

Importing Harm: U.S. Ports' Impacts on Health and Communities

THE Impact Project Policy Brief Series

January 2012

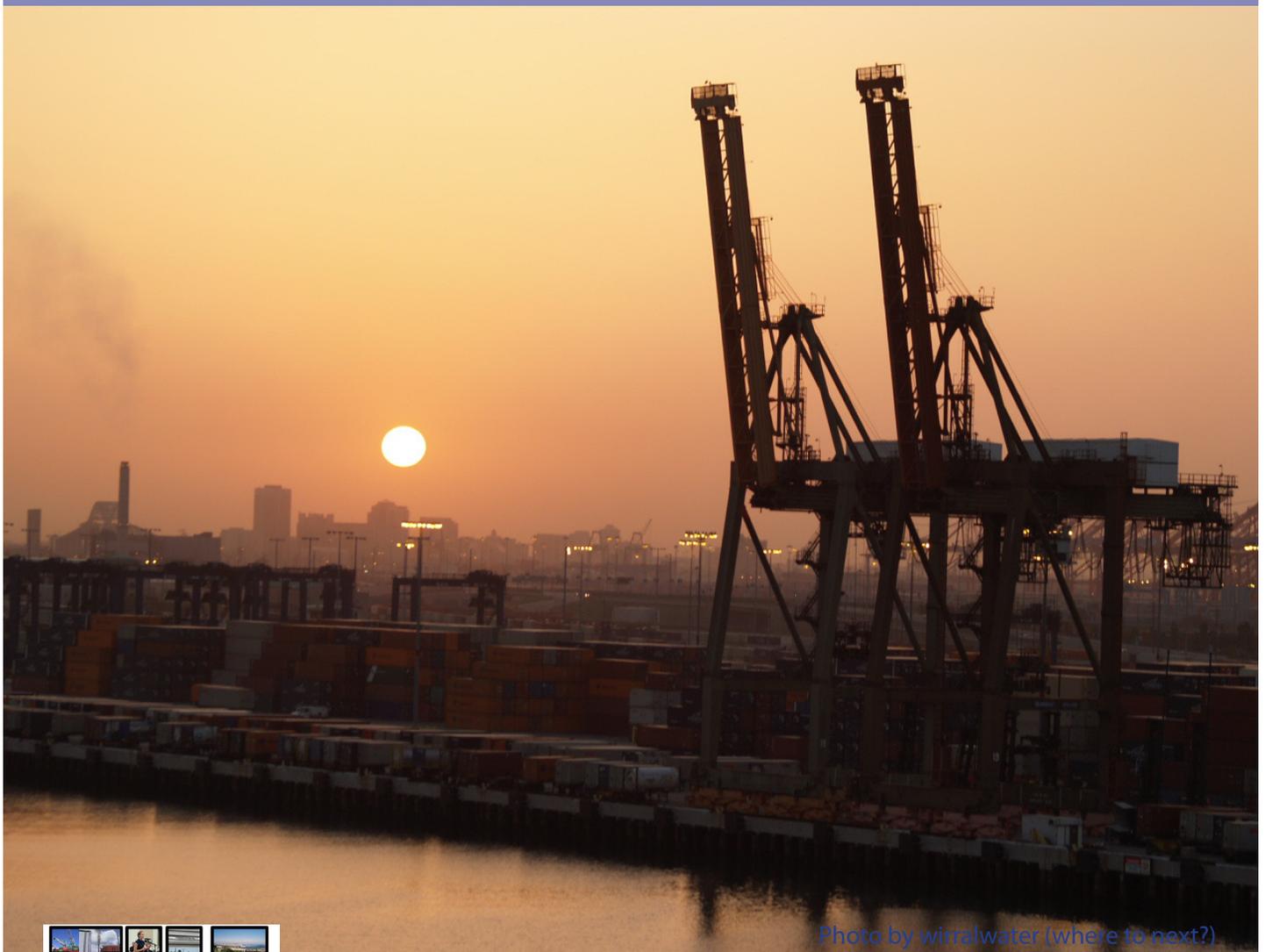


Photo by wirralwater (where to next?)



Trade, Health and Environment Impact Project
www.theimpactproject.org

Introduction

Ports are fascinating industrial operations. A visitor can see a colorful maze of majestic ships and cranes loading and unloading cargo. Ocean cruise ships can be seen passing by with hundreds of passengers waving at their families, friends, and the public. Thousands of trucks and long lines of train cars are all moving cargo in and out of the ports. Huge ships the size of three football fields arrive from Asia and other far-away places, bearing thousands of 20 to 40 foot containers, each filled with children's toys, consumer electronics, furniture or other goods – all made in other countries and all ready to be delivered to America's retailers. Other ships carry millions of gallons of crude oil, liquefied natural gas, imported cars, and agricultural products.

But Ports are much less exciting to live near than to casually observe. For communities in close proximity to ports, there is a daily non-stop parade of polluting ships, trucks, and trains operating and passing near their neighborhoods. People living near the San Pedro Bay Ports of Los Angeles and Long Beach, and along freight transportation corridors serving the ports, have witnessed a major expansion in trade and goods movement over the past 40 years. Port drayage trucks haul about 80% of the 50 million containers that move through American ports annually.¹ U.S. West Coast ports have seen a nearly 29 times increase in international trade since 1970.² The Ports of Los Angeles and Long Beach container volume is projected to increase from 11.2 million in 2009 to 36 million annually by 2020.³

Growth at the ports has been celebrated by many as an economic engine for the region. The Ports of Los Angeles and Long Beach directly employ approximately 1,498 workers and are said to support 1.4 million jobs throughout California.⁴ However, this growth has also resulted in significant negative environmental, public health, and economic impacts. The ports have become the leading source of air pollution in greater Los Angeles and throughout the region, to the extent that communities located near the ports are sometimes referred to as "Diesel Death Zones."⁵

In the last decade environmental justice organizations have formed near the ports, goods movement freight transportation corridors, and gigantic distribution warehouses, to draw attention to the toll that port-related pollution is taking on residents and their communities. These groups have organized local communities to measure pollution, to demand that the ports not expand unless they can protect public health in the process, and to take legal action to demand stronger environmental standards and fuller environmental and health assessments of Port projects.

This pressure has led the San Pedro Bay Ports to acknowledge that there are health and environmental impacts from their operations and to take some steps to reduce toxic emissions. But with predictions of continued massive expansion in goods movement through the ports, much more needs to be done to prioritize health and environmental protection over trade expansion.

Ports of Los Angeles and Long Beach

The Ports of Los Angeles and Long Beach are huge transportation and logistics complexes. They are designed to unload and load large, ocean-going cargo ships. Much of modern commerce relies upon standardized shipping containers which are moved by the thousands in ships across oceans, unloaded by enormous cranes, and placed onto trucks and trains as the first stage of their movement to final destinations. The Ports of Los Angeles and Long Beach specialize in container trade with Asia. The Port of Los Angeles is the # 1 busiest container port in the United States. Long Beach is the second busiest. Together, the two adjacent sites are the 6th busiest container port complex in the world.⁶

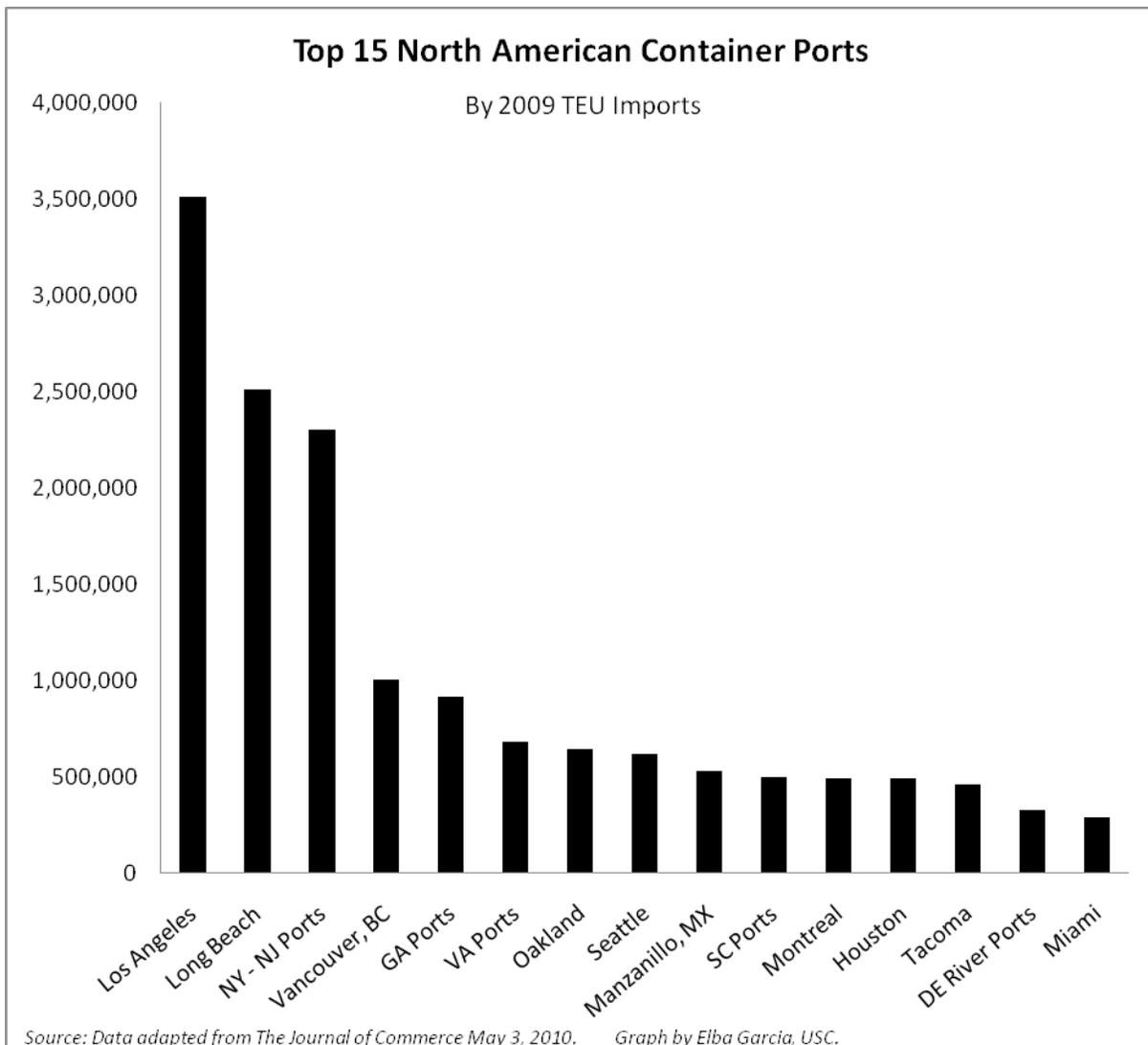
Statistics for the Ports of Los Angeles and Long Beach^{7,8}

Port statistics	Los Angeles	Long Beach
<i>National rank (containers handled)</i>	1	2
<i>Share of containers moving through U.S. handled</i>	20%	15%
<i>Containers handles in 2009</i>	6.7 million TEUs ⁹	5.1 million TEUs
<i>Size</i>	4300 acres 270 berths	3200 acres 80 berths
<i>Top five imports</i>	Furniture, Women's and Infant Apparel, Footwear, Toys, Automobile Parts	Crude oil, Electronics, Plastics, Furniture, Clothing
<i>Top five exports</i>	Paper, Paperboard and Wastepaper, Scrap Metal, Grains and Flour, Products, Fabrics and Raw Cotton, Pet and Animal Feed	Petroleum Coke, Refined petroleum, Chemicals, Waste paper, Foods
<i>Top trading partners</i>	East Asia = 92%; top five countries are China, Japan, South Korea, Taiwan, and Thailand	East Asia = more than 90%; top five countries are China, Japan, South Korea, Taiwan, and Mexico

Top 5 Retail Importers in 2009 in the United States via Ocean Containers

Retailer	TEUs 2009	Comment
Wal-Mart	684,000	World's largest retailer, 8416 stores; \$305 billion in U.S. net sales
Target	441,800	1,740 stores in 49 states; 33 distribution centers
Home Depot	278,900	2,200 stores around world
Sears Holding	216,300	Sears & Kmart; 4000 stores in the U.S. and Canada; 39 distribution centers
Lowe's	195,000	1,700 stores in the U.S. and Canada

Source: Adapted from *The Journal of Commerce* May 31, 2010. Table by Elba Garcia, USC.



Community Impacts

Public Health

Ports have significant health, environmental, and quality of life impacts on communities located close to the port facilities. Pollution from ships burning dirty bunker fuel and trucks, trains and port equipment burning diesel significantly impacts local residents and hurts air quality throughout the region.

Because so many ships and vehicles operate there, the Ports of Los Angeles and Long Beach are the largest single source of air pollution in Southern California. In 2009, the Ports accounted for 10% of particulate emissions, 7% of nitrogen oxides emissions, and 42% of sulfur dioxide emissions in the South Coast Air Basin.^{10 11} These pollutants contribute to asthma, reduced lung development in children, cardiovascular disease, lung cancer, and premature death.



Port Operations Include Activities On and Off Port Properties

The California Air Resources Board estimates that there are 3,700 premature deaths per year directly attributed to the ports and goods movement activities statewide and approximately 120 deaths per year associated with diesel particulate matter emissions from activities at the Port of Los Angeles and Long Beach.¹² The economic cost associated with these deaths as well as for medical care for illnesses and missed school and work days is an estimated \$30 billion annually.¹³

Containers from overseas are also potential vectors for the introduction of invasive species or new strains of diseases. Container storage yards are havens for insects and rodents, which could potentially spread illness in surrounding neighborhoods. Fumigation of certain types of agricultural commodities carries its own risks of toxic exposure. From 1997-2008 California Cotton Company in Wilmington fumigated shipping containers with the fungicide methyl bromide outdoors less than 50 feet from where people lived and children played.¹⁴

2005 PM and Ozone Health Effects Associated with Ports and Goods Movement in California¹⁵

Health Outcome	Cases per Year	Uncertainty Range (Cases per Year)	Valuation (millions)	Uncertainty Range (millions)
Premature Death	2,400	720 to 4,100	\$19,000	\$5,900 to \$36,000
Hospital Admissions (respiratory causes)	2,000	1,200 to 2,800	\$67	\$40 to \$94
Hospital Admissions (cardiovascular causes)	830	530 to 1,300	\$34	\$22 to \$53
Hospital Admissions (cardiovascular causes)	62,000	24,000 to 99,000	\$1.1	\$0.44 to \$1.8
Acute Bronchitis	5,100	-1,200 to 11,000	\$2.2	-\$0.52 to \$4.7
Work Loss Days	360,000	310,000 to 420,000	\$65	\$55 to \$75
Minor Restricted Activity Days	3,900,000	2,200,000 to 5,800,000	\$230	\$130 to \$350
School Absence Days	1,100,000	460,000 to 1,800,000	\$100	\$41 to \$160



This is not the future we want for our children and elders.

Noise and Light Pollution

As large industrial facilities, the ports, truck freight transportation corridors, train routes, and rail yards are major sources of non-stop noise. In southern California, the ports, intermodal facilities and rail yards now operate 24 hours per day, which means that residential communities never have a quiet day, night or weekend. The human body does not get used to loud or continuous noise; the body's biological systems continue to react but at lower thresholds.¹⁶ Night-time operations at the port and rail yard facilities also emit light pollution. Many port and goods movement facilities use large banks of lights that shine on adjacent residential properties, passing through windows and curtains.¹⁷¹⁸

Public Safety

Port terminals, freight transportation corridors, intermodal facilities, transloading facilities, container inspection facilities, container storage yards, warehouses, distributions centers, marine fuel, oil and gas storage terminals and toxic and hazardous cargo pose significant public safety hazard risks from on-port property and off-port property accidents. If there is a major incident, public service providers such as police, fire department, paramedics, and utilities will be diverted to the ports. The risks of these negative impacts are not included in traditional cost-benefit economic assessments of the goods movement industry. Some examples of increased public hazard risk factors include:

- › Ship breakdowns, loss of power, collisions
- › Train wrecks, derailments, toxic chemical spills
- › Truck accidents, breakdowns, spills, fires
- › Petroleum fuel storage tank, oil, and gas pipeline fires, explosions, or spills
- › Terrorist attacks
- › Increased damage from natural disasters

Land Use

The ports have also purchased hundreds of acres of land adjacent to their facilities, causing direct and indirect displacement of residents, community resources, and businesses. These land holdings deprive residents in environmental justice communities of access to beaches, coastal tidelands, wetlands, and aesthetic bay vistas while also locking away land that could be used for future green space parks, sport facilities, new public schools, public libraries, community centers, residential areas, and retail and commercial centers. City planning and zoning has failed to require adequate public health and safety buffers to protect residents, children in schools, and senior care facilities from bordering ports, supporting industries and transportation corridors.

Aesthetics and Blight

Many harbor residents purchased their homes because of the beauty of the coastline, harbor bay, and as an investment. However, many of these homeowners now no longer enjoy a beautiful vista of the sea. What they see are hundreds of ship smoke stacks billowing smoke, tens of thousands of stacked containers, new land masses being built in the ocean to create new port terminals, and blight throughout the area. Aesthetic impacts and impacts on property values are negative economic impacts that are not included in standard cost-benefit economic assessments.

Policy Recommendations

Community involvement and advocacy in the Harbor communities near the Ports of Los Angeles and Long Beach have led to increased awareness of the negative pollution, health impacts, and socio-economic impacts from ports and goods movement. This has led to the establishment of new policies, standards, and programs. The Ports of Los Angeles and Long Beach have adopted the San Pedro Bay Ports Clean Air Action Plan, Clean Truck Program, Clean Port Air Standards, Water Resources Action Plan, Wilmington and San Pedro Waterfront Development Projects, Clean Ship Fuel Incentive Program and Ship Speed Reduction Program.

While these programs and pollution reductions are a promising start, they still leave emissions at significant levels that endanger public health. And with shipping trends expected to pick up again, there is a need for stronger, binding actions and regulations addressing the range of health and community impacts. Policy makers should regulate ports and goods movement to ensure that all sources of pollution are being reduced to safe levels. All negative impacts must be mitigated, and the public must be involved in overseeing the ports. The Impact Project is committed to zero emissions technologies and regulations across all stages of goods movement. Policy recommendations to reduce rather than eliminate emissions should be considered important interim steps towards achieving zero emissions.

THE Impact Project has identified the following policy recommendations to further advance environmental justice and improve the health of residents living near port operations anywhere in the country.

1. Port management must include the public and reflect accurate health, environmental and socio-economic impact information:

- › Port Boards of Commissioners and Port Joint Power Authorities membership should include representatives from: residential communities, public health and environmental advocates, and/or green technology experts labor to ensure that impacted persons and environmental experts have a formal role in port management.
- › Ports should establish a Community Advisory Committee to allow for broader public input, following the example of the Port of Los Angeles.¹⁹
- › Planned expansions or major new projects environmental assessments at ports should include Environmental Impact Reports and/or Environmental Impact Statements (EIR/ EIS), Health Risk Assessments (HRA), and Health Impact Assessments (HIA).
- › Ports should mitigate all “significant impacts” identified by EIR/EISs and HIAs to less than significant before proceeding with a project and should not rely upon ‘Overriding Considerations’ to approve a project.

2. Ports should establish comprehensive clean air action and environmental sustainability programs, including:

- › Adopt Clean Air Action Plans²⁰ that include Clean Port Air Standards, Clean Ship Fuel Incentive Programs and Ship Speed Reduction Programs,²¹ and Clean Truck Programs with requirement that port truck drivers must be employees of truck companies.²²
- › Require ships to plug in and use electric power when at dock rather than running engines.²³
- › Reduce the number of cargo ‘moves’ and trans-shipment (and resulting pollution) by increasing on-dock rail.²⁴
- › In designing and implementing clean air plans, address pollution along the entire logistics chain, from ships’ arrival at port, to docking and offloading, to shipment and transshipment inland.
- › Adopt container fees and bulk commodity fees to help pay for environmental and community programs.²⁵
- › Adopt a Technology Advancement Program to support new emerging alternative and green technologies.²⁶
- › Adopt zero pollution technologies when these are fully developed.²⁷
- › Adopt Green House Gas Reduction Plans.²⁸
- › Adopt Water Resources Action Plans²⁹ and Wetlands and Aquatic Life Restoration Plans³⁰ (and not expand into environmentally sensitive coastal areas).
- › Conduct real-time air quality monitoring on site and in adjacent communities.³¹

3. Ports must reduce their negative health and community impacts:

- › Create buffer zones between port and goods movement operations and adjacent communities. The California Air Resources Board recommends buffer zones between rail facilities and sensitive receptors (homes, schools), and taking steps to avoid locating new residences and sensitive receptors downwind of ports.³² Community organizations active in THE Impact Project have often called for 1500 foot buffer zones. In addition, these rules should apply in both directions: no location of new industrial facilities near sensitive receptors, as well as no new sensitive receptors near industrial facilities.
- › Establish a Public Health Care Fund sufficient to mitigate current and future impacts.
- › While reducing emissions from port operations and transportation should be the priority, provide air filters to all impacted sensitive receptors such as schools, child care centers, and residences.³³
- › Limit noise and light pollution. Require sound barriers and lower lights and light deflectors to limit noise and light pollution to nearby residential areas. Provide better insulation to nearby sensitive receptors.³⁴
- › Ensure that existing health and environmental impacts are satisfactorily addressed before expanding port property operations.
- › For all port tenant off-port property businesses, increase enforcement so that facilities comply with applicable city, county, state, and federal laws, rules, regulations, requirements and guidelines.

Conclusion

While products shipped in and out of the ports reach destinations across the country and throughout the world, the health and environmental impacts of trade through the ports are concentrated in the primarily low-income communities near ports and along freight transportation routes inland. With predictions of continued massive expansions in goods movement through the ports, much more needs to be done to prioritize human health, environmental protection over trade expansion and assure that all appropriate health and socio-economic assessments are conducted.

Acknowledgements

Written by Jesse N. Marquez, Coalition For A Safe Environment and Mark Vallianatos, Urban & Environmental Policy Institute (UEPI) at Occidental College, with contributions from other Impact Project partners. Photo credits: Flickr user wirralwater and Coalition For A Safe Environment. This brief is part of a series of policy papers on goods movement produced by THE Impact Project, <http://www.theimpactproject.org>. Funded by The Kresge Foundation and The California Endowment.

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