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Pesticides, People and Power in Ecuador’s Banana Industry: Participatory Epidemiology and Political Ecology Approaches to Occupational Health and Safety

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Occupational and environmental health risks in Ecuador’s export-based banana industry – the world’s largest – demonstrate many of the contradictions inherent in the global food system, and the model of development within which it fits. Banana workers in Ecuador tend to be young, proletarianized, and vulnerable to exploitation by wealthy elites; farm-owning elites are in turn contractually engaged by multinational banana exporters to sell bananas, with financial risk being shifted downward by all parties in the supply chain (Striffler, 2002). The extremely precarious nature of banana industry employment is reinforced by disregard for Ecuador’s labour laws, meaning that workers who attempt to join unions or ask for better pay or working conditions are often summarily dismissed (Pier, 2002).

Bananas are a pesticide-intensive monoculture due to their low genetic diversity and vulnerability to fungal diseases (Henriques et al., 1997); among other occupational hazards, this combination of ecological and social risk leads to exposure to several classes of hazardous pesticides, with neurotoxic, carcinogenic, reproductive and dermatological effects. Agro-industrial exports such as bananas, produced using “Green Revolution” technologies, have been key components of compulsory economic restructuring plans imposed on countries such as Ecuador by international financial institutions and development agencies. Overall,

the banana industry has transformed the landscape of much of Latin America for over a century, linking banana consumers, governments and corporate actors in high-income countries to often-inequitable processes of social and environmental change in the global South (Soluri, 2005).

My research is situated in the “implementation gap” between the reality of occupational and environmental impacts of Ecuador's banana industry, and the theoretical implications of health and social science research indicating that these impacts are unacceptable. International trends towards “evidence-based” public health practice and policy reflect the belief that knowledge should inform practice (Behague et al., 2009), though such rhetoric often contains superficial or non-existent recognition of attendant political obstacles. Because of this lack of explicit political awareness in evidence-based health discourse, the globalized nature of the banana supply chain, and the prominence of young, precariously employed workers in banana farm work in Ecuador, I am working with Ecuadorian and Canadian youth (aged 18–30) to explore unconventional (i.e. effective) and appropriately-scaled approaches to political and social action on health determinants in Ecuador. Together with Ecuadorian NGO and academic partners, I will be facilitating and evaluating an intervention consisting of the establishment and use of social networks linking youth across a North-South divide to engage with a health and environment problem with international roots. This intervention will employ both traditional and novel methods of critical pedagogy and transformative education (Freire, 2004), with participatory evaluation methods carried out in partnership with participating Ecuadorian and Canadian youth. The project builds on a banana industry stakeholder workshop hosted in Machala, Ecuador in December, 2009, as well as a multi-year collaboration between the University of British Columbia (in Vancouver, Canada) and four Ecuadorian universities (Universidad Andina Simón Bolívar, Universidad Estatal de Bolívar, Universidad de Cuenca, and Universidad Técnica de Machala) aimed at equitably managing environmental health risks in Ecuador (Parkes et al., 2009).

Issues such as pesticide exposure and the health effects of agro-industry in the global South have been among the key motivators of an academic movement based on employing “ecosystem approaches to health”. Canada's International Development Research Centre funds such participatory environmental health research through its ‘Ecohealth’ program initiative, including attempts to prevent pesticide exposure. Criticisms have emerged that Ecohealth's focus on community-level action research, albeit sophisticated in its ‘transdisciplinarity’ and gender-equity foci, ultimately fails to engage with the upstream roots of environmental health risks (Cole et al., 2006). This is in spite

of “scale politics”-type arguments used by Ecohealth researchers and practitioners to translate descriptions of global environmental degradation into a need for community-level research (e.g. Lebel, 2003). My paper – “*Scaling up*” *Ecohealth: insights from the political ecology of pesticide exposure in Ecuador’s banana industry* - will explore this contradiction. I will present at the Ecohealth 2010 conference at the London School of Hygiene and Tropical Medicine (UK). I will also participate in a panel with other young researchers dealing with participatory approaches to governance of the global food system. I am very fortunate to have *Antipode’s* support in adopting this critical perspective by bringing themes from radical geography – especially political ecology – into my public health research. The *Antipode* scholarship will enable me to attend the Ecohealth 2010 conference, and to continue working with Ecuadorian partners on creating international linkages for grassroots governance of the international commodity chains linking banana producers in the global South to consumers in the North.

Prior to beginning my doctoral research, I completed a Bachelor of Science degree at McGill University in Montreal and a Masters in Environmental Studies at York University in Toronto. I have also worked as a high school teacher, in Canada’s federal health and environment departments, and in Guyana for a youth-focused Canadian NGO. My doctoral research is reflective of this interdisciplinary background and extracurricular experience, as well as of a family tradition of Latin America-focused social justice activism. I am therefore extremely grateful for the opportunity to work with my Ecuadorian academic and community partners on an issue with such relevance to environment-health and North-South interactions.

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