

URBAN SOCIAL VULNERABILITY TO DISASTER IN GREATER LOS ANGELES

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Summary

A survey of a sample of emergency managers in greater Los Angeles and the non-governmental organizations that serve low income, immigrant, and other populations revealed that, while municipal governments have financial and technical means for identifying and meeting the needs of highly vulnerable social groups, they lack information about these groups and their trust. On the other hand, while the non-governmental organizations have detailed information about these groups of people and also trust relationships with them, they lack financial and technical means for meeting their needs in disasters.

The obvious, rational solution is a partnership between municipal and non-governmental professionals. This solution is not as easy as it might seem. The history of race and class relations in southern California as well as the stresses caused by

globalization are challenges to full cooperation and a reduction in urban social vulnerability in greater Los Angeles.

1. Introduction

Speeding along one of Los Angeles's (LA) many freeways, you don't notice much. Often elevated, sometimes sunken, always crowded, and dangerous, the traveler catches only glimpses: apartment houses, mini-malls, office buildings merge into a blur. An oil refinery complex may rush past; a church steeple or the crescent atop one of LA's 58 mosques. Storm channels sometimes intersect the roadway—a reminder that this sprawling urban region is located on planet Earth. If air quality allows, the rim of mountains to the east is sometimes visible. Exiting or entering the freeway you may encounter someone selling bags of oranges or a bunch of roses. Although you are usually too busy driving to think much about the seller or the goods, nevertheless this brief moment evokes both the past and present of the urban region. Horticulture has been almost driven from the coastal plains and internal valleys that people struggled earlier in this century to irrigate. Today low income minority people populate much of Los Angeles county and portions of Ventura, Riverside, San Bernadino, and Orange counties. At 80 miles an hour what you see is the way that the history and present global relations of this city have reshaped the social and spatial distribution of risk. The study reported here, part of a six city investigation of urban social vulnerability sponsored by the United Nations University, seeks, in part, to make visible the formerly invisible. We ask, "Who are those people most at risk?" and "What are municipalities trying to do to reduce the vulnerability of such groups?"

2. Greater Los Angeles: Background

2.1. Geographic and Economic Background

The greater Los Angeles region has grown enormously in the past 60-70 years (most dramatically adding two million people during the decade of the 1980s alone). It presently includes 15 million inhabitants living in an area of 34 000 square miles (87,040 square km) spread over five counties in southern California. The region includes 160 municipal governments and accounts for roughly one-half of California's entire population.

With a gross output of \$336 billion (1989), the economy of greater LA was bigger than that of China or India. In the five-county region within a radius of 60 miles (96 km) of the City of Los Angeles are 26 full-blown "edge cities." There, on the "edge" of the mega-city, some 1.5 million jobs were created in the 1980s. This is where the white working class migrated during the 1970s and early 1980s, leaving the less mobile black working class and newly arrived Hispanic and Asian populations behind in the city and county of Los Angeles. More recently in the 1990s many middle class African Americans, Hispanics and Asians have joined this centrifugal movement to the edges of the urban region, away from inner city areas perceived as congested, poorly served by the school system and at risk from crime.

The people of greater Los Angeles are highly stratified by income and by race. The

African American population has grown steadily since the 1940s, when defense industry jobs began to attract them from the rural south. More recent immigrants include people from many parts of Asia and the Pacific and Spanish speakers from throughout the hemisphere, especially Mexico. Los Angeles is second only to Mexico City in the number of Mexicans in the population. The racial/ethnic composition of the City of Los Angeles in 1990 was: White, 36%, Hispanic, 40%, Black, 14%, Asia and the Pacific, 10%. A decade earlier the pattern was considerably different: White, 61%, Hispanic, 28%, Black, 17%, Asia and the Pacific, 7%.

The growth of "edge cities" in the 1980s and global economic restructuring in the 1990s both combined to reduce employment opportunities among minority and immigrant populations marooned at the center of the urban region. In addition, conservative politics at the state and national level during the 1980s both considerably reduced federal aid to the city and capped the ability of constituent cities and counties to raise their own tax revenue. Urban social services were scaled back. For example, County U.S.C. Medical Center—the busiest in California and the only health resource for many poor families—was down-sized. Poverty and homelessness rose in the 1980s. The combination of unemployment, poor educational opportunities, and deteriorating city and county services produced a pressure-cooker that erupted in urban rioting in 1992 associated with the trial of police officers accused of abusing Rodney King. What are the chances of building social support for what the International Decade for Natural Disaster Reduction calls "a culture of prevention" in an urban region that has become synonymous—Angotti's words—with the phenomenon of "private opulence and public squalor"?

2.2. Political and Administrative Background

Such background conditions place constraints on the ability of city and county officials to mobilize public support for disaster preparedness and mitigation. Although the City of Los Angeles has trained more than 20 000 people in basic emergency response by Community Emergency Response Teams (CERTs), very few of these are low income, minority or immigrant residents who could share such skills with their neighbors in impoverished areas like South Central LA and Hispanic areas of East LA and the San Fernando Valley.

Community-based action is further hampered by social anomie, possessive individualism, the complexity of the relations among ethnic and economic groups, and inter-ethnic economic competition among the poor. This is overcome only when very narrow interests seem threatened (e.g. the NIMBY phenomenon, or "not in my backyard").

Apathy and cynicism on the part of the poor were exacerbated by the fact that until 1999, when a reform of the City Charter was finally approved, the City of Los Angeles had never undergone the kind of democratic reform that the large cities of the east accomplished during the last few decades. Before Charter Reform, nearly 5 million people were represented by only 15 council persons, who controlled enormous precincts. By contrast, New York City enlarged its council, and other cities created intermediate levels of government to encourage citizen participation.

Among the middle class a similar dissatisfaction with services provided by the City of Los Angeles, perhaps even skepticism about the governability of the city, led to citizen-based movements in the San Fernando Valley and in San Pedro to secede and strike out on their own.

"Top down" mitigation is limited by the extreme fragmentation, decentralization, and complexity of governmental structure and by the overwhelming influence of the real estate and financial sectors that have promoted little-regulated growth for nearly a century. In the 1990s the State of California required all cities and counties to join in coordinated planning and mutual aid relations with neighboring jurisdictions. This has helped facilitate emergency response, but has done little to promote mitigation that would address root causes of disaster vulnerability. In addition, economic recession in the late 1980s and early 1990s further eroded the tax base of local government agencies, affecting their ability to plan, train, monitor, regulate, inspect, and deliver services. Speculative investment caused the actual bankruptcy of Orange County in 1995, a blow to local government that is still being felt in the under-staffing of emergency operations and planning offices.

2.3. Hazard Background

The people of the greater Los Angeles region are at risk, to one degree or another, from a wide range of geophysical, climatic, biological, technological, and social hazards. A well-known geophysical hazard in this region is earthquake — both large events along the main tectonic plate boundaries and the smaller but very destructive "blind thrust" faults that were responsible for the Coalinga (1983) and Northridge (1994) earthquakes. In addition there are the hazards of tsunamis, sinking coasts, a rising sea level, and frequent landslides.

On the side of climate-related hazards, the region suffers from bouts of hot desert winds (often exacerbating wildfire), drought, gale force ocean wind and associated waves (especially in El Nino years), frequent flooding, and heat waves that can endanger the elderly and infirm. One of the most ambitious urban flood control systems in the world has channelized all major natural streams, including the Los Angeles and San Gabriel rivers, yet sometimes fails to contain storm run-off.

Biological hazards, quite unevenly distributed among socio-economic groups, include HIV infection, drug addition and overdose, childhood cancer (likely associated with industrial pollution), marine pollution, heat exhaustion, and water-borne diseases. As suburbanization pushes ever farther into the urban-wildland interface, viruses existing in rodent reservoirs, such as the Hanta virus, will inevitably affect more humans.

Technological hazards include, famously, the region's air pollution — again quite unevenly distributed by socio-economic group since the coast and higher ridge-dwelling, higher income groups breathe better air. There are considerable hazards as well from industrial fires and explosions, a nuclear accident at San Onofre that would affect the southern coastal part of the urban region, hazardous waste sites, and the mechanical failure of water reservoirs and flood control structures (as happened in 1927 when the San Francesquito Dam failed, killing 400).

Finally, social hazards include civil uprising, violent crime, child poverty, and homelessness.

Some combination of all of these hazards is capable of arising either as secondary or tertiary consequence of another event (e.g. toxic spills or explosions secondary to earthquakes) or as a compound, complex event (e.g. Santa Ana winds, wildfires, and riots).

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Bibliography

Bolin, R. with Stanford, L. (1998). *The Northridge Earthquake: Vulnerability and Disaster*. London: Routledge. [This is an in-depth study of the recovery process following the 1994 earthquake that reveals racial and class bias].

Davis, M. (1998). *Ecology of Fear*. New York: Metropolitan. [This book is a study of the social construction of risk in Los Angeles which contrasts the access to risk management resources, such as fire fighting services, available to the rich and to the poor].

Klinenberg, E. (2002). *Heat Wave: The Social Autopsy of a Disaster*. Chicago: University of Chicago Press. [A detailed account and analysis of the 1995 heat wave in Chicago that killed 731 individuals, many of whom were low-income, elderly people].

Oliver, M., Johnson, J., and Farrell, W. (1993). *Anatomy of a Rebellion: A Political-Economic Analysis. Reading Rodney King/ Reading Urban Uprising* (ed. R. Gooding-Williams) 117-141. New York: Routledge. [An analysis of the 1991 urban uprising in Los Angeles that focuses on the marginalization of the non-white and immigrant working class in the context of economic globalization].

Pulido, L., Sidawi, S., and Vos, R. (1996). An Archaeology of Environmental Racism in Los Angeles. *Urban Geography*, 17:5, 419-439. [A review of the socio-spatial distribution of environmental risks in Los Angeles and arguments that show a systematic pattern that one can term “environmental racism”].

Scott, A. and Soja, E., eds. (1996). *The City: Los Angeles and Urban Theory at the End of the Twentieth Century*. Berkeley: University of California Press. [An excellent introduction to many aspects of the city, including chapters on spatial and economic relations in the greater urban region (by Scott and Soja), environmental relations (by Fitzsimmons and Gottlieb), and homelessness (by Wolch)].

Steinberg, T. (2000). *Acts of God: The Unnatural History of Natural Disaster in America*. New York: Oxford University Press. [A social and environmental historians’ review of class and racial bias in the construction of disaster risk from the late nineteenth century and forward. This volume serves as a rebuttal to views sometimes expressed that life in Los Angeles is exceptionally risky (a specific form of more general views of Angelino “exceptionalism”)].

Wisner, B. (1999). There are Worse Things than Earthquakes: Hazard Vulnerability and Mitigation Capacity in the Greater Los Angeles Region. *Crucibles of Hazard: Mega-cities and Disasters in Transition*, (ed. J.K. Mitchell) 375-427. Tokyo: United Nations University Press. [A systematic review of geophysical, climatic, biological, technological, and social hazards in greater Los Angeles, the distribution of vulnerability and mitigation capacity among socio-economic, racial, and age groups in the urban region, and the resulting patterns of risk].

Wisner, B. (2002). Disaster Risk Reduction in Mega-cities: Making the Most of Human and Social Capital. *The Future of Disaster Risk: Building Safer Cities*. Proceedings of a Provention Consortium/World Bank workshop, Washington, D.C., 4-6 December 2002. http://www.proventionconsortium.org/files/conference_papers/wisner.pdf . [Analysis of the data from the United Nations University study (1997-2001) in six mega-cities, in which the comparison of the results from Los Angeles with those from Mexico City are of particular relevance to this chapter].

Wisner, B., Blaikie, P., Cannon, T., and Davis, I. (2003). *At Risk: Natural Hazards, People's Vulnerability, and Disasters*, (2nd edition). London: Routledge. [An exhaustive study of thirty years of international research on the nature and causes of social vulnerability to disaster. This volume provides the theoretical framework within which the work discussed in this chapter was carried out].

Biographical Sketch

Dr. Ben Wisner has dedicated most of his 37-year career to the study of the point where “bottom up” meets “top down” in disaster management systems. This has included work on local knowledge and coping with respect to hazards ranging from drought in eastern Kenya, to urban flash flooding in Johannesburg, South Africa, to earthquake in Mexico City, Los Angeles, and Tokyo. Much of this experience has been distilled into three forms of dissemination: the second edition of a textbook, written with three UK-based co-authors (Piers Blaikie, Terry Cannon, and Ian Davis), *At Risk: Natural Hazards, People's Vulnerability and Disasters* (London: Routledge, 2003); an edited volume (with John Adams) for the World Health Organization, *Health and Environment in Emergencies and Disaster* (Geneva: WHO, 2003); and a website, co-founded with Dr. Maureen Fordham, *RADIX* (http://online.northumbria.ac.uk/geography_research/radix). He retired from full-time teaching as Director of International Studies and Professor of Geography at California State University at Long Beach in 2000, and is currently a Research Fellow at two London-based institutions, the Development Studies Institute, London School of Economics and the Benfield Greig Hazard Research Centre, University College London. He divides his time among research, production of videos on disaster risk reduction (with Mr. Gregory Berger, *Producciones Gringoyo*), consulting, and sumu wrestling. He is co-chair of the Commission on Risk and Hazards of the International Geographical Union (IGU), a member of the IGU Task force on Megacities, and from 1997 to 2002 was a founding member of the board of the Earthquakes and Megacities Initiative.