Where Local Meets Global: Environmental Justice on the US-Mexico Border

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Where Local Meets Global: Environmental Justice on the US-Mexico Border

David V. Carruthers

The US-Mexico border is an enigmatic place where the local and the global collide. It is at once prosperous and poor, urban and rural, Anglo American and Latin American, First World and Third World. In few places do we see in such stark terms the unevenness with which the modern global economy parcels out costs and benefits. Border residents feel the environmental and social contradictions of global development, North and South, with great intensity. "We live with this every day. We know that there are many things that we have to put up with on this border—the *maquiladoras*,[1] the contamination from the *maquiladoras*, the fact that all of the things that we assemble, that we build, that we sew together, are not even for us—[this] is very clear in everybody's minds." (García Zendejas 2005). Likewise, on the border we find multiple and sophisticated efforts to confront and exploit those contradictions, including the emergence of local and cross-border movements for environmental justice.

While we must be cautious about the generalizability of lessons learned in this peculiar region, the border does present a telling microcosm of North-South relations, revealing the forms, consequences, and tensions of global economic and cultural integration. The border is likewise the paradigm case for transnational citizen activism on environmental and social justice issues (Brooks and Fox 2002; Hogenboom, Cohen, and Antal 2003). With this intensified representation of global tensions, it offers especially fertile terrain to assess the international dimensions of environmental justice in Latin America.

This chapter explores a set of cases from northern Mexico in which community resistance and cross-border collaboration are generating a

uniquely binational conception of environmental justice. The first section looks at a community's efforts to confront the notorious industrial waste hazards of the region's export assembly plants. The second section explores the politics of energy in the border region, focusing on Baja California's emerging role as an export platform for electricity and liquefied natural gas to meet US demand.

Industrial Hazardous Waste

Many academic studies and journalistic accounts have chronicled the varying successes and shortcomings of a series of environmental justice struggles over chemical hazards in and around the industrial parks and factories that dominate the landscape of the northern Mexican border. Debates about the capacity of the North American Free Trade Agreement's "side agreement" institutions to protect communities and workers propelled several local cases into international prominence. Scholars, policymakers, and journalists have focused attention on scandalously high clusters of neural-tube birth defects (such as spina bifida and anencephaly) in border communities, acute chemical toxicity in Mexicali's New River, and lead smelters, battery recycling facilities, and other uncontrolled hazardous wastes or chemical releases that have tarnished the reputations of Stepan Chemical, Alco Pacífico, Chemical Waste Management, Hyundai, and many other international companies.[2]

Even with that inglorious background, one of the most visible symbols of NAFTA's institutional failure to protect the environmental health of a community is Metales y Derivados, my focus here. Metales stands at the edge of Tijuana's Otay Mesa industrial park, 150 yards above the canyon in which the community of Colonia Chilpancingo houses more than 10,000 residents. Owned by San Diego-based New Frontier Trading Corporation, the Metales plant began smelting in 1972 to recover refined lead and copper from automobile batteries and other sources.

For more than 20 years Chilpancingo residents expressed concerns to local and national officials about possible threats to public health and the environment. One 1990 Mexican study of the river below found lead levels 3,000 times higher than US standards, and cadmium 1,000 times higher (Sullivan 2003). In 1987 and again in 1989, Mexican authorities

ordered cleanups and imposed fines; however, the factory owners did not respond, and no enforcement was forthcoming (Fritsch 2002). The facility remained in operation until March 1994, when the federal environmental enforcement agency (PROFEPA) finally ordered its closure for violating Mexico's environmental laws.[3] Since its closure, approximately 24,000 tons of mixed hazardous waste, including more than 7,000 tons of lead slag, remained exposed to the elements. With only a crumbling retaining wall and the tattered remnants of plastic tarps to contain the wastes, the plant continued to leach arsenic, cadmium, antimony, and other hazardous metals into the soils and waters of the community below for more than 10 years (EHC 2004).

The Metales case was thrust onto the international stage in October 1998, when San Diego's Environmental Health Coalition (EHC) and residents of Colonia Chilpancingo (the Comité Prorestauración del Cañón del Padre/Canyon Restoration Committee) filed a petition with the North American Commission for Environmental Cooperation (NACEC), the main institution of the NAFTA environmental side agreement. Over the next few years Chilpancingo's parents and activists held news conferences, organized vigils and protests, and launched the kinds of letter writing and direct action campaigns that would be familiar to environmental justice activists everywhere. Not surprisingly, Metales gained a high profile in the ongoing debates over the failures of NAFTA and the potential lessons for the proposed Free Trade Agreement of the Americas (Fritsch 2002).

In February 2002, the NACEC released its factual record on the case. The report confirmed the community's claim that the site presented a grave risk to human health, and called for remediation (NACEC 2002a). The NACEC ruling offered vindication and a great symbolic achievement, but was a frustratingly hollow victory, given that the Commission has no enforcement authority or budget.

With no cleanup forthcoming, Chilpancingo homemakers, mothers, and activists formed a new citizens' organization, the Colectivo Chilpancingo Pro Justicia Ambiental (Chilpancingo Pro Environmental Justice Collective) in April 2002, to keep up the pressure for a cleanup. The new organization was rooted in gender empowerment, composed of working-class women concerned about threats to their households and

children, and propelled into action "because we were looking at a case of injustice, because of Metales y Derivados. . . . We're working on cleaning up the environment here. . . . We're looking for justice, and the government and the companies are not giving it to us." (Lujan 2002) The women of the Colectivo, collaborating with their EHC allies, continued pressuring the PROFEPA (EHC 2002). In May 2003, the Colectivo and the EHC turned up the pressure by presenting a cleanup plan of their own, and challenging officials on both sides of the border to seek implementation (Colectivo Chilpancingo 2003). In February 2004, the US EPA and the Mexican counterpart agency responded to the challenge, and began to seek funding for a cleanup strategy (Cantlupe and Wilkie 2004). In March 2004, EHC and Colectivo members met with US, Mexican, and Baja California officials to establish a working group to carry out the cleanup.

On June 24, 2004, the women of the Colectivo achieved the community's long-sought victory. The Colectivo and the Mexican government signed an agreement to achieve a comprehensive cleanup of the Metales y Derivados site within 5 years. The first stages of a site restoration that is ultimately expected to cost $5–10 million were initiated immediately, with the Mexican federal and Baja governments providing $500,000 and the US EPA contributing an initial $85,000 (Cantlupe 2004; Dibble 2004; EHC 2004). The first step in the remediation plan called for 2,500 tons of lead slag to be removed and transported to Kettleman Hills, California (EHC 2004).[4] By the end of 2005, most of the above-ground hazardous waste had been removed from the site (nearly 2,000 tons), and the EHC and the Colectivo had succeeded in archiving all the waste-removal manifests.

Energy and Environmental Justice

While cross-border organizing has focused on *maquiladora* waste for a number of years, environmental health and social justice concerns have recently been finding new expressions in the area of binational energy development. The story begins north of the border, in the wake of California's costly and humiliating rolling electricity blackouts of 2000–2001. Energy production and distribution in the California–

Baja California region features high levels of interdependence across the border and high dependence on outside sources of energy. Baja California's power grid is not connected to the main transmission system in Mexico; Mexico's mainland gas pipeline system also does not reach the peninsula (CEC 2005a, p. 27). San Diego and Imperial counties are likewise more dependent on imported power than the state as a whole (SCERP 2003, p. 92).

After 2001, major energy producers played on fears of future blackouts, proposing a vastly expanded binational energy system to meet anticipated regional demand. Recognizing from the outset the strong community resistance that has long slowed new installations in California, the companies set their sights on northern Baja California, which they see as an ideal production platform to meet future energy needs. Energy companies rushed to present dozens of proposals for the construction of thermoelectric power plants, receiving terminals and regasification facilities for liquefied natural gas (LNG), new gas pipelines, and new electricity distribution systems across the region. This section explores contestation over two categories of energy development: electricity generation and LNG regasification.

Power Plants and Transmission Lines

While energy companies have proposed 17 power plants for the Mexican border as a whole, I focus attention here on two new gas turbine, combined-cycle thermoelectric plants near Mexicali, the state capital of Baja California. Proposed immediately after the crisis and constructed without delays, both plants have been exporting power to Southern California via the Imperial Valley substation since mid 2003. The first is Sempra Energy's 650-megawatt Termoeléctrica de Mexicali (TDM). The second is InterGen Services' 1060-megawatt La Rosita Power Complex.

Environmental groups on both sides of the border raised early alarms about potentially adverse impacts on air and water quality. Electric power plants are the single largest source of toxic air pollution in North America, accounting for nearly half of all industrial air emissions (NACEC 2002b). The Mexicali Valley–Salton Sea binational airshed is already seriously polluted, with high incidence of pulmonary disease; it regularly

violates established ambient air quality standards for ozone, particulate matter, and on the Mexicali side, carbon monoxide (Powers 2005a; CEC 2005b, pp. 7–14). In a fiercely hot and arid region, the plants' wet cooling systems could reduce stream flows, increase salinity, and contaminate surface or groundwater, negatively affecting the Salton Sea and the New River, already among the most polluted waterways in the hemisphere (CEC 2005b, pp. 32–35). Many Mexicali residents opposed the plants, as did Imperial county officials and residents concerned about cross-border emissions (Lindquist 2005a). However, Mexican federal and Baja state officials promoted the projects on the basis of job creation and economic growth. Localized opposition did not develop into organized resistance. While there was nationalistic resentment on the street, especially a sense that Mexico was going to be "used," by and large "people didn't think you could stop it" (Powers 2005b).

As energy companies started to reveal their ambitious plans for the region, energy consultants and environmental activists on both sides of the border began to collaborate to formulate a community response. In May 2001, a US air quality engineering group, Mexico's Grupo Yeuani (an environmental law organization), Mexico's Proyecto Fronterizo de Educación Ambiental (see appendix below), the Border Ecology Project, and others formed the Border Power Plant Working Group, an advocacy network dedicated to the promotion of environmentally sustainable energy for the US-Mexico border region.

With the plants granted quick approvals by Mexican agencies, the Working Group concluded that opposition in Mexico was futile (Powers 2005b). However, transmission lines to carry the electricity into the United States presented an opportunity. In early 2001, the companies applied for permits for two parallel 230-kilovolt lines to transmit the new electricity across BLM (US Bureau of Land Management) land to the Imperial Valley substation for distribution on the Southern California electric energy grid. The US Department of Energy and the BLM prepared an abbreviated environmental assessment (EA) outlining the impacts of the power plants and transmission lines. Eager to expedite the development of new power plants, the DOE ruled two Findings of No Significant Impact (FONSIs) in December 2001, and the US Energy Secretary issued the federal permits (CEC 2005b, pp. 87–88).

In March 2002, the Working Group teamed with Earth Justice and Wild Earth Advocates to file a lawsuit against the DOE and the BLM in the US District Court, alleging that the EAs, FONSIs, and presidential permits violated US environmental law by not adequately evaluating plant emission impacts on Imperial Valley air quality, or liquid cooling impacts on the Salton Sea (Lindquist 2003; CEC 2005b, pp. 87–88). On May 2, 2003, the District Court agreed, ruling that the DOE had acted illegally by not requiring a more thorough environmental review. The victory was short-lived; a few months later the same judge ruled that the companies could bring the plants online and proceed with electricity export during the year the court allotted the DOE to come up with a more thorough environmental impact study. The companies completed the lines and started exporting electricity in June 2003. Not until November 2006 did the DOE and BLM finally complete the long-overdue environmental review, which received the court's final approval (Lindquist 2006).

Another important dimension of this story involves technological differences between the United States and Mexico. While the plants were still in the planning stages, the Working Group identified two concerns. Ironically, while Mexico is a world leader in air-cooled plant technology, its officials had permitted these plants with environmentally damaging water-cooled technology, inviting serious water quality problems (Powers 2005a). A second issue has to do with the nitrogen oxide scrubbers that would be required to comply with California air quality standards. Sempra agreed to install selective catalytic reduction equipment (SCRs) on the TDM plant, but InterGen offered no such guarantee.

These issues gave environmental justice advocates new political traction, as they went public with the charge that the companies were deliberately installing dirty plant technology in Mexico to evade higher US environmental and community health standards. Senator Dianne Feinstein and Representative Duncan Hunter (both from California) responded with a proposal to ban electricity imports if the plants were not brought into compliance with California standards. Under Congressional pressure, in January 2003 InterGen announced a commitment to install SCRs on the export turbines at La Rosita; Feinstein and Hunter shelved their legislation.[5]

Amazingly, the company did not follow through with this promise, only installing SCRs on one of the smaller turbines. Only the determined vigilance of the Working Group revealed their duplicity, in late 2003, after tons of additional pollutants had been released into the airshed. The exposure was a major embarrassment to plant advocates and public officials on both sides of the border, especially the Mexican regulatory agencies and the DOE, who failed to catch the company's flagrant non-compliance. In January 2004, under a DOE threat to revoke the export permit, InterGen finally shut down the export turbine (Lindquist 2004a). The following year the company attempted to secure Mexican government funding to cover the cost of the SCRs, but the Mexican electricity agency responded that it does not require them; the turbine complies with Mexican law without them (Lindquist 2005a).

From a social and environmental justice standpoint, the Mexicali thermoelectric plants manifest important parallels with the *maquiladora* sector—located in Mexico to take advantage of a streamlined permitting process, limited political space for popular resistance, lower wages and land costs, and a more favorable political and investment climate. Like the export factories, they are oriented to serve external consumer demand, with few local benefits or linkages. Most glaringly, Sempra's TDM is not even connected to the Baja California electricity distribution grid—its entire generating capacity is transmitted directly across the border. Two of the InterGen plant's turbines are likewise transmitting more than half of their capacity northward (560 MW of the plant's total 1,060 MW) (CEC 2005b, pp. 46–47). The inequitable distribution of burdens and benefits could not be clearer: adverse air and water impacts are born principally by Mexicans, while Californians enjoy consumption of an increased energy supply. Notably, in terms of global greenhouse gases, Mexico is also shouldering part of the carbon burden for US consumption (Moreno 2005). "The CO_2 quotas generated are not added to the US's emissions account but to Mexico's. We are in fact laundering carbon for our neighbors up north, whose energy policy is absolutely unacceptable and deadly for the planet." (Greenpeace 2002, p. 1)

Liquefied Natural Gas

Another set of environmental inequities appears in the conflicts that have erupted over company plans to install a string of liquefied natural gas

receiving terminals, regasification facilities, storage tanks, and new gas pipelines along Baja's Pacific coastline. Mexico is one of the world's major energy producers, with its own substantial natural gas supply and infrastructure. Nonetheless, US energy companies see growth opportunities for imported LNG, given the limited exploration and development capacity of the state-owned Petroleos Mexicanos (PEMEX), Baja California's distance from the mainland system, and expectations of increased US demand for gas in coming years. Mexican energy planners expect to build as many as 11 Pacific coast LNG terminals to receive gas imported from Australia, Indonesia, Russia, Bolivia, and other countries (Lindquist 2005b).

Cooled to minus 259 degrees Fahrenheit, natural gas becomes a clear, odorless liquid that occupies one six-hundredth of its gaseous volume, enabling economical transport between continents in special, double-hulled tankers (CEC 2006a). Natural gas is the preferred fuel for new power plants, and US demand is expected to exceed the domestic US gas supply. Even with the technical complexity and expense of liquefaction and cold shipment, regasified LNG costs less than half the price of oil in terms of comparable energy yield, and emits fewer greenhouse gases. There are currently only four LNG terminals in the United States, but companies have plans for as many as 40 (Romero 2005). However, LNG is difficult to work with, highly unstable, and potentially dangerous. When spilled, it warms into an extremely combustible vapor cloud that can travel for miles over water or land. Given the possibilities of leaks, accidents, or terrorist attacks, US safety standards emphasize the need for remote siting, typically requiring a one-mile buffer zone directly around a plant, and prohibiting LNG plants within 6 miles of population centers. At this point, Mexico has clarified no such restrictions (Moreno 2005).

No LNG facilities currently exist on the west coast of the United States. Energy companies have longer-term plans to install three in Oregon, one in Washington, one in Northern California, two in Ventura County, and one in Long Beach (CEC 2006b). However, company officials recognize the political barriers to siting dangerous, controversial, and unsightly industrial facilities in US coastal communities, where they rightly anticipate that lengthy, deliberative policy processes and well-organized opposition will derail some projects and delay construction of

others for years. Sharing the expectation that Mexico offers faster, streamlined government permitting processes, limited public resistance, lower land and construction costs, and fewer barriers to entry, the companies turned to Baja California in the race to bring imported LNG supplies more quickly to market. After the California crisis, companies proposed six initial projects; two have withdrawn, two were defeated, and two are currently proceeding. Their stories are instructive.

The earliest projects out of the gate were first to fail, due to heightened local perceptions of environmental injustice and determined street-level opposition. In early 2002, El Paso Corporation teamed with Conoco Phillips Petroleum to purchase a 74-acre plot near an existing power plant in the picturesque tourist town of Rosarito Beach, about 25 miles south of the border, unveiling plans to construct a regasification facility for gas imported from Australia (Niller 2002). The companies apparently did not anticipate local resistance, assuming the community would welcome facility modernization, job creation, and growth opportunities (García Zendejas 2005; Powers 2005b). However, the citizens of Rosarito have a healthy distrust of the energy industry, after a long history of pipeline and tank leaks and air pollution problems with CFE (Federal Electricity Commission) and PEMEX facilities there. A local citizens group, the Comité de Planeación y Saneamiento (Planning and Sanitation Committee), along with nearly a dozen other community activist groups, mobilized hundreds of students, teachers, parents, and residents in a series of protests that captured the attention of the local media and government officials, including the mayor, who turned vocally against the project (Lindquist 2002a; Treat 2002). In the face of mounting public and local government opposition, and especially when it appeared that the local land use permit was not forthcoming, the companies withdrew the plan in 2003.

Also in February 2002, Houston-based Marathon Oil announced plans for a massive LNG complex less than 15 miles south of the border, on the southern outskirts of a coastal residential neighborhood, Playas de Tijuana. Marathon proposed an onshore receiving terminal for tankers from Indonesia, along with a regasification plant, thermal storage tanks, new gas pipelines to ship the gas north to the United States, a 400-MW power plant, and to make the project more attractive to residents of

the community, a wastewater treatment facility and desalination plant (Treat 2002).

Once again, company planners underestimated the mobilizational power of perceived injustice and the passion of community opposition. Playas de Tijuana has experience confronting environmental threats, including one of the border region's earliest environmental justice victories, when a neighborhood homemakers association (Amas de Casa de Playas de Tijuana) halted the construction of a chemical waste incinerator in the neighborhood in 1991. This time, the grassroots Comité Ciudadano Estatal (State Citizen's Committee) spearheaded the opposition to Marathon's project, utilizing the direct-action strategies on which so much environmental justice activism has been based: community workshops, blockades, public marches, protests, publicity, press conferences, networking with allied groups (including those across the border), and calling political leaders to account (García Zendejas 2005). Claims for environmental justice obtain close to home: "Why don't they put these plants on the other side? . . . I'm concerned about what will happen to my family, my kids." (Lindquist 2002b) When company spokespersons lauded the benefits of water treatment and desalination, one resident quipped: "We don't even want to hear about the benefits. . . . I don't think the residents of La Jolla or Coronado [upscale San Diego neighborhoods] would want to hear about the benefits either, if this kind of project were being built there." (Lindquist 2002b)

In spite of the fury of protest on the street, the federal government welcomed Marathon's LNG proposal, granting permits from the Energy Regulatory Commission (CRE) in May 2003 (Lindquist and Dibble 2004). However, the protests captured national attention, increasing community pressure on public officials (García Zendejas 2005). In June, the controversy appeared in Mexico City's main newsmagazine, Proceso, widening the scope of opposition (Salinas 2003). On January 20, 2004, a deadly explosion at an LNG facility at the Algerian port of Skikda killed 27 people and injured more than 70. The accident shattered industry claims about safety, reignited debates about risks, and deepened community opposition in Playas de Tijuana, which would experience many deaths in a similar incident (Lindquist 2004b). Hostility to the project mounted throughout the summer (Mier 2004). During an LNG

workshop hosted by the Comité Ciudadano, one invited senator went so far as to call support for Baja LNG projects "treason," claiming the agreements violate the Mexican Constitution. He spoke directly to the inequity manifest in the projects: "This state government is not interested in the people it represents. Why doesn't the United States put the gas plants there? Because the North American population won't let them." (Rea Torres and Osuna Murillo 2004)

As with El Paso/Conoco, the Marathon proposal was inherently provocative to environmental justice activism. The plan was overly ambitious, too industrial for the location, too close to too many people, and politically mismanaged. For the local political establishment the costs of support became too high, and the payoffs became too elusive. In the face of sustained popular resistance, officials finally turned against the project. In February 2004, the state government expropriated the site, claiming overlapping property titles and jurisdictional confusion over ownership. Though Marathon had not yet applied for environmental and land use permits, state officials indicated municipal plans would prohibit industrial use on the site in any event. On March 1, 2004, the company bitterly announced the project's cancellation (Lindquist and Dibble 2004).

The other energy companies have since attempted to remain agile and to learn from their early competitors' mistakes. Of the three remaining projects, Energía Costa Azul is the most ambitious and the farthest advanced in construction. Costa Azul is the only remaining onshore LNG project, but unlike its ill-fated predecessors, it is not located in a residential neighborhood. Instead, it occupies 400 acres of unpopulated coastal plain about 15 miles north of Ensenada.[6] Costa Azul is a partnership between the owner, Sempra Energy, and Shell Oil. Shell initially had its own proposal nearby (one of the original six), but withdrew those plans and signed an agreement to share plant capacity with Sempra instead. Costa Azul holds a solid lead in the race to bring LNG to market. The Sempra-Shell partnership has signed agreements for LNG supplies from Australia, Indonesia, and Russia's Sakhalin Island, holds contracts to provide gas to Mexico's CFE, and was the first LNG facility to obtain all required local and federal permits (Calbreath 2005; Lindquist 2005c, 2007).[7] The imposing facility has reconfigured the coastline with an

immense stone jetty and two 180-foot insulated storage towers. It is expected to be operational in early 2008.

Chevron Texaco's Terminal GNL Mar Adentro de Baja California was the first proposal for a facility to be sited offshore, in order to avoid the controversies associated with the land-based sites. Announced in October 2003, Mar Adentro proposed a regasification terminal 6 miles off the coast of Playas de Tijuana, consisting of a 1,000-foot concrete island, with docking facilities for tankers to bring LNG from Australia, a regasification plant, storage tanks, a heliport, and an underwater pipeline to carry the gas to Baja California's existing pipeline system. The Mar Adentro project invited immediate and heated protest from conservation groups, because it was proposed for the heart of the rugged, uninhabited Coronado Islands National Marine Protected Area, and designed to use the southern island as a breakwater. Protest notwithstanding, SEMARNAT (Secretariat of Environment and Natural Resources) granted the project its environmental permit in August 2004; the other permits followed.[8] Outraged by SEMARNAT's approval, on May 3, 2005, a coalition of seven Mexican and US environmental groups filed a petition with NAFTA's NACEC, charging that the agency had failed to adequately consider negative impacts on plant, sea, and bird life, including the largest coastal nesting colony of the endangered Xantus murrelet, whose breeding would be disrupted by the facility (Enciso 2005; Rodriguez 2005a).[9] The NACEC panel agreed to review the complaint. Before the NACEC report was completed, however, Chevron stunned and delighted their opponents with the March 12, 2007 announcement that the company had withdrawn the permits and suspended plans for constructing the facility. In spite of its controversial legacy, company officials asserted that "the decision was based on business needs," presumably market competition from Costa Azul (Lindquist 2007).

And in 2005, Moss-Maritime teamed with TAMMSA (Terminales y Almacenes Maritimos de México, S.A.) to propose a floating storage and regasification unit 5 miles off the coast of Rosarito Beach. This unit, relatively modest in scale, would consist of an LNG ship and an undersea pipeline connected to existing PEMEX facilities in Rosarito. It would be much less costly (US $55 million, versus $800 million for Costa Azul and $650 million for Mar Adentro), technologically simpler, and poses

significantly lower environmental impact (Lindquist 2005e). In January 2005, Moss-TAMMSA applied for the required environmental permits from SEMARNAT, receiving approval in April. Other required permits are pending (CEC 2006b, p. 23).

These three projects suggest that company planners learned a critical lesson from the missteps of the early entrants, a lesson familiar to environmental justice experiences everywhere: siting hazardous industrial facilities in residential neighborhoods invites opposition. People will mobilize against perceived threats to their households, families, and workplaces. By proposing subsequent facilities in isolated locations, the companies have displaced the problems away from people and onto coastal and marine habitats, where advocacy groups have been less successful at achieving the same level of popular resonance. This problem of threat displacement is familiar to environmental justice advocates. While industrial developers typically refer to local resistance as NIMBY (not in my back yard) syndrome, environmental justice activists promote the idea of NIABY (not in anyone's back yard) to challenge the legitimacy of hazard sources altogether. In this case, opponents to Baja's energy projects have worked to defy industry assertions of high expected energy demand. Movement leaders have sought to delegitimize the rationale for the facilities by presenting data in support of an alternative energy program that could satisfy binational needs with a greatly reduced role for LNG, emphasizing new conservation measures and an assortment of less threatening energy sources and technologies.[10]

So far, Moss-TAMMSA's relatively small footprint proposal has drawn little protest. In spite of its advanced construction, even Costa Azul still faces at least fifteen different legal challenges in Mexican state and federal courts, many brought by the owner of a nearby golf resort community, Bajamar, which would be within the blast zone of an accident (Lindquist 2004b). Sustained popular resistance has percolated upward to the state legislature, which has launched an official inquiry, and has considering placing a referendum on the ballot that could halt LNG development in the state altogether (Lindquist 2005f). According to Bill Powers of the Border Power Plant Working Group, "they might have the project under construction, but that doesn't mean it's going to get built" (Lindquist 2005g).

As of this writing, only two of the original six proposals remain active, and only one is under construction. A binational environmental justice movement has consolidated around LNG issues, consisting of grassroots groups, national associations, activists, attorneys, parents, teachers, scientists, and engineers. The movement employs an array of direct action, legal, advocacy, and political strategies, and works at all levels of government (Gortazar 2005; Ovalle 2005). There are at least 35 networked US and Mexican organizations currently opposing LNG developments in Baja California.[11] Their campaigns have catapulted LNG into the national limelight, tapping into public resentment about Mexican national territory serving foreign energy demand (Rodriguez 2005a, 2005b; Naumann 2005). An image capturing exactly this sentiment appeared in a major national newspaper, featuring protestors in Ensenada carrying a banner reading "Mexico: hay quien te quiere y hay quien te USA" ("Mexico: there are those who love you, and those who use you," with the Spanish verb for "use" spelled out as the abbreviation for "United States of America").[12] "We're very aware of the fact that they want to put this here because they don't want it there," said one activist. "There is absolutely no doubt in anyone's mind about that . . . they're going to put this on our side of the border and all the benefits are going to go to the other side. That is ingrained in people's minds as border inhabitants. The fact that we're open minded about it, that we can live with it day to day, is a result of living on a border." (García Zendejas 2005)

Borderland Environmental Justice

These accounts demonstrate the peculiar character of environmental justice on the US-Mexico border. Growing out of a strong tradition of cross-border social movement collaboration, local conceptions of environmental justice are firmly rooted in Baja California communities, infused with Mexican national political culture, yet unmistakably binational in character. Environmental and social justice concerns have come together in unique ways that capture both local and global dimensions of identity and protest.

As with many stories of environmental justice activism from around the world, the lessons in these accounts are mixed, including both

discouraging and encouraging elements. At the neighborhood level, environmental justice has demonstrated some success. Whether it can affect the bigger picture—the inequitable distribution of environmental burdens North and South—remains to be seen. While the victory at Metales is surely significant for the women of the Colectivo and the community of Chilpancingo, the threats of industrial hazards remain omnipresent, with hundreds of contaminated sites dotting the length of the border. While the Mexicali plants were largely brought into compliance with California air quality standards, they still stand as monuments to an economic model that parcels benefits in one direction and costs in another. While the most threatening LNG plants have been derailed or withdrawn, the companies remain determined to identify new opportunities and sites for development.

These limitations notwithstanding, environmental justice has clearly emerged as a force for change on the Mexican border. Local victories have fueled a sense of community power. Borderland environmental justice has developed with its own language, logic, and flavor, and cross-border collaborations have raised its profile as both slogan and strategy. "And that does change things, I think. It does empower you because you say 'this is environmental racism. This is an environmental injustice.' . . . [It's] putting a name on what we know, putting a name on something that you've always lived but didn't know what it was called, or what people call it somewhere else in the world." (García Zendejas 2005) "This is a very new concept. For most people in Mexico, the environment means forests, species. We're breaking away from that. We want to focus on human beings. . . . If we think of the world as neighborhoods, then it's obvious—the poor countries pay the environmental costs. Mexico is a poor neighborhood." (Cerda 2002)

Border activists are linking local struggles for a safer environment to global claims for justice. Not only are they pushing the boundaries of Mexico's political opening, they are fueling popular demands for increased participation on both sides of the border, as well as transnationally, via the NAFTA bodies. These efforts demonstrate the potential of what Margaret Keck and Kathryn Sikkink (1998) call the "boomerang strategy," by which advocacy networks reach above the state to lever

external pressures onto recalcitrant governments to resolve claims of injustice. With Metales y Derivados, the citizens of Colonia Chilpancingo and their allies at the EHC brought the case into the larger debates about NAFTA and economic integration. In energy politics, local groups and their international partners have framed their struggles in terms of corporate power and government accountability, promoting a larger dialogue about environmental and social injustices in the North American energy economy and in NAFTA's institutions. On the US-Mexico border, environmental justice is indeed linking the local with the global, uniting activists, scholars, and professionals, and enhancing their prospects for future successes.

Appendix: Environmental Justice Organizations in the Borderlands

This appendix provides only an illustrative list, selected from the dozens of organizations and networks involved in environmental justice work along the US-Mexico border. For more thorough accounts, see Bandy 1997; Interhemispheric Resource Center 1997; Bejarano 2002; Kelly 2002; Alfie Cohen 2003; Antal 2003.

Regional Environmental Justice Advocacy Organizations and Networks

Arizona Toxics Information (ATI)
Border Ecology Project (BEP)
Fundación Ecológica Mexicana (Mexican Ecological Foundation)
Greenpeace Mexico
Interhemispheric Resource Center (IRC)
Red Fronterizo de Salud y Medio Ambiente (Border Health and Environment Network)
Southwest Network for Environmental and Economic Justice (SNEEJ)
INCITRA Project (Información Ciudadana Transfronteriza/Cross-border Citizen Information)[13]

Environmental Law and Justice Organizations

Center for International Environmental Law
Centro Mexicano de Derecho Ambiental (CEMDA, Mexican Environmental Law Center)
Comité Cívico de Divulgación Ecológica (Civic Committee for Ecological Disclosure)
EarthJustice Legal Defense Fund
E-LAW Mexico

Labor, Trade, and Workplace Health and Safety Organizations and Networks

Coalition for Justice in the Maquiladoras (CJM)
Comité de Apoyo Fronterizo Obrero Regional (Regional Border Worker Support Committee)
Frente Auténtico del Trabajo (FAT, Authentic Labor Front)
Red Mexicana de Acción Frente al Libre Comercio (RMALC, Mexican Action Network on Free Trade)

Community Organizations, East

Comité Chihuahua de Solidaridad y Defensa de los Derechos Humanos (Chihuahua Solidarity Committee for the Defense of Human Rights)
Comunidad Ecológica de Matamoros (Matamoros Ecological Community, which works with CJM on *maquiladora* toxics issues)
Northeast Environmental Rights Center[14]
Texas Natural Resources Conservation Commission[15]
The Border Commission against Radioactive Waste
The Texas Center for Policy Studies (works with base organizations in Coahuila and Tamaulipas

Community Organizations, Central (Ciudad Juarez/El Paso)

Grupo Ecologista y Participación Ciudadana
Alianza Internacional Ecologista del Bravo
Comité Ecológico de Ciudad Juárez
Enlace Ecológico (Ecological Linkage, Agua Prieta, Sonora)

Community Organizations, West (Baja California/San Diego)

Border Power Plant Working Group/Grupo de Trabajo de Termoeléctricas Fronterizas
Colectivo Chilpancingo Pro Justicia Ambiental (Chilpancingo Pro Environmental Justice Collective)
Comité Ciudadano Estatal (State Citizen's Committee)
Comité de Planeación y Saneamiento (Planning and Sanitation Committee)
ECO-SOL
Environmental Health Coalition (EHC)[16]
Foro Ecologista de Baja California (Baja California Ecologist Forum)
Grupo Ecologista Gaviotas ("Seagull" Ecology Group)
Grupo Factor X/CITTAC (Centro de Información Para Trabajadoras y Trabajadores/Workers Information Center)[17]
Grupo Yeuani[18]
Movimiento Ecologista Mexicano en Baja California (MEBAC, Mexican Ecology Movement in Baja California)

Proyecto Fronterizo de Educación Ambiental (Border Environmental Education Project)

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Notes

1. *Maquiladoras* are "in-bond" assembly plants in Mexico's export processing zones.

2. For more complete treatment of these cases and related issues see Bandy 1997; Alfie Cohen and Méndez 2000; Bejarano 2002; Kelly2002; Kopinak and Barajas 2002; Alfie Cohen 2003; Antal 2003; Kopinak 2004.

3. PROFEPA (Procuraduría Federal de Protección al Ambiente/Federal Ministry for Environmental Protection) is the enforcement branch of Mexico's environmental protection ministry, the SEMARNAT (Secretariat of the Environment and Natural Resources).

4. Ironically, Kettleman City is familiar to US environmental justice advocates as the site of a victory for low-income Latino residents who defeated a hazardous waste incinerator (Kay 1994).

5. Note that even with the SCRs there is still a cost advantage of locating in Mexico over California, where producers must purchase emissions credits to offset emission increases; Mexico does not require offsets (CEC 2005b, p. 14).

6. Costa Azul occupies what was the last contiguous stretch of undeveloped native habitat between the border and Ensenada (Powers 2005b).

7. In April 2003, Costa Azul received the environmental permit from SEMARNAT. In August 2003, they received both the permit from the federal CRE (the Energy Regulatory Committee) and the land use permit from the Municipality of Ensenada (CEC 2006b, p. 26).

8. In January 2005, Mar Adentro received CRE approval and a third permit from the Secretariat of Communication and Transportation (SCT). No municipal land use permit was required for an offshore terminal; approval of pipeline right of way was pending when the project was suspended (CEC 2006b; Lindquist 2005d, 2007).

9. The petition (SEM-05-002) was presented by the Center for Biological Diversity, Greenpeace Mexico, American Bird Conservancy, Los Angeles Audubon

Society, the Pacific Environment and Resources Center, Conservación de las Islas, and Wildcoast.

10. Multiple reports detailing the viability of an alternative energy future for the California–Baja California region can be found on the websites of the leading advocacy groups, including Greenpeace Mexico's comprehensive report on LNG (Greenpeace 2004). See www.greenpeace.org/mexico. For reports from the Border Power Plant Working Group and the RACE coalition (Ratepayers for Affordable Clean Energy), see www.borderpowerplants.org; www.local.org/fercrace.html; www.lngwatch.com.

11. Leading organizations active on LNG include the Border Power Plant Working Group, Comité Ciudadano Estatal, Conservación de Las Islas, Grupo Ecologista Gaviotas, Wildcoast, RACE coalition (Ratepayers for Affordable Clean Energy), Greenpeace Mexico, Amazon Watch, and the Comité Estatal Contra la Instalación de las Plantas Regasificadoras (State Committee Against the Installation of Regasification Plants).

12. *La Jornada* (Mexico City), March 21, 2005.

13. INCINTRA is a collaborative effort involving the Red Fronterizo, BEP, and IRC.

14. Works with the Comité Chihuahua on forests, watersheds, and hazardous waste incineration.

15. The Texas Natural Resources Conservation Commission and The Border Commission against Radioactive Waste assisted local organizations in the defeat of the Sierra Blanca radioactive waste facility and a Chemical Waste Management site in southern Texas.

16. EHC is a San Diego environmental justice group affiliated regionally with the SNEEJ and nationally with the CHEJ (Center for Health, Environment, and Justice). It sponsors the "Border Environmental Justice Campaign" focused on maquiladora hazardous waste, and works closely with the Colectivo Chilpancingo Pro Justicia Ambiental in Tijuana.

17. Grupo Factor X/CITTAC works with CJM, RMALC, Yeuani and others on workplace health, safety, and gender issues.

18. Yeuani works in the area of environmental law, coordinating its efforts with CEMDA.

References

Alfie Cohen, Miriam. 2003. The rise and fall of environmental NGOs along the US-Mexico border. In *Cross-Border Activism and Its Limits*, ed. B. Hogenboom et al. Center for Latin American Research and Documentation.

Alfie Cohen, Miriam, and Luis H. Méndez. 2000. *Maquila y movimientos ambientalistas: Examen de un riesgo compartido*. Grupo Editorial Eon.

Antal, Edit. 2003. Cross-border relations of Mexican environmental NGOs in Tijuana-San Diego. In *Cross-Border Activism and Its Limits*, ed. B. Hogenboom et al. Center for Latin American Research and Documentation.

Bandy, Joe. 1997. Reterritorializing borders: Transnational environmental justice movements on the US-Mexico Border. *Race, Gender, and Class* 5, no. 1: 80–103.

Bejarano, Fernando. 2002. Mexico-US environmental partnerships. In *Cross-Border Dialogues*, ed. D. Brooks and J. Fox. Center for US-Mexico Studies, University of California, San Diego.

Brooks, David, and Jonathan Fox, eds. 2002. *Cross-Border Dialogues: US-Mexico Social Movement Networking*. Center for US-Mexico Studies, University of California, San Diego.

Calbreath, Dean. 2005. Baja LNG terminal gets first contract. *San Diego Union Tribune*, April 12.

Cantlupe, Joe. 2004. Abandoned smelter gets near to cleanup. *San Diego Union Tribune*, June 23.

Cantlupe, Joe, and Dana Wilkie. 2004. Cleanup slated at toxic plant: US-Mexico plan targets closed facility in Tijuana. *San Diego Union Tribune*, June 25.

Carruthers, David V. 2007. Environmental justice and the politics of energy on the US-Mexico border. *Environmental Politics* 16, no. 3: 394–413.

CEC (California Electricity Commission). 2005a. Energy Supply and Demand Assessment for the Border Region. CEC-600-2005-023 (May).

CEC. 2005b. Environmental Issues and Opportunities in the California-Mexico Border Region. CEC-600-2005-022 (May).

CEC. 2006a. Frequently asked questions about LNG. www.energy.ca.gov.

CEC. 2006b. West Coast LNG projects and proposals. www.energy.ca.gov.

Cerda, Magdalena (Coordinator, Colectivo Chilpancingo Pro Justicia Ambiental). 2002. Interview by author, September 27, Tijuana.

Colectivo Chilpancingo Pro Justicia Ambiental y Coalición de Salud Ambiental. 2003. Plan de saneamiento del sitio de Metales y Derivados in Tijuana, Baja California, Mexico.

Dellios, Hugh. 2004. Access law spurs culture shift: Mexicans make use of open information. *San Diego Union Tribune*, February 8.

Dibble, Sandra. 2004. US, Mexico get set for cleanup of abandoned toxic plant. *San Diego Union Tribune*, (June 25).

EHC (Environmental Health Coalition). 2002. Community celebrates opening of new Tijuana Office. *Toxinformer* 21, no. 3: 3–5.

EHC. 2004. Victory at last! Community celebrates Metales y Derivados cleanup agreement. *Toxinformer* 23, no. 3: 3–5.

Enciso, Angelica. 2005. De nuevo, piden revisar proyecto de regasificadora en islas Corondado. *La Jornada* (Mexico City), July 30.

Fritsch, Peter. 2002. Mexican toxic waste case shows Nafta's limits. *Wall Street Journal*, January 16.

García Zendejas, Carla. 2005. Border Power Plant Working Group. Interview by author, October 10, Tijuana.

Gortazar, Iciar. 2005. Foro internacional de lucha contra el gas natural licuado. *El Vigia en Linea*, Ensenada, February 15.

Greenpeace. 2002. Terra Sempra: A report on plans to develop the California/Baja California border region as a dirty energy export zone. San Francisco.

Greenpeace Mexico. 2004. Gas natural licuado: El fin de la independencia energética. Mexico City.

Hogenboom, Barbara, Alfie Cohen, and Edit Antal, eds. 2003. *Cross-Border Activism and Its Limits*. Center for Latin American Research and Documentation.

Interhemispheric Resource Center. 1997. Cross-border links 1997: A directory of organizations in Canada, Mexico, and the United States. Albuquerque.

Kay, Jane. 1994. California's endangered communities. In *Unequal Protection*, ed. R. Bullard. Sierra Club Books.

Keck, Margaret, and Kathryn Sikkink. 1998. Activists beyond borders: Advocacy networks in international politics. Cornell University Press.

Kelly, Mary E. 2002. Cross border work on the environment. In *Cross-Border Dialogues*, ed. D. Brooks and J. Fox. Center for US-Mexico Studies, University of California, San Diego.

Kopinak, Kathryn, ed. 2004. *The Social Costs of Industrial Growth in Northern Mexico*. Center for US-Mexico Studies, University of California, San Diego.

Kopinak, Kathryn, and Maria Del Rocio Barajas. 2002. Too close for comfort? The proximity of industrial hazardous waste to local populations in Tijuana Mexico. *Journal of Environment and Development* 11, no. 3: 215–247.

Lindquist, Diane. 2002a. Proposed plants fuel passions. *San Diego Union Tribune*, March 4.

Lindquist, Diane. 2002b. Energy plants face Baja backlash. *San Diego Union Tribune*, November 29.

Lindquist, Diane. 2003. Court hears suit against power lines from Mexico. *San Diego Union Tribune*, April 19.

Lindquist, Diane. 2004a. InterGen gives in, unplugs turbine. *San Diego Union Tribune*, January 17.

Lindquist, Diane. 2004b. Mexican agency warns of potential for LNG disaster. *San Diego Union Tribune*, January 23.

Lindquist, Diane. 2005a. Power plant billing could go to tribunal in Paris. *San Diego Union Tribune*, March 11.

Lindquist, Diane. 2005b. Mexico pushes forward with LNG plans. *San Diego Union Tribune*, February 27.

Lindquist, Diane. 2005c. Sempra LNG gets contract to supply Mexico's power agency. *San Diego Union Tribune*, January 12.

Lindquist, Diane. 2005d. Oil firm's LNG plan gets OK of Mexico. *San Diego Union Tribune*, January 7.

Lindquist, Diane. 2005e. Another entry in the LNG stakes. *San Diego Union Tribune*, February 3.

Lindquist, Diane. 2005f. Legal hurdles await Baja LNG project. *San Diego Union Tribune*, September 8.

Lindquist, Diane. 2005g. Sempra's gas venture gathering steam at Baja site. *San Diego Union Tribune*, October 24.

Lindquist, Diane. 2006. Permits on 2 power plants in Mexico OK. *San Diego Union Tribune*, December 1.

Lindquist, Diane. 2007. Chevron gives up on building LNG plant. *San Diego Union Tribune*, March 13.

Lindquist, Diane, and Sandra Dibble. 2004. Plans for Baja fuel plant are dropped. *San Diego Union Tribune*, March 2.

Lujan, Lourdes. 2002. Promotora, Colectivo Chilpancingo Pro Justicia Ambiental. Interview by author, September 27, Tijuana.

Mier, Fidel. 2004. No se establecerán regasificadoras en BC. *El Sol de Tijuana*, August 17.

Moreno, Arturo. 2005. Greenpeace Mexico. Interview by author, June 2, Mexico City.

NACEC (North America Commission for Environmental Cooperation). 2002a. Citizen Submissions on Enforcement Matters: Metales y Derivados, Submission SEM-98-007.

NACEC (North America Commission for Environmental Cooperation). 2002b. Environmental Challenges and Opportunities of the Evolving North American Electricity Market.

Naumann, Talli. 2005. Courage, fortitude evident in confrontation over Baja Peninsula gas plans. *The Herald Mexico: El Universal*, May 23.

Niller, Eric. 2002. LNG terminal plans proliferate in Baja California. IR/PS in the news: Eoamericas. Graduate School of International Relations and Pacific Studies, University of California, San Diego.

Ovalle, Fausto. 2005. Anuncian marchas contra plantas de gas. *La Frontera*, Tijuana, February 20.

Powers, Bill. 2005a. Energy, the environment, and the California-Baja California border region. *Electricity Journal* 6, no. 6: 77–84.

Powers, Bill. 2005b. Border Power Plant Working Group. Interview by author, September 20, San Diego.

Rea Torres, Hugo, and Conrado Osuna Murillo. 2004. Autorizar gaseras, tración a la patria. *El Mexicano*, Ensenada, August 17.

Rodriguez, Israel. 2005a. Arriesga el ecosistema la planta de regasificación en Tijuana. *La Jornada* (Mexico City), March 7.

Rodriguez, Israel. 2005b. Manifestaciones en Ensenada y Tijuana contra regasificadoras. *La Jornada* (Mexico City), March 21.

Salinas, Juan Arturo. 2003. La batalla de Chevron y Marathon oil en Tijuana. *Proceso* (Mexico City), June 21.

SCERP (Southwest Center for Environmental Research and Policy). 2003. *The US-Mexican Border Environment: Trade, Energy, and the Environment*. San Diego State University Press.

Sullivan, Kevin. 2003. A toxic legacy on the Mexican border: Abandoned US-owned smelter in Tijuana blamed for birth defects, health ailments. *Washington Post*, February 16.

Treat, Jonathan. 2002. Baja Energy and Environment Update. Americas Program, Interhemispheric Resource Center.