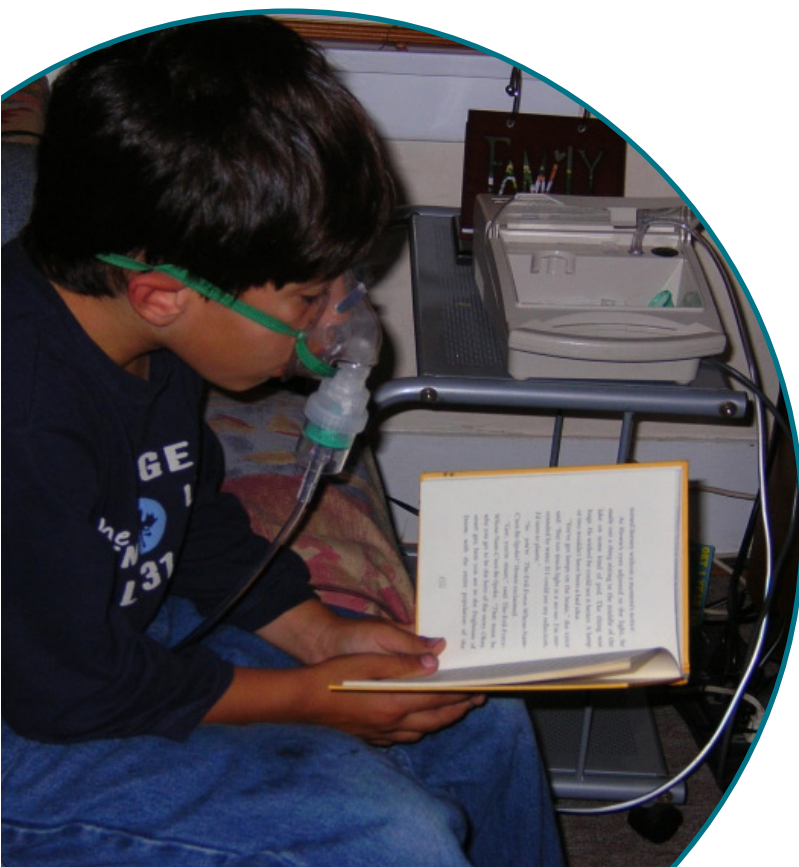
Despite the ever-growing evidence about the nature of these widespread health, environmental and workplace issues, they have not been widely incorporated into policy decisions about expanding the size of ports and the freight transportation system in the United States. Decisions by global retail chains such as Walmart are able to dictate the scope and scale of how and where goods are produced and moved. These retailers work closely with and influence powerful shipping, logistics, and other freight companies who in turn influence developers and government decision-

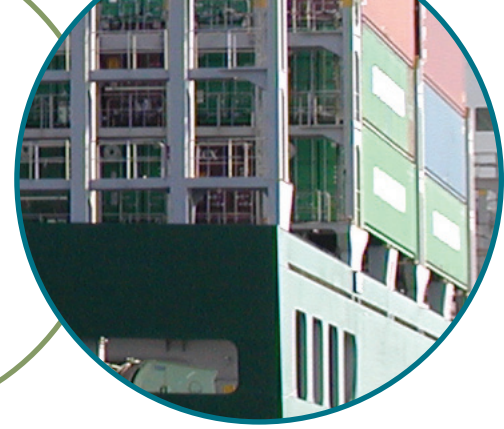
makers about expansion of ports and infrastructure. In addition, fragmented regulatory authorities are unable to effectively address, for example, ship emissions (regulated at the international level) and locomotive emissions (regulated at the federal level). Interstate commerce laws prevent local and state governments from exercising authority over freight transportation, although numerous legal challenges are underway. Without a national industrial policy and/or a global regulatory system to ensure that health, community, environmental and labor considerations become incorporated into such decisions, economic and political forces aligned with freight transport, logistics and large retail industries are able to frame the nature of the debates about benefits and impacts. As a result, the dominant narrative promoted by these industries and most government agencies situates the global trade and freight transportation system as an economic driver for new jobs and cheap goods, while ignoring or minimizing the downside of the shift of jobs from production to distribution and the negative external costs of the system.

In this economic model, large scale infrastructure and public works projects are touted as a central economic development strategy to facilitate economic recovery. This includes public funding for freight and cargo-related highway improvements and bridge construction, and public policies to facilitate private investment, such as zoning for port expansion and converting agricultural use to warehouse use. Such an approach often pits jobs and economic development against health, environment, community and labor concerns.

In the face of these dominant growth and development agendas, health and environmental advocates, labor unions and worker organizations, and environmental justice and community groups have sought to shift the nature of the debates. Impressively, several groups have been able to organize successful campaigns to push for - and win - policies that promote health, worker and environmental protections.

Across the country in places like Southwest Detroit, Michigan, the Harbor area of Los Angeles, California, West Oakland, California, Gardner, Kansas, Newark, New Jersey and Gulfport, Mississippi, communities and workers advocate for policies that encourage clean air, good jobs, livable neighborhoods and a role in decisions that affect their health and long-term well-being. These groups, representing multiple constituencies, have also begun to explore the need for national and international networks to address this non-transparent, massive global system. See next pages.





## Select Groups Engaged in Ports and Freight Transportation\*

### Los Angeles/Long Beach

#### *Community-based Organizations*

Coalition for a Safe Environment  
Communities for a Better Environment  
East Yard Communities for Environmental Justice  
Communities for Clean Ports/End Oil  
Long Beach Alliance for Children with Asthma  
Long Beach Interfaith Community Organization

#### *Local and Regional Coalitions*

Coalition for Clean and Safe Ports  
Port Work Group, Green LA Coalition  
The Trade, Health and Environment Impact Project (THE Impact Project)  
Coalition for Environmental Health and Justice

#### *Environmental Groups*

Coalition for Clean Air  
Natural Resources Defense Council

#### *Homeowner Associations*

Peninsula-San Pedro Homeowners  
West Long Beach Neighborhood Association

#### *Research and Academic Institutions*

Southern California Environmental Health Sciences Center, based at University of Southern California  
Southern California Particle Center, based at UCLA  
Urban and Environmental Policy Institute, Occidental College

### The Inland Valley: San Bernardino and Riverside

Center for Community Action and Environmental Justice  
Clergy and Laity United for Economic Justice  
Inland Valley Action Network

Partnership for Working Families  
Warehouse Workers United/Change to Win

### Oakland/East Bay

Ditching Dirty Diesel Collaborative  
East Bay Alliance for a Sustainable Economy  
Pacific Institute  
Regional Asthma Management and Prevention  
West Oakland Environmental Indicators Project

### Central Valley, CA

Central Valley Air Quality Coalition  
Natural Resources Defense Council  
Center for Race, Poverty & the Environment  
Greenaction  
Fresno Metro Ministry

### San Diego

Environmental Health Coalition

### California Statewide Coalitions

California Diesel Rule Work Group  
Statewide Environmental Justice, Health and Freight Movement Policy Project

### Pacific Northwest: Seattle and Tacoma

Puget Sound SAGE  
Washington CAN  
Washington Coalition for Clean and Safe Ports  
University of Washington, School of Public Health

### The Gulf Coast

Air Alliance Houston  
Clean Economy Coalition  
Community In-Power and Development Association  
Gulfport Community Land Trust  
Mississippi Center for Justice  
Sealy Center for Environmental Health Sciences at the University of Texas Medical Branch





Southwest Network for Economic  
and Environmental Justice  
STEPS Coalition / Partners for Safe  
& Healthy Port Campaign  
Texas Environmental Justice Advocacy Services  
Turkey Creek Community Initiatives

**Detroit**

Detroit Community-Academic Urban  
Research Center (University of Michigan,  
Schools of Public Health, Nursing and  
Social Work and Detroit Department  
of Health and Wellness Promotion)  
Detroit Hispanic Development Corporation  
Detroiters Working for Environmental Justice  
East Michigan Environmental Action Council  
Southwest Detroit Community Benefits Coalition

**Chicago**

Center for Urban Economic Development,  
University of Illinois at Chicago  
Citizen Action, Illinois  
Greater Englewood Community  
and Family Task Force  
Illinois Campaign to Clean up Diesel Pollution  
Respiratory Health Association  
of Metropolitan Chicago  
Warehouse Workers for Justice  
Warehouse Workers United/Change to Win  
Will County Residents for Responsible  
Intermodal Development

**Kansas City**

Hillside Environmental Loss Prevention  
Johnson County Intermodal Coalition  
Natural Resources Defense Council  
Sierra Club

**New York/New Jersey**

Center for the Urban Environment,  
John S. Watson Institute for Public Policy,

Thomas Edison State College  
Coalition for Healthy Ports  
Environmental and Occupational  
Health Sciences Institute, University of  
Medicine and Dentistry of New Jersey  
Ironbound Community Corporation  
Garden State Alliance for a New Economy  
New Jersey Environmental Federation  
New Jersey Environmental Justice Alliance

**Baltimore**

Environmental Justice Partnership  
NIEHS Center in Urban Environmental Health,  
Johns Hopkins Bloomberg  
School of Public Health

**Philadelphia**

Clean Air Council

**Hampton Roads and Southwest Virginia**

Citizens for the Preservation of our Country

**Savannah, Georgia**

Citizens for Environmental  
Justice/Harambee House  
First African Baptist Church  
Southern Environmental Law Center

**Charleston, South Carolina**

Department of Epidemiology and Biostatistics,  
University of South Carolina  
The Lowcountry Alliance for Model Communities  
South Carolina Coastal Conservation League  
New Rosemont Homeowners Association  
Southern Environmental Law Center

**Jacksonville, Florida**

Mayport Village Civic Association

\* These are examples of groups identified  
in regions profiled in this study

From the description of the issues and organizing in the regions, we find that while communities share similar negative impacts of freight transportation, the local, regional and state political and economic context in which they operate has direct bearing on the strategies for change. Different strategies may be more effective and appropriate, depending on the organizing capacity and political conditions in each region. For example, in Los Angeles/Long Beach (home to the country's largest ports), where there has been a high level of organizing, and where successful

coalitions and campaigns have developed, community organizing, advocacy, legal strategies, public health and economic research and policy initiatives have been connected. Advocates have found important allies and partnerships with academic institutions. In regions with a less developed set of players and coordinated strategies, a key focus includes building capacity as well as identifying opportunities for establishing coalition and networks. Nevertheless, the most visible strategies and approaches all reflect important work in three related areas:

***Education and Direct Organizing.*** Increasing awareness of the negative impacts freight transport has on community, worker, and environmental health, particularly in directly impacted communities, serves as the necessary baseline for informing the public as well as engaging the range of necessary stakeholders in freight transport planning and decision-making.

***Peer to Peer Learning and Training.*** These strategies have helped to educate, mobilize and connect communities across the country. Building coalitions and developing long-term trust among labor, community, environmental, environmental justice, and health interests is a necessary but challenging effort. These strategies have helped address the tensions that emerge within and between organizations.

***Coalitions and Networks.*** Building the relationships between a wide range of stakeholders and building capacity for the groups to take action together requires organizational structures that are able to bridge interests, bring together resources, and facilitate shared agenda setting and action. Coalition organizations have been key engines for progressive policy change in port operations and freight transportation. These coalitions along with national networks, help community-based organizations gain access to and support from important technical, legal, and scientific research resources to support organizing, advocacy, and policy campaigns.





These strategies have resulted in important policy campaigns that have sought - and won - new rules for freight transportation that address concerns about health, labor, community and the environment. For example, groups have pushed local, state and federal agencies to adopt and implement stricter rules to address diesel pollution, including anti-idling laws for trucks and locomotives, federal diesel measures requiring the retrofit of public fleets and installation of pollution controls on federally funded transportation projects. Coalitions of labor, community, health and environmental justice organizations have engaged in clean trucks program campaigns modeled after the

path-breaking program adopted in Los Angeles that requires truck retrofits along with important employee concessions to ensure that the negative impacts of truck transport are addressed by industry rather than the public. Through legal and advocacy campaigns, groups have won community benefits from project-specific legal settlements and community benefits agreements such as the electrification of the China Shipping terminal in Los Angeles and the establishment of a \$50 million mitigation fund from the expansion of the TraPac terminal in Los Angeles. Efforts are also underway to secure community benefits from the range of freight transportation projects in Detroit.



# Moving Forward Together



The wide variation of groups and strategies points to the challenges of building capacity, increasing knowledge and awareness of issues, and building political power sufficient to influence policy and decision-making. These strategies suggest several areas for change:

## ● Ensure Public Notice and Participation Policies

Across the regions, public policies related to public notification and participation have varied widely. In places like Savannah, Charleston, and Miami, port authorities do not make use of the internet to make their agendas available online or post meeting notices and minutes. Without easily accessible information, communities may be unaware of proposed projects and the impact on their health and communities. Some ports, such as New York and Los Angeles (through its Port Community Advisory Committee), have institutionalized a formal community advisory committee, comprised of residents, businesses and other stakeholders, that meets regularly and provides input to the governing body of the Port.

## ● Connect local organizing to regional organizing

As a system of regional links, from ports, rail yards, highway corridors, distribution centers, and other cargo facilities and roadways, local organizing requires both a community, regional (and sometimes national) perspective and strategy for action. Organizing, research and funding at the community, regional and national level can more effectively challenge the dominant economic and political players and their agenda.



“Moving Forward Together” was held in October 2010 in Los Angeles and drew more than 600 participants from port, warehouse and rail communities all over the United States and six other countries. The conference focused on adverse health, community and labor impacts of global trade and freight transportation, and developed a platform for action and solutions. Key organizers were the USC/UCLA Southern CA Environmental Health Sciences Center and THE Impact Project, a community-academic collaborative.



- **Strengthen, expand and link national and international networks**

Freight transportation relies on distribution and consumption that is national and global in scale. Organizing and influencing this system requires not only an integrated community and regional approach, but also a parallel national network of public health, social justice, and labor advocates as well as international linkages to share information and provide connections around specific campaigns and larger change agendas.

- **Strengthen and expand research on health and environmental impacts and encourage community-academic partnerships**

Scientific research in the area of environmental health has drawn important links between freight transportation and negative health outcomes. Expanding this body of research and communicating these findings to decision-makers will be critical for advancing health protective policies as freight transportation systems expand. More environmental health science research is needed on exposures and health impacts in communities surrounding freight transportation facilities, such as in close proximity to ports, rail yards, truck corridors, and distribution centers. This includes measuring levels of air pollutants, noise, and night-time lighting levels. In addition, community-university partnerships serve as important vehicles to integrate public health research with advocacy, organizing, and policy campaigns to reduce air and noise pollution and prevent impacts. When scientific and policy research expertise is combined with community knowledge and activism, it can influence and reshape policy and decision-making.



- **Forge and promote public policies that integrate community, environment and worker health protective measures into highway and freight transportation planning and project approval**

Winning worker benefits without ensuring community health is not sufficient for long-term, sustained health of a community and workforce, nor is the reverse true. Comprehensive methods of environmental assessment need to be required of all port and freight transportation projects. Environmental Impact Reviews/Statements need to be based on comprehensive assessments of impacts. Assessment tools such as Health Impact Assessments are promising approaches for assessing comprehensive environmental and health impacts that include a more holistic investigation of environmental, health, labor and broader community impacts.

- **Increase local government capacity to regulate and plan**

Local governments are responsible for land use planning and decisions on how land is used, such as whether a city builds a new park or a housing development. City governments can also weigh in on whether they support or oppose new freight transportation facilities, such as a rail yard or a highway expansion. Cities and counties across the country, however, face increasing economic and budgetary challenges. The result has been layoffs, furloughs, and elimination of environmental and regulatory enforcement programs that leave local governments with little capacity and limited political will to push back against powerful port expansion and freight transportation development agendas. New partnerships with the nonprofit and philanthropic sector, when deeply rooted in the public sector, can provide local authorities more tools and resources to address the negative health and environmental impacts of freight transportation.

- **Broaden and strengthen the movement**

In order to challenge the way goods are moved throughout the country, organizers and advocates must be able to connect and deepen the relationships between a wide range of constituent groups in order to build a broad-based movement that links health, labor, and environmental aspects of freight transportation. As a system, freight transportation represents a “maypole” around which many other issues can be connected: public health, environmental justice, community and economic development, regional planning, climate justice, land use, housing and transportation, consumer rights, and food justice, among others.

**Incorporating community, environmental, health, and labor issues into global trade and freight transportation discussions is at a critical juncture. It requires greater awareness about the importance of the agenda for change that extends at each point along the system’s pathways.**

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For a detailed list of references, please refer to the full document online (see back cover for URLs of web sites).

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[www.usc.edu/medicine/scehsc](http://www.usc.edu/medicine/scehsc)

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