



Center for Social Development

GEORGE WARREN BROWN SCHOOL OF SOCIAL WORK

Environment and Social Development

Lisa Reyes Mason

Faculty Director, Environment and Social Development
Center for Social Development

Assistant Professor
University of Tennessee
College of Social Work

May 2015
CSD Working Papers
No. 15-33

Campus Box 1196 One Brookings Drive St. Louis, MO 63130-9906 • (314) 935.7433 • csd.wustl.edu



Washington University in St. Louis

Environment and Social Development

Abstract

Global environmental changes—such as pollution, climate change, biodiversity loss, and freshwater decline—affect people worldwide, with impacts that are not just physical, but also social and economic. Consequences range from minor inconvenience to injury and death, and can include food and water insecurity, mental distress, family separation, income disruption, and asset depletion. A social justice issue, environmental change has consequences that are typically worse for some groups than others. The Environment and Social Development initiative examines social vulnerability and strategies for social action and adaptation to environmental change. We emphasize social action that leads to reductions in negative environmental problems and adaptation through formal programs and policies designed to reduce vulnerability to environmental change. Through this work, Environment and Social Development aims to contribute to a more environmentally sustainable world, in which all people have fair and optimal opportunities to live full, healthy, and productive lives.

Key words: *environment, climate change, pollution, social justice, social action, adaptation*

People have changed the environment in unprecedented ways. In turn, these global environmental changes—such as pollution, climate change, biodiversity loss, and freshwater decline—affect people worldwide. Left unchecked, feedback loops between human and environmental systems may have devastating consequences (Intergovernmental Panel on Climate Change, 2013). For individuals, families, and communities, these changes threaten basic needs and livelihoods, emotional and physical health, financial security, and overall well-being. Opportunities for social development and potential for people to live fully capable, productive lives are compromised (Humphreys, 2009; Mearns & Norton, 2010).

For decades, environmental scientists have sounded alarms to the public and policymakers. Some gains have been made. In the United States, air quality has improved since passage of the 1970 Clean Air Act (Bachmann, 2007), several states have adopted renewable energy policies (Delmas & Montes-Sancho, 2011), and a growing number of cities are creating climate adaptation plans (Bierbaum et al., 2013). Still, the social and health impacts of pollution are of critical concern (Sadd, Pastor, Morello-Frosch, Scoggins, & Jesdale, 2011), and more than 42,000 U.S. bodies of water are impaired (United States Environmental Protection Agency, 2014). Recently, the devastation of Hurricane Katrina and Superstorm Sandy disrupted lives, livelihoods, and entire communities in multiple states (Lein, Angel, Bell, & Beausoleil, 2009; Neria & Shultz, 2012).

More must be done to protect both people and the environment. Despite mounting evidence of human impacts on and social vulnerability to environmental change, overall public and policy response remains low. Inclusion and participation of diverse stakeholders is limited. Scientists, nonprofit organizations, industry, policymakers, and the public must respond in novel, collaborative, and transformative ways to protect human and environmental well-being.

To advance this goal, the Center for Social Development (CSD) is launching **Environment and Social Development**—a new applied research area that aims to catalyze a multidisciplinary and multisectoral response to problems at the nexus of people, society, and the environment. The vision of this area is to create an environmentally sustainable world in which all people are capable of full, healthy, productive lives.

Social Problems, Social Solutions

The human impacts of environmental change are often social in nature. They affect family and community stability, social relationships, health, and sometimes survival. Consequences of global environmental change range from minor inconvenience to injury and death. Common effects are food and water insecurity, respiratory illness and diseases, mental distress and emotional health problems, family separation, social network loss, housing damage, unemployment, income disruption, and asset depletion (Burton, Kates, & White, 1993; Carter, Little, Mogues & Negatu, 2007; Füssel & Ebi, 2009; Mearns & Norton, 2010).

Unfortunately, disparities abound. The consequences of environmental change are much worse for some groups than others. In the 1990s, *social vulnerability* emerged as an explanation for these disparities, out of theories from disaster (Cuny, 1983), political economy (Blaikie, Cannon, Davis, & Wisner, 1994), and entitlements research (Drèze & Sen, 1989; Sen, 1981). Social vulnerability suggests that people with less social, economic, or political advantage are more likely to fare worse and experience more negative effects from pollution, climate change, and other environmental problems than those with more structurally determined advantage.

To document disparities, vulnerability assessments at city, county, state, and regional scales have become increasingly common. Vulnerability indices that are geospatially mapped are available for parts or all of the United States and many other countries (Cutter, Boroff, & Shirley, 2003; Romero-Lankao, Qin, & Borbor-Cordova, 2013; Sadd et al., 2011). These maps can provide valuable information about areas or population groups that may need particular assistance in mitigating or adapting to environmental change. Some gaps remain, such as mapping underserved areas, understanding vulnerability at lower scales (e.g., within cities or neighborhoods), analyzing political aspects of vulnerability, and ensuring inclusion of already marginalized groups.

Vulnerability assessments should continue to be refined and implemented. At the same time, progress toward innovative testing of solutions to reduce vulnerability is also needed. The social work profession has excellent capacity to advance vulnerability assessments and to design, test, and implement solutions. An applied social science, social work aims to improve the human condition through evidence-based knowledge for positive change (Brekke, 2012). Social work scholars and practitioners are experts in understanding people's lived experience, studying problems at multiple scales, organizing and mobilizing groups, intervening in social systems, and advancing social policy change. As Sherraden et al. (2014) note, throughout modern civilization, humans have depended not just on technologic or economic solutions, but on innovations that are "fundamentally social" to advance.

Areas of Inquiry

In launching this research area, CSD will examine strategies for social action and adaptation. *Social action* is the mobilization of people in organized, collective efforts to question the status quo and advocate policy change. Here, we emphasize social action that leads to reduction in negative environmental problems. *Adaptation* is the increased capacity to cope with changes that are already in motion or expected in the future. Here, we emphasize adaptation through formal programs and policies designed to reduce vulnerability to the impacts of environmental change.

Social Action

Applied research should study, test, and disseminate strategies for increasing *civic engagement and political participation* around environmental social action. Topics for social action might include greenhouse gas mitigation, reevaluation of national clean air and water policies, and environmental justice hazards (e.g., pollution physically located near marginalized groups). Policy change targets may be corporations, city councils, county commissions, and state and national legislative bodies and agencies.

Social Practices

An emphasis on the social and collective, rather than the individual, is foundational to our approach. Everyday consumption in modern society—which produces significant environmental waste and greenhouse gas pollution—is typically conceived as an individual practice. Linear approaches to behavior change (e.g., theory of planned behavior), however, have had mixed success in changing environmental behaviors (Hargreaves, 2011). Recent scholarship calls for reconceiving individual environmental behaviors as social practices that can be influenced by social policy (Lee & Koski, 2012), social computing and technology (Wright, Duncan, & Lach 2009), and formal or informal social networks (Moloney & Strengers, 2014; Semenza & March, 2009; White, Hall, & Johnson, 2014). Organized, collective action may have an important, and testable, role in the reconception of environmental behavior as social behavior, with ensuing implications for program and policy change.

People, Place, and Usable Science

There is growing evidence that tailored, localized, and place-based communication about environmental problems can affect people's willingness to take action (Schweizer, Davis, & Thompson, 2013). The public is not a *tabula rasa* on which scientists convey environmental information. People have lived experience that shapes how they perceive, process, and respond to environmental information (Bickerstaff & Walker, 1999; Johnson, 2012). More scientific inquiry at finer scales of analysis would provide localized data that social action efforts can use for policy advocacy linked to actual individual, household, and community concerns (Cardwell & Elliott, 2013; Mason, in press). For scientific inquiry to be usable—for example, to a community coalition starting to organize around a local environmental problem—it should be designed with diverse stakeholder input from the early stages of research (Ford, Knight, & Pearce, 2013; Nerlich, Koteyko, & Brown 2010; Wibeck, 2014). Such participatory methods are well known in social work research and practice.

Emerging Action

Specific to climate change, organized action is starting to emerge (Moser, 2007; Russell, Greenaway, Carswell, & Weaver, 2014). With expertise and training in community organizing and participatory governance, social work scholars and practitioners can play key roles in stimulating further action and helping existing efforts more effectively advocate for change (Pawar, 2013). Barriers to overcome—through inquiry and new testing—include the commonly held views that we cannot act until more is known or until we are sure that our actions are the correct ones to take (Fleming, Vanclay, Hiller, & Wilson, 2014).

Adaptation

A sizeable body of adaptation scholarship has emerged over the past 20 years. Often in case study form, research tends to describe household-level adaptation or coping strategies (Arku & Arku, 2010; Molua, 2009) or adaptation planning or intentions without actual assessment of adaptation efforts (Berrang-Ford, Ford, & Paterson, 2011). Though a practitioner community of adaptation professionals from many disciplines and sectors has begun to emerge, the actual *science of adaptation* lags behind. Rigorous applied research on adaptation should conduct baseline vulnerability assessment, design and test the effectiveness of adaptation interventions, and inform policy change that supports evidence-based adaptation strategies (Hess et al., 2014; Moss et al., 2013).

Resource Distribution

A promising focus for adaptation intervention is resource distribution. Institutional norms and structural inequities can lead to unequal distribution of the human, social, financial, physical, and natural resources that individuals, households, and communities need for successful adaptation (Mason, 2014; Mearns & Norton, 2010; Wutich & Brewis, 2014). Through well-designed studies that examine how and to what extent resource redistribution (or accumulation) affects vulnerability and adaptation to the impacts of environmental change, meaningful policy and program implications can emerge.

Local Focus

While National Adaptation Programmes of Action (NAPAs) are well known among global adaptation experts, local-level communities and cities are now being recognized as important scales for new adaptation inquiry. Cities may arguably be a more viable level for effective adaptation policy, as they should be responsive to local conditions (Lee & Koski, 2012). In cities, there is also potential for more civic engagement or ability of grassroots groups to influence local decision-making than at state or national levels (Bond, 2010). Also, new efforts to obtain localized data for usable science (described above) may provide unique opportunities for scientists, policymakers, and the public to jointly develop socio-technical solutions for adaptation that integrate social research with cutting-edge technologies (Miller et al. 2014); for example, coupling local environmental sensor monitoring with near-real-time feedback on how environmental conditions affect human health and well-being.

Vision

Through this work, the Environment and Social Development initiative aims to contribute to a more environmentally sustainable world, in which all people have fair and optimal opportunities to live full, healthy, and productive lives. All people should have opportunities for social development, unconstrained by the impacts of environmental change. The time to rigorously study and intervene in the compelling problems of human-induced environmental problems is now.

Social work is well positioned to help lead and organize this effort. Social workers are skilled at bridging academic, policy, and practitioner worlds through applied social research, policy partnerships, and practice in a wide range of settings. Social workers can serve as brokers among scientists, policymakers, and the public, which good science communication and effective policy change often need (Dilling & Lemos, 2012).

But this vision cannot be accomplished alone. Multidisciplinary and multisectoral collaboration and response is necessary. An active and engaged public—along with the best thinkers in academia, policy, nonprofits, and the public and private sectors—can and will solve coupled human–environmental problems. Rigorous, applied research will be key to designing, testing, and disseminating solutions.

References

- Arku, F. S., & Arku, C. (2010). I cannot drink water on an empty stomach: A gender perspective on living with drought. *Gender and Development, 18*(1), 115–124.
- Bachman, J. (2007). Will the circle be unbroken: A history of the U.S. National Ambient Air Quality Standards. *Journal of Air and Waste Management, 57*, 652–697.
- Berrang-Ford, L., Ford, J. D., & Paterson, J. (2011). Are we adapting to climate change? *Global Environmental Change, 21*, 25–33.
- Bickerstaff, K., & Walker, G. (1999). Clearing the smog? Public responses to air-quality information. *Local Environment, 4*, 279–294.
- Bierbaum, R., Smith, J. B., Lee, A., Blair, M., Carter, L., Chapin III, F. S. . . .Verduzco, L. (2013). A comprehensive review of climate adaptation in the United States: More than before, but less than needed. *Mitigation and Adaptation Strategies for Global Change, 18*, 361–406.
- Blaikie, P., Cannon, T., Davis, I. & Wisner, B. (1994). *At risk: Natural hazards, people's vulnerability, and disasters*. London, United Kingdom: Routledge.
- Bond, M. (2010). Localizing climate change: Stepping up local climate action. *Management of Environmental Quality: An International Journal, 21*, 214–225.
- Brekke, J. S. (2012). Shaping a science of social work. *Research on Social Work Practice, 22*, 455–464.
- Burton, I., Kates, R. W., & White, G. F. (1993). *The environment as hazard* (2nd ed.). New York, NY: The Guilford Press.
- Carter, M. R., Little, P. D., Mogues, T., & Negatu, W. (2007). Poverty traps and natural disasters in Ethiopia and Honduras. *World Development, 35*(5), 835–856.
- Cuny, F. C. (1983). *Disasters and development*. New York: Oxfam and Oxford University Press.
- Cutter, S. L., Boruff, B. J., & Shirley, W. L. (2003). Social vulnerability to environmental hazards. *Social Science Quarterly, 84*, 242–261.
- Delmas, M. A., & Montes-Sancho, M. J. (2011). U.S. state policies for renewable energy: Context and effectiveness. *Energy Policy, 39*, 2273–2288.
- Dilling, L., & Lemos, M. C. (2011). Creating usable science: Opportunities and constraints for climate knowledge use and their implications for science policy. *Global Environmental Change, 21*, 680–689.
- Drèze, J., & Sen, A. (1989). *Hunger and public action*. New York, NY: Oxford University Press.
- Fleming, A., Vanclay, F., Hiller, C., & Wilson, S. (2014). Challenging dominant discourses of climate change. *Climatic Change, 127*, 407–418.

- Ford, J. D., Knight, M., & Pearce, T. (2013). Assessing the ‘usability’ of climate change research for decision-making: A case study of the Canadian International Polar Year. *Global Environmental Change, 23*, 1317–1326.
- Füssel, H., & Ebi, K. L. (2009). Assessing vulnerability of human health. In A. G. Patt, D. Schröter, R. J. T. Klein & A. Cristina de la Vega-Leinert (Eds.), *Assessing vulnerability to global environmental change: Making research useful for adaptation, decision making and policy* (pp. 115–132). London, United Kingdom: Earthscan.
- Hargreaves, T. (2011). Practicing behaviour change: Applying social practice theory to pro-environmental behaviour change. *Journal of Consumer Culture, 11*, 79–99.
- Humphreys, S. (2009). *Human rights and climate change*. Cambridge, United Kingdom: Cambridge University Press.
- Intergovernmental Panel on Climate Change. (2013). Summary for Policymakers. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. T. F. Stocker, D. Qin, G. -K. Plattner, M. Tignor, S. K. A. J. Boschung, A. Nauels, Y. Xia, V. Bex, and P. M. Midgley (Eds.). Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press.
- Lee, T. & Koski, C. (2012). Building green: Local political leadership addressing climate change. *Review of Policy Research, 29*, 605–624.
- Johnson, B. B. (2012). Experience with urban air pollution in Paterson, New Jersey and implications for air pollution communication. *Risk Analysis, 32*, 39–53.
- Lein, L, Angel, R., Bell, H., & Beausoleil, J. (2009). The state and civil society response to disaster: The challenge of coordination. *Organization & Environment, 22*, 448–457.
- Mason, L. R. (2014). Examining relationships between household resources and water security in an urban Philippine community. *Journal of the Society for Social Work and Research, 5*(4), 489–512.
- Mason, L. R. (in press). Beyond improved access: Seasonal and multidimensional water security in urban Philippines. *Global Social Welfare: Research, Policy, and Practice*.
- Mearns, R., & Norton, A. (Eds.). (2010). *Social dimensions of climate change: Equity and vulnerability in a warming world*. Washington, DC: The World Bank.
- Moloney, S. & Strengers, Y. (2014). Going green: The limitations of behavior change programmes as a policy response to escalating resource consumption. *Environmental Policy and Governance, 24*, 94–107.
- Molua, E. L. (2009). Accommodation of climate change in coastal areas of Cameroon: Selection of household-level protection options. *Mitigation & Adaptation Strategies for Global Change, 14*(8), 721–735.

- Moser, S. C. (2007). In the long shadows of inaction: The quiet building of a climate protection movement in the United States. *Global Environmental Politics*, 7, 124–144.
- Neria, Y., & Shultz, J. M. (2012). Mental health effects of Hurricane Sandy: Characteristics, potential aftermath, and response. *JAMA: Journal of the American Medical Association*, 308, 2571–2572.
- Nerlich, B., Koteyko, N., & Brown, B. (2010). Theory and language in climate change communication. *Wiley Interdisciplinary Review of Climate Change*, 1, 97–110.
- Pawar, M. (2013). Water insecurity: A case of social policy action by social workers. *Australian Social Work*, 66, 248–260.
- Romero-Lankao, P., Qin, H., & Borbor-Cordova, M. (2013). Exploration of health risks related to air pollution and temperature in three Latin American cities. *Social Science and Medicine*, 83, 110–118.
- Russell, S. L., Greenaway, A., Carswell, F., & Weaver, S. (2014). Moving beyond “mitigation and adaptation”: Examining climate change responses in New Zealand. *Local Environment*, 19, 767–785.
- Sadd, J. L., Pastor, M., Morello-Frosch, R., Scoggins, J., & Jesdale, B. (2011). Playing it safe: Assessing cumulative impact and social vulnerability through an environmental justice screening method in the South Coast Air Basin, California. *International Journal of Environmental Research on Public Health*, 8, 1441–1459
- Schweizer, S., Davis, S., & Thompson, J. L. (2013). Changing the conversation about climate change: A theoretical framework for place-based climate change engagement. *Environmental Communication*, 7, 42–62.
- Semenza, J. C. & March, T. L. (2009). An urban community-based intervention to advance social interactions. *Environment and Behavior*, 41, 22–42.
- Sen, A. K. (1981). *Poverty and famines: An essay on entitlement and deprivation*. Oxford, United Kingdom: Oxford University Press.
- Sherraden, M., Barth, R. P., Brekke, J., Fraser, M., Madershied, R., & Padgett, D., (2014). *Social is fundamental: Introduction and context for grand challenges for social work* (Grand Challenges for Social Work Initiative, Working Paper No. 1). Baltimore, MD: American Academy of Social Work and Social Welfare.
- United States Environmental Protection Agency. (2014). National Summary of Impaired Waters and TMDL Information. Retrieved from http://iaspub.epa.gov/waters10/attains_nation_cy.control?p_report_type=T#imp_water_by_state
- White, B. M., Hall, E. S., & Johnson, C. (2014). Environmental health literacy in support of social action: An environmental justice perspective. *Journal of Environmental Health*, 77, 24–29.

- Wibeck, V. (2014). Enhancing learning, communication and public engagement about climate change—some lessons from recent literature. *Environmental Education Research*, 20, 387–411.
- Wright, D. J., Duncan, S. L., & Lach, D. (2009). Social power and GIS technology: A review and assessment of approaches for natural resource management. *Annals of the Association of American Geographers*, 99, 254–272.
- Wutich, A., & Brewis, A. (2014). Food, water, and scarcity: Toward a broader anthropology of resource insecurity. *Current Anthropology*, 55, 444–468.

Suggested Citation

Mason, L. R. (2015). *Environment and Social Development* (CSD Working Paper No. 15-33). St. Louis, MO: Washington University, Center for Social Development.

Contact

Center for Social Development
Washington University in St. Louis
One Brookings Drive
Campus Box 1196
St. Louis, MO 63119
csd@wustl.edu