

CHAPTER 14

Golgotha Mexicana: *Climate Refugees, Free Trade, and the War Next Door*

A new day has begun and it looks like night.

—CHARLES BOWDEN, *Murder City*

THE WIND OFF the Mexican desert was cold and gritty. A pale winter sun slipped away, and the shadows of Juarez reached long across the streets. I was riding with a Mexican army patrol in a military truck that bounced and lurched across the broken terrain. Cinderblock shacks sat scattered haphazardly over the steep little hills and gullies. We were driving around and around waiting for violence. That is what the soldiers do here: drive in loops, then stop for snacks, then drive some more. Soon a bullet-ridden corpse would turn up. Several do every night, because this is one of the most violent cities in the world.

A gum-chewing soldier in the back of the truck, holding his G3 rifle in a gloved hand and the truck roll bar with the other, had a plan for Juarez: "martial law." He scanned the flat rooftops through pale yellow wrap-around shooting glasses. "A curfew. House-to-house searches. Take all the weapons. No mercy."

They say there is a war in Mexico, and the body count makes it look that way. Close to thirty thousand people have been killed here since 2006, when President Felipe Calderón deployed the military into the border

cities to fight the drug war.¹ By 2009, more than eleven hundred of the dead were soldiers, police, and security officials. A classified Mexican government report described 2009 as the deadliest year to date with over ninety-six hundred killed; the next year was even worse.²

At the end of 2009, when I spent some time drifting around the border region, Juarez—shabby, grime smeared, semiabandoned—clocked a staggering twenty-six hundred killings.³ Many of these incidents also involved kidnapping, torture, and mutilation. El Paso, on the other hand, counted only four murders. Some Juarez murders happened one at a time, some in massacres of up to eighteen victims at once.⁴ Some happened in the dead of night, others during noontime traffic jams. New Year's Day 2010 began with a mass killing: more than a dozen gunmen attacked a house party of middle-class high school students, killing thirteen and wounding two dozen.⁵ Then two US embassy officials were ambushed and murdered. By late April 2010, twenty-nine police officers had already been killed in Juarez; then gunmen ambushed two police vehicles in the middle of town, killing seven more cops. Around the same time, gunmen raided the customs office on the Mexican side of the international bridge linking Camargo, Mexico, to Rio Grande, Texas. The same day, in La Union, Guerrero, police were attacked with grenades. A police chief and two deputies were executed in the farm town of Los Aldamas, Nuevo Leon. The police chief of a nearby town was decapitated. Then, around the same time, gunmen ambushed and killed the assistant police chief of Nogales, Sonora, and his bodyguard. In the states of Tamaulipas and Nuevo Leon, dozens of narco gunmen launched simultaneous attacks on two army garrisons; eighteen of the attackers were reported killed. A car bomb went off in Juarez, and seventeen migrants were massacred in Tamaulipas about one hundred miles from Brownsville, Texas.⁶ These days, Mexican mayors, police officials, and drug-rehab patients are all routinely murdered in shockingly large numbers. The list of strange atrocities could go on and on.

Political Teleconnections

At first glance, this crisis of violence seems to have little to do with climate change—drug dealers do not murder cops because the Intertropical

Convergence Zone is off kilter. But, on closer examination, the meltdown of northern Mexico provides another illustration of the catastrophic convergence: policies that create poverty and violence are now colliding with the new realities of climate change, and together these three forces are creating socially destructive forms of adaptation.

As I explored Juarez, it became clear that climate change is already an important factor in the crisis. First and foremost, climate change is undermining agriculture and fishing. Along with neoliberal economic policies, it is driving rising unemployment and pushing people north, toward the United States, and into the traps of the underground drug economy.

Mexico is being hammered by climate change. The northern half of the country is in the grips of the worst drought in sixty years, while the southeastern areas are being deluged. A recent study found that for every 10 percent decrease in crop yields, 2 percent more Mexicans will leave for the United States. The same study projects that 10 percent of the current population of Mexicans aged fifteen to sixty-five could attempt to emigrate north as a result of rising temperatures.⁷

The year 2010 saw more freakish weather: rains destroyed much of the bean harvest in the Pacific Coast states of Nayarit and Sinaloa; rivers burst their banks and flooded crops in Michoacán. Hurricane Alex soaked northeastern Mexico, killing at least thirty people and destroying crops. Mass flooding hit Tabasco for the second time in four years; in 2007, floodwaters inundated 80 percent of that state.⁸

Migration

In 1990 the Intergovernmental Panel on Climate Change predicted that "the gravest effects of climate change may be those on human migration." Increased storms, droughts, flooding, proliferation of pathogens, and rising seas will wreak havoc upon the world's urbanized coastlines and agricultural economies. This suggests a future in which millions of people will be on the move. A one-meter rise in sea level—almost certain by the century's end, barring some strange intervention by Mother Nature, like a radical solar minimum—will inundate terrain currently housing about 10 percent

of the world's population. Many other people living far from the sea, on semiarid agricultural lands, will be unable to adapt and forced to move.

In this light, the US-Mexico border becomes a template for understanding dangerous global dynamics. All over the world, borders and policing regimes are hardening as restrictive immigration policies are matched by a xenophobic style of politics.

By 2050 global population is expected to peak at 9 billion, and global temperatures are likely to be close to 2°C hotter than today, or more. How many environmental refugees will there be? A report from the International Migration Organization was realistic about the uncertainties, noting, "Current estimates range between 25 million and 1 billion people by 2050." The report also explained that "as is already the case with political refugees, it is likely that the burden of providing for climate migrants will be borne by the poorest countries—those least responsible for emissions of greenhouse gases."⁹

Britain's 2006 Stern Review estimated that between 200 and 250 million people would be uprooted by climate change. That is 10 times the current number of refugees in the world.¹⁰ Let that sink in for a moment. Bangladeshi academic Atiq Rahman had it correct when he warned, "Millions of people will be moving. No amount of nuclear submarines will be able to stop that."¹¹ Another report estimated there are 214 million international migrants in the world today. "If this number continues to grow at the same pace as during the last 20 years, international migrants could number 405 million by 2050."¹²

Migration unfolds in a series of knock-on effects that mask causal relationships. In poor countries, it is not necessarily the poorest and hardest hit who migrate the first and furthest. "The ability to migrate is a function of mobility and resources (both financial and social). In other words, the people most vulnerable to climate change are not necessarily the ones most likely to migrate."¹³

Here the catastrophic convergence reveals itself again: the climate crisis adds its propellant power to the already unfolding, highly destructive legacy of neoliberalism and Cold War military adventures. Climate change acts as an additional causal factor in shaping already-established migra-

tion flows. And in the face of rising migration, the borders between wealthy core economies and the developing world harden and militarize.¹⁴

Who Is a Climate Migrant?

On the south bank of the Rio Grande I met José Ramírez. Squat and ruddy faced, dressed in jeans and a hooded sweatshirt, he was unemployed and gazing across the river at the United States. He had been a fisherman in Michoacán but was displaced by the economic aftershocks of 1997–1998's El Niño. His story reveals the connections between environmental and economic crises.

"The sea became red, and all the fish just disappeared," Ramírez said in explaining why he left his home. The coast of Michoacán was becoming warmer, both the land and the sea. At first he hung on, but El Niño had put him into debt. Ramírez's family had run a little restaurant but had to close it when everyone took an economic hit. Eventually, he had to sell his skiff and outboard motor. Then he worked on a large shrimp fishing boat, but the income was minimal. So a couple years after the weather shock of El Niño, he moved north to Juarez, aiming to come to the United States, which he did. For about a year he worked illegally as a roofer in Las Cruces, New Mexico, but then he was caught and deported.

Now he is waiting to go back. "I even talked to my old boss on the phone. He said he has work for me," Ramírez said, looking across the dry Rio Grande into downtown El Paso. But it is difficult to cross the border these days. He needs money to hire a professional coyote. And there is no work here in Juarez. Between the global economic downturn and the city's extreme drug violence, industry is in decline. Ramírez makes just enough to survive from occasional day labor.

"The killings around here make it very hard. I saw a child killed right in front of me. Not far from here at a store, they shot a man and then the child. I don't want to get involved in drugs. I just want to do honest work," Ramírez said.

What happened to José Ramírez? In simple terms, the El Niño pushed him into debt, which in turn forced him to migrate north. As I have repeated

throughout this book, it is impossible to say that a warmer globe has caused any single weather event. But the pattern of association is clear: increased surface temperatures correlate with more El Niño events.

Climate change unfolds as part of a matrix of causality. The warm water of the El Niño triggered the poisonous red tide algae bloom that killed and pushed away the fish and thus began Ramírez's sojourn in the north. But the toxic algae bloom was not produced by warm water alone. It was also created on land by rampant development of tourist hotels, golf courses, and agroexport fruit plantations, all of which discharge more sewage and organophosphates into the sea, feeding toxic algae blooms.

Compounding this increase in organic pollution is the decline of natural defenses in the form of mangrove forests and wetlands. Mangrove forests grow on tidal flats and clean freshwater runoff by absorbing the nutrients that otherwise feed algae blooms. Their decline means more algae. The same uncontrolled development that adds organic pollutants to coastal waters also clears away mangroves. According to the United Nations' Food and Agricultural Organization, Mexico had 1.4 million hectares of mangrove forest in 1971. By 1999, those coastal woodlands had dropped by almost half to only 733,000 hectares.¹⁵

Likewise, the social impacts of the red tide were not inevitable but were created in part by political economic policies. For example, why were the fish stocks not more robust? Because Mexico's fisheries are badly managed and in decline; catches have been level since 1980 despite ever more investment.¹⁶ Why was there no public system of support for José Ramírez during his difficult times? Because Mexico is now a social laboratory of radical free market orthodoxy.

Neoliberal Fish

The Mexican Revolution was broadly progressive in character. Among its many reforms, it reserved the best fish stocks for small individual fisherman and state-sponsored cooperatives. "Throughout the 1930s co-operatives were progressively awarded concessions to national fish stocks, a process that culminated with the 1947 Fishing Law granting them exclusive access

rights to the nine most important inshore marine and shellfish fisheries."¹⁷ Subsistence or artisanal fishermen got the rest. How fish were caught, processed, and sold was, like much of the economy, encased in layers of regulation defined by economic nationalism. A parastatal enterprise called Productos Pesqueros Mexicanos, or Propemex, controlled fish packing and processing, price regulation and marketing.¹⁸

During the Latin American debt crisis of the 1980s, Mexico steadily liberalized its economy. The end goal of the process was a free trade agreement with the United States and Canada. As part of that, Propemex with all its canneries, processing factories, and vessels, was privatized. Deregulation of the banking sector allowed private firms to push aside government financing of the fishing sector.¹⁹ In 1989 foreign ownership of up to 50 percent of fishing and fish-processing industries was allowed.²⁰ The monopoly of the co-ops was ended, forcing them to compete with the private sector for formal access rights. The state reduced public expenditures by selling the main state-owned fish processor and exporter to a private bank and reducing subsidies to small fishermen. More broadly, between 1982 and 1994, 940 of 1,155 publicly owned businesses throughout the economy were privatized or liquidated. And previously closed markets were opened. In exchange for all of this, Mexico got greater access to US markets.²¹

The neoliberal model of fisheries management has come at a high social and environmental cost. Stocks have plummeted and poverty has risen among fishing communities. As the state downsized its role and private capital moved into a heavily regulated sector, official corruption and marine-resource poaching grew.²²

The little regulation remaining is often circumvented in what veteran *Times* reporter Tim Wiener called "the great divide between Mexico's laws and its law enforcement." Officials have estimated that as many twelve thousand unregulated fishing boats work the Sea of Cortez alone.²³ Foreign boats take much of the fish: Mexico's fleet accounts for less than 10 percent of the total catch, with the rest going to boats from the United States, Canada, and Japan.²⁴ This bad management of fish resources has made people like José Ramírez vulnerable to the new freak weather and

helped push them away from their original livelihoods and toward Mexico's cities and the United States.

The story of José Ramírez, multiplied across the country, is the story of climate change expressing itself through the political economic realities of neoliberalism. While it is impossible to say that climate change caused the 1997–1998 El Niño, we know that a hotter planet will likely lead to more extreme weather events like the El Niño–Southern Oscillation and more toxic algae blooms. Combined with bad economic policies, climate change is already creating climate refugees.

Pushed from the Sierra

On the southwestern edge of Juarez, where the slums creep up into the Sierra Madre, I met other climate migrants in a *colonia* of Rarámuri Indians. Also known as the Tarahumara, these famous long-distance runners come from southern Chihuahua's Sierra Madre Occidental. Their urban *colonia* replicates a mountain village centered around a plaza and a yellow-walled catholic church. Above them looms a cold, grey massif. On a fence hung two drying cowhides from animals slaughtered for the holidays. Many of the Rarámuri men were out of work or had only intermittent day labor, and many were drunk. The Indians moved here because jobs pulled them north, but drought back home is also pushing them.

"We have no rains there, so many people are coming here," said Celso Nava Galindo. Thirty-six, he moved from a village seven hours away called Bocoína. "No rain, no people," said Galindo. "Back home we survive by farming and speak our own language. But the drought makes it very difficult."

In 2008, travel writer Richard Grant noted the same: "The Tarahumara had moved out of the area now. It was climate change as much as anything. There had been twelve drought years in the last fifteen. And it was becoming impossible for subsistence farmers to keep themselves alive. Of all the problems and challenges the Tarahumara are up against, this was the most intractable."²⁵

When farming gave way to drought, Galindo became a full-time logger, but when the trees were cleared, he lost his job. So he came to Juarez—like the timber from his homeland—and worked in construction. Like the other men in the plaza, he explained the drought in local and empiricist terms: “Too much logging.”

Indeed, the forests of the Sierra Tarahumara are under strain; almost 90 percent of the lumber produced in Chihuahua State comes from there. Mexico as a whole, never heavily wooded, has cut down more than one-third of its forests. The 1980s, the decade of steady liberalization leading to the North American Free Trade Agreement (NAFTA), saw rapid deforestation. Between 1990 and 2005, Mexico lost 6.9 percent of its forest cover.²⁶

The men on the plaza may be correct that deforestation is a cause of the drought. However, the problems extend beyond their sierra. Much of Mexico is suffering dry and erratic weather, including sudden flooding in otherwise drought-plagued areas. Increasingly, climate change will be the central dynamic in migration. The World Watch Institute reports, “Desertification affecting [Mexican] drylands is leading some 600,000 to 700,000 people to migrate annually.” In 2009 and 2010, thanks to an El Niño, Mexico was gripped by the worst drought in decades. In many parts of Mexico, ownership of water has been even more important than ownership of land.²⁷ “Almost 40 percent of the farm land inspected by the government has been affected by the drought, causing shortfalls in the harvests of corn, beans, wheat and sorghum,” reported a business wire. And the Mexican government spent more than \$100 million on emergency crop-insurance aid to farmers.²⁸ It announced that drought had reduced the 2009 harvest of the staple white corn by 10 percent but insisted that “the supply for human consumption will be guaranteed.”²⁹

CARE International examined desertification and migration in Mexico, finding more evidence of climate-driven dislocation. “When our harvest is bad, we have to rely on ourselves,” explained one farmer. “Many of us had to leave, to Canada or the United States. . . . The money I made there . . . was a big help for my family. Without that income, it would have

become extremely difficult." Another farmer told CARE, "My grandfather, father and I have worked these lands. But times have changed. . . . The rain is coming later now, so that we produce less. The only solution is to go away."³⁰

Further south, similar conditions obtain. The warming of the Pacific off Peru has meant that Guatemala faced its worst drought in three decades. In 2009 corn crops failed in four provinces, and four hundred thousand peasant families needed food aid. The government pleaded for \$100 million in emergency donations. In El Salvador, Hurricane Ida brought massive flooding: fifteen thousand people were displaced, and more than two hundred died. But the real devastation from that storm would arrive later as eroded soil, failed crops, and mounting household debt drove people off the land into cities and beyond, to Mexico and then north again.

When displaced populations meet with more poverty and unemployment, slum living, the lure of the underground narcotics trade, state corruption, inequality, and a media landscape full of materialism, narcissism, sexism, and blood lust, the resulting anomie and relative deprivation they experience fuels crime. Crime justifies Mexican state repression and, as we shall see later, a xenophobic hardening of policing in the United States. In this fashion, a crisis of natural systems becomes a crisis of urban violence and border repression.

The catastrophic convergence as it unfolds in northern Mexico links migration, economics, violence, and climate. To understand the social breakdown that is the Mexican drug war and into which climate refugees now flow, we must understand the country's economic history, because the strange new weather that drives people off the land is articulated through the economic realities history has bequeathed. This is evident in the case of José Ramírez, the fisherman from Michoacán, and Celso Nava Galindo, the Rarámuri farmer turned logger, then urban day laborer. Migrants like them are not merely *pushed* away by drought, floods, and algae blooms; they are also *pulled* into the vortex of migration and border politics by the lure of industrial work. Thus, making sense of climate change in Mexico and at the militarized US border requires a foray into the economic history of the Mexican Revolution and the transformations wrought by NAFTA.

Insurgent Mexico

From 1920, when the guns of the revolution fell silent, until the early 1980s, the Mexican economy developed along inward-looking, state-led corporatist lines in a pattern similar to Brazil's and common throughout Latin America. Under Porfirio Díaz, Mexico was said to be the mother of foreigners and the stepmother of Mexicans.³¹ As *The Nation* correspondent and historian Carlton Beals described in his biography of Díaz, "His group had only one basic idea, to steal, much, often and scientifically."³² This was particularly so after the US war with Spain in 1898, when under commercial pressure from the north, Díaz slipped into the authoritarian *caudilloismo* for which he is best known. Economic depression in 1903 made it worse. Strikes during the recovery in 1906 and 1907 were met with vicious repression. His methods—*pan o palo*, "bread or stick"—combined repression and corrupt patronage. During his last decade in power, economic policy was in disarray, and in response to the international economic crises of 1893 and 1903, Díaz borrowed heavily and at high rates of interest.³³

By the eve of the revolution, power relations in Mexico were rotten. Beals painted a picture (perhaps exaggerated) of unbearable humiliation: "Everywhere, the *hacendado* had first right to women. Frequently the *hacendado*, or foreman, after enjoying a girl just entering puberty, would call in some young peon, with the remark 'this is your wife' such was the marriage ceremony."³⁴ At the top of this heap was Díaz.

When the revolution against him finally broke out, it was a chaotic affair, pitting geographically and ideologically heterogeneous forces against Díaz and his backers: hacienda landlords, the corrupt officialdom, and large foreign capitalists, mostly British and European.³⁵ The rebels included Liberals, demanding free politics; Indian peasants, demanding land; cowboys and gangsters, demanding loot; and nationalist entrepreneurs, seeking a path toward modern economic development. As Frank Tannenbaum put it in his contemporary classic *Peace by Revolution*, "The Mexican Revolution was anonymous. It was essentially the work of the common people. No organized party presided at its birth. No great intellectuals prescribed its program, formulated its doctrine, outlined its objectives."³⁶

Article 27 and the Corporatist State

In victory, the revolution settled on an agenda of economic modernization and capitalist development that pivoted, interestingly, on the world's first socialist constitution.³⁷ More specifically, Article 27 of that 1917 document read, "In the Nation is vested the direct ownership of all natural resources." That meant all lands, minerals, and forests, all the waters and all the fish. The actual text goes on in great detail to enumerate "precious stones, rock-salt and the deposits of salt formed by sea water . . . petroleum and all solid, liquid, and gaseous hydrocarbons."³⁸ (Even the rock salt!) At the heart of Article 27 was land reform, which liberated much of the peasantry from debt peonage. By 1940 almost 23 percent of all land was collectively owned in the *ejido* system, up from 1.6 percent at the end of the revolution.³⁹ In 1960, about 20,000 *ejidos* with about 2 million members worked "slightly less than half of all cultivated land."⁴⁰

The relatively autonomous state sought to spur economic development through policies of import-substitution industrialization (ISI). Like Brazil and many other Latin American states during the twentieth century, Mexico forged a limited labor-capital compact. The state owned some industries and imposed controls upon others. Ultimately, this semisocialist set of interventions formed part of "an alliance for profit" with business.⁴¹

In exchange for cooperating and negotiating with trade unions, Mexican capitalists were allowed to form monopolies and cartels. They were also forced into state-managed business chambers. The state supported business with subsidies, protective tariffs, and regulations designed to blunt the most ravaging effects of unbridled interfirm competition and protect Mexican companies from foreign rivals. Partial state ownership allowed stronger sectors of the economy to support weaker sectors.⁴²

The state provided cheap and stable credit as "foreign ownership of the banking system was progressively replaced by national and state ownership."⁴³ The new credit system facilitated "the progress of the agrarian reform" and developed a crop-based, rather than land-based, credit system for small individual proprietors and "peasants holding communal lands in villages." By these arrangements they could access ready credit, but com-

munal lands would not carry mortgages or be foreclosed on.⁴⁴ Meanwhile, trade unions won legal rights, although organized labor's more radical elements were marginalized. Union agitation and collective bargaining increased wages, which in turn spurred consumption and the growth of internal markets, and that encouraged more productive investment, creating further employment, consumption, profits, and so on.⁴⁵ All these progressive reforms allowed Mexican industry to compete with the more powerful British and American interests that had dominated business and trade (but not agriculture) under Porfirio Díaz.⁴⁶

Cárdenas and Oil

This Mexican version of corporatism deepened significantly in the late 1930s under President Lázaro Cárdenas, who accelerated land reform and the nationalization of basic industry. "The assumption underlying Cardenas' policies was that while capitalism was necessary for development, capital, like labor, could be controlled and regulated by the state."⁴⁷ Cárdenas "emphasized programs to improve the lot of the lower classes, especially the Indians, through education, redistribution of land, collective farms (*ejidos*), curbs on foreign capital, and a larger role for state-run enterprise."⁴⁸

By 1937, Cárdenas had nationalized the railroads and set his sights on the ultimate prize: petroleum. That brought him into direct confrontation with Standard Oil of New Jersey, Shell, and the US government. But Cárdenas prevailed and expropriated the Mexican operations of the international petroleum firms to create the state oil company *Petróleos Mexicanos*, or Pemex.⁴⁹

But the system had its problems. By centralizing power and excluding, but not smashing, capital, the Mexican state opened the way for serious corruption. The idea was that the state should be the "rector of the economy." Business was excluded from politics and denied access to decision-making circles; owners of private businesses were not even allowed to be part of the ruling party.⁵⁰ Yet, formal exclusion of the private sector from official channels of influence encouraged businessmen to cultivate informal influence and access. Corruption and clientelism resulted.

By the 1960s, some industries had founded autonomous chambers that opposed state involvement in the economy. The most powerful of these were the Businessmen's Council, formed in 1962, and the Businessmen's Coordinating Council, created in 1975. Within these elite factions, pressure for a rightward turn in economic policy would grow.

Oil's Cursed Boom

The corporatist model fell upon hard times during the 1970s. Sagging growth and rising inflation were coupled with increasing public debt. At the same time, an oil boom began to distort the Mexican economy. In 1973, just as new oil reserves came into production, prices surged, going from \$3 to \$12 per barrel.⁵¹

At the same time, social pressure was growing throughout Mexico: farmers, workers, and, most of all, students and urban youth were forming active social movements. Their protests were met with arrest, torture, murder, and even massacre. Ten days before the 1968 Summer Olympics opened in Mexico City, soldiers opened fire on a student protest at La Plaza de las Tres Culturas at Tlatelolco. Some two to three hundred were killed, hundreds more wounded, hundreds arrested and beaten, with scores of bodies taken away and hidden by troops.⁵²

Amidst the rising tension, Luis Echeverría began his six-year term as president in 1970. Personally implicated in the slaughter of protesting students at Tlatelolco in 1968, President Echeverría attempted to shore up the state's legitimacy with a neopopulist program of political and social reforms. "Shared development" was the catch phrase; a massive expansion in public spending, the means. Among other things, the number of university students increased by 290 percent between 1970 and 1976.

The stimulus was paid for with oil income, which was rising as international petroleum prices spiraled upward. But Echeverría needed more revenue. He needed to collect more taxes from the rich but could not because too many were hiding their wealth abroad. So, the government increased borrowing on foreign markets.⁵³ Under Echeverría, foreign debt shot from \$3.2 billion to \$16 billion. With the stimulus came inflation. In

August 1976, Echeverría's debt bubble burst, and the peso was devalued 45 percent. Mexico had been a low-inflation country, but in the early 1970s, prices began to rise from an annual average increase of 3.6 percent between 1965 and 1970, to 30.5 percent between 1977 and 1982. By the mid-1980s inflation averaged 90 percent.

The next president, José Lopez Portillo, continued the balancing act: he repressed the radical Left but allowed the Communist Party to run in elections. He spent lavishly on development projects and invested in neglected sectors like agriculture, housing, health, and education. Again, oil prices were surging. Between 1979 and 1980, Mexican oil income grew by almost two-thirds.⁵⁴ Yet, the government still had to borrow to pay its bills. The economy was growing by 8 percent per year, many companies were operating at full capacity, and Mexico's small stock market was booming. From the early 1960s through the 1970s the number of primary schools doubled, and the illiteracy rate fell to 15 percent; the infant mortality rate fell by half, thanks to a nearly tenfold increase in the number of public doctors.⁵⁵

Logic of Loans

In theory, the strategy of taking loans against future oil incomes was sound. As international oil prices increased, so too did the value of Mexico's untapped petroleum. Mexican planners sought to avoid the "resource curse" of developing into an unbalanced, petroleum-fixated economy. Mexico's leading politicians wagered that while credit was cheap and oil income high, they could renovate the nonoil sectors of the economy with petroleum-collateralized debt. Because of the oil boom, credit was cheap: financial markets were awash in liquidity because most petrostates lacked the capacity to invest their windfall earnings internally. These so-called petrodollars were recycled through international financial markets. Diversified and balanced economic growth would allow Mexico to generate tax revenue with which to repay the loans. With this strategy, Mexican technocrats sought to avoid the "mistakes of Venezuela," which had spent most of the century exporting oil and squandering the income. The trick was to *invest* the petroleum-collateralized income in production, not just *spend* the money on imports.⁵⁶

Alas, imports did not decline, and domestic production did not surge. The peso's value rose, making imports cheap: grain imports doubled between 1979 and 1980; the oil and service sectors drew away talent. Agriculture, the heart of Mexican society, stagnated amidst the boom, as did other nonoil sectors. Poverty remained severe and widespread. By the end of 1980, Mexico owed \$33 billion to foreign banks. As crisis loomed, President José Lopez Portillo insisted, "Our economy is not petroled." In fact, it was: nearly 75 percent of Mexico's export earnings came from petroleum.⁵⁷

The Mexican economy was now like a waiter rushing forward with a tray full of dishes: keep moving and you are okay. But, as the bankers say, "It's not speed that kills; it's the sudden stop."

Crash

The sudden stop took the form of that disciplinary recession unleashed in 1979 when the US Federal Reserve, under Paul Volcker, jacked up rates. This triggered (but did not cause) the Latin American debt crisis. As the crisis worsened, the International Monetary Fund (IMF) and World Bank stepped in. As chapter 13 on Brazil explains, assistance from the Bretton Woods institutions came with strings attached: emergency loans were given only if austerity was imposed and exports increased. But increased exports meant an oversupply of primary commodities and therefore declining prices. Thus, the debt crisis begat the commodity crisis, a prolonged period of low prices for primary commodities such as timber; metal ores like iron, bauxite, and tin; grains and foods like sugar, coca, coffee; and, to some extent, oil. By one estimate, commodity prices declined 35 percent during the 1980s.⁵⁸ As a result, many economies in the Global South—the ones now feeling the first effects of climate change—suffered relative stagnation for nearly two decades. Only the overflow of the long Chinese boom and the early impact of climate change finally broke the torpor beginning around 2004 and accelerated to the food crises of 2008 and 2010.⁵⁹

The commodity crisis essentially had three causes: (1) the economic slowdown in the developed countries; (2) the rise of synthetic subsidies in

part as a result of the oil-price hikes of the 1970s, which raised incentives for new industrial engineering techniques; and (3) the structural-adjustment policies of the IMF and World Bank that forced debtor nations to increase exports and devalue their currencies.⁶⁰

In the summer of 1981, as the effect of Volcker's monetarist squeeze went international, oil prices began to slide, and Mexico faced badly diminished revenues and the world's largest foreign debt: \$70 billion. Mexican economists had projected the country would have oil revenues of \$20 billion in 1981 and \$27 billion in 1982. Both borrowing and domestic spending were based on those figures. In 1981, however, oil brought in a mere \$14 billion, and the next year was also below target.⁶¹ The cost of debt servicing now consumed most of Mexico's projected petroleum sales, thus most of its foreign earnings.⁶² By the summer of 1982, Mexico owed almost \$81 billion to foreign banks, and that sum was growing. To avoid default, the peso was devalued, and the government imposed limited capital controls. It was the second devaluation of the year.⁶³ Rich individuals and private firms began to panic and shift their wealth out of the country.

On August 12, 1982, Mexico announced that it could not pay its bills and took the first steps toward default, declaring a ninety-day moratorium on repayment. The peso was devalued 30 percent and before year's end would drop another 53 percent.⁶⁴ As the *New York Times* explained, "A default by Mexico could have serious effects on the American banking system and on banks throughout the world. According to one American banker, some United States banks have as much as 90 percent of their capital on loan to Mexico. Even at banks with relatively small exposure, the Mexican loans represent 30 percent of their capital."⁶⁵ In early September, President José Lopez Portillo nationalized the country's private banking system, freezing negotiations with the IMF.⁶⁶

Bailout '82

The eventual compromise involved the US Federal Reserve, the IMF, and most of the 800 banks to which Mexico owed money.⁶⁷ In exchange for \$12 billion in credit, Mexico began economic liberalization and imposed

austerity. Out went Keynes; in came Hayek. The government sold 106 state-owned companies and agencies. These included sugar mills, shipyards, textile and power plants, as well as the parastatal processing plants and the export-marketing firm Ocean Garden Products, to which the unemployed fisherman José Ramírez would have sold his catch.⁶⁸

Privatization brought new owners who broke unions, fired workers, and drove down wages. By decade's end, 1,155 state businesses had shrunk to only 400. The government earned less than \$2 billion from these privatizations, which went to service debts.⁶⁹ At the same time, food subsidies were slashed; those for eggs, milk, cooking oil, sugar, beans, and rice were eliminated completely. The retail price of gasoline and natural gas doubled.⁷⁰ By 1986, the purchasing power of the average Mexican was about half of what it had been in 1982.⁷¹

President José Lopez Portillo, however, retired to a \$30 million mountaintop mansion, a monument to venality and arrogance that included a walk-in "refrigerator for furs," a library with space for a million volumes, and "an astronomical observatory that is better equipped than National University's."⁷²

NAFTA

Mexico's trial by debt began the long march to the North American Free Trade Agreement. The agreement culminated a process of liberalization born of the 1982 debt crisis. Along the way, Article 27 of the 1917 constitution was eviscerated; among other things, it now allows greater foreign investment. On January 1, 1994, NAFTA took effect.⁷³ At the same time, in the southern Mexican state of Chiapas, the Zapatista National Liberation Army, a group of mostly indigenous peasants, rose up against the government, calling NAFTA a death sentence for Indians.⁷⁴

According to its main booster, former Mexican president Carlos Salinas, NAFTA would empower Mexico "to export goods, not people."⁷⁵ The rural economy would be modernized, and farmers who could not adapt would find work in the expanding industrial and service sectors.⁷⁶ But what did free trade really do for Mexico? An almost quizzical article published in

the *New York Times* in 2009 answered this as follows: "In some cases, NAFTA produced results that were exactly the opposite of what was promised. For instance, domestic industries were dismantled as multinationals imported parts from their own suppliers. Local farmers were priced out of the market by food imported tariff-free. Many Mexican farmers simply abandoned their land and headed north."⁷⁷ The piece went on to note that, although the value of Mexico's exports had quintupled in fifteen years, almost half a million people each year were outmigrating in search of work, a disproportionate number of them from the countryside. With only one-quarter of Mexico's total population, the countryside accounts for 44 percent of all Mexican immigrants moving to the United States.⁷⁸

Under NAFTA, the government dismantled most of the agencies that offered assistance and administered subsidies to small farmers. "Lending by both government and private-sector rural credit programs declined 75% after 1994, when NAFTA took effect, while rural bankruptcies increased six-fold."⁷⁹ The reformed Article 27 now allows sale of *ejido* lands, which has increased landlessness.⁸⁰ According to a 2010 report by Oxfam, Mexico has spent \$80 billion on food imports and now has a deficit in food trade of \$435 million.⁸¹ Mexican agricultural production has turned away from food for people and internal markets toward animal feed for export.⁸² Markets for corn, the staple food, protected by government policy until NAFTA, have been completely opened.⁸³ Peasant organizations have demanded a renegotiation of the treaty.⁸⁴

Since 1994, Mexico's economic growth has slowed. It now averages only about 3 percent. From 1921 to 1967, annual growth averaged 5.2 percent, and for much of that period, it was over 6 percent.⁸⁵ According to World Bank figures, "in 2004, 28 percent of rural dwellers were extremely poor and 57 percent moderately poor."⁸⁶

The suffering and social polarization produced by neoliberalism has fostered corruption and exacerbated relative deprivation. This is the stage, preset, onto which now enters the issue of climate change to converge with the economic crisis and the legacy of political repression. In combination, all of these factors help drive migration to the United States and to northern Mexico, where the chaotic drug war now eats away at society.

Narcoguerra: Countdown to Chaos

Tanila Garcia's shack looks out upon the United States of America from the western edge of Juarez. The view takes in a kaleidoscopic political landscape defined by the social chasm between the underdevelopment of the Global South and the dazzling wealth of the Global North. The shack has a dirt floor covered with strips of salvaged grey office carpet. Its walls are lined with layers of flattened cardboard boxes, and the small windows are covered with clear, foggy plastic to keep out the wind of the high desert winter. Each of Garcia's rooms, one for her and her husband, the other for their four children, two boys and two girls, smells of sweat and dirty clothes. On a step of land above the shack sits a plywood outhouse.

Her little home in the *colonia* of Anapra was purchased for the equivalent of \$2,000. She has enclosed her barren yard with a homemade fence of sticks, barbed wire, and burnt-clean wire mattress frames. From a low naked tree hang three wooden cages for songbirds she has captured: the two small red birds are called gurrions, and a bigger one is a chivo. The birds hop nervously back and forth in their shoebox-size confinements. "I like how they sing in the morning," said Garcia.

She works cleaning houses and her husband works day-labor construction. At that time, they had no employment. One of her girls, age eleven, stood nearby as Garcia explained how they survived: "We save food when we have it."

She draws her water from a neighbor's tap. Electricity is pirated from a nearby utility pole. The aging extension cords that feed her home are draped haphazardly over branches and roofs. During rainstorms, jerry-rigged arrangements like these are known to electrocute people who walk too close to them on muddy ground. The average annual rainfall here is minimal—only about eight inches, but parts of Juarez and El Paso are occasionally hit by flash floods. When in August 2006 the skies dumped more than fifteen inches on the region, the pit latrines overflowed, and the slums of Juarez flooded with electrocuting sewage.

Across from the little homestead lies a sandy access road and the metal wall of the US border. Beyond that are the arcing tracks of the Southern

Pacific Railroad, and rising up the slopes of the Franklin Mountains are the middle-class suburbs of El Paso's west side, Coronado Hills and Ridge Crest.

This landscape is so extreme in its social contrasts, so politically didactic, that it could have been invented by revolutionaries, preachers, or lazy journalists had it not already been created by migrants, land speculators, politicians, bureaucrats, and industrial firms in search of cheap labor. This is Juarez: the city NAFTA built and then began to kill. But climate change will finish that task, probably some time around 2050. As climate change pushes people off the land, they come here in search of work and to cross the border. As they wait, the drug economy sucks up their youngsters.

Juarez and the militarized border against which it leans are not the products of climate change, but climate refugees now pass through here, get stuck here, and die here. And the vortex of murder that now defines Juarez is a harbinger of a world in which climate mitigation has been ignored and adaptation takes the form of violent class apartheid.

In the Beginning There Was Murder

The infamous violence of Juarez first attracted attention in 1993, on the eve of the passage of NAFTA. It seemed a serial killer was preying on the young women who toiled in the city's *maquiladora* assembly plants. The women usually turned up dead after having been raped and mutilated. The *maquila* workers were especially vulnerable, it was said, because of their early-morning commutes across desolate stretches of open desert, where they could be kidnapped with ease and anonymity. Juarez has a strangely desolate, patchwork geography that is the result of land speculators leapfrogging one another ever further out into the desert.

The police captured one alleged culprit after another. First, the perpetrator was a known sex offender: an Egyptian chemist who had moved to Juarez from Midland, Texas. He was jailed, but the killing went on. Then police blamed it on a gang of teenage rapists, then on a bus driver. But the killing went on. A superb documentary, *Senorita Extraviada* by Lordes Portillo, presented evidence that linked elements *inside* the police to the

rapes and murders.⁸⁷ In the last few years, the storyline has shifted way beyond that: from dead women to a whole city dying. The violence now appears, at first glance, to be driven by turf battles and leadership struggles between infinite numbers of *narcóleros*. But it's worse than that.

Charles Bowden, the longtime chronicler of Juarez, described the end-times quality of lawlessness that now obtains: "Imagine living a place where you can kill anyone you wish and nothing happens except that they fall dead. You will not be arrested. Your name will not be in the newspapers. You can continue on with your life. And your killing. You can take a woman and rape her for days and nothing will happen. If you choose, if in some way that woman displeases you, well, you can kill her after raping her. Rest assured, nothing will happen to you because of your actions."⁸⁸ Later, he explains it more abstractly: "For years, people have sought a single explanation of violence in Juarez. . . . We insist that power must replace power, that structure replaces an earlier structure. . . . Try for a moment to imagine something else, not a new structure but rather a pattern, and this pattern functionally has no top or bottom, no center or edge, no boss or obedient servant. . . . Violence courses through Juarez like a ceaseless wind. . . . Violence is now woven into the very fabric of the community and has no single cause and no single motive and no off button."⁸⁹

This lawlessness is the context in which climate change is beginning to have effects. It is also part of what makes Mexico highly vulnerable to climate change. So then, what is the history of the narcoviolence that now ravages northern Mexico?

The Pus of Free Trade

By most accounts, the Mexican cartels either had old roots in bootlegging or got their start as auxiliaries of Colombian organizations.⁹⁰ During the second half of the 1980s, Mexico became a transshipment point for illicit drug imports to the United States following the US Drug Enforcement Administration (DEA) crackdown on Florida smuggling routes starting in 1982. As Florida closed, Mexico opened.⁹¹ In 1988, cocaine seizures along the California border shot up 700 percent in one year as Colombians

moved cocaine through traditional heroin and marijuana routes, known as the "Mexican pipeline." The DEA estimated that 30 to 40 percent of all cocaine entering the United States now arrived via Mexico.⁹² That percentage would later rise dramatically.

For years the Mexicans merely facilitated transshipment of cocaine and marijuana on behalf of the more powerful Colombian cartels.⁹³ In the mid-1990s conditions changed. The Colombian cartels began to fracture. First, the Medellin Cartel's boss, Pablo Escobar, was jailed, then escaped and was killed by DEA commandos. With that, his organization began to splinter and was superseded by the Cali Cartel, which is said to have opened the route through Mexico; soon that cartel's leaders were also rounded up.⁹⁴

A month after Pablo Escobar was killed, the United States and Mexico signed NAFTA. The late Ken Dermota—a great American journalist who interviewed the imprisoned Pablo Escobar and covered the Colombian drug war better than most—reported how the Medellin Cartel awaited free trade with the enthusiasm of children on Christmas Eve. On hearing that NAFTA was coming, a trafficker named Juan Fernando Toro told Dermota, "Soon, I'll be able to ship through Mexico right to the U.S.!"⁹⁵

The Mexican adjuncts of the Colombian organizations soon began to mature, becoming more sophisticated and independent.⁹⁶ The year leading up to NAFTA, 1993, was also the year Amado Carrillo Fuentes, aka "Lord of the Skies," founded the Juarez Cartel. A year later, the DEA estimated that 80 percent of cocaine destined for US markets was entering through Mexico, making that country the new center of the Western Hemisphere's narcotics trade.⁹⁷ A confidential report called "Drug Trafficking, Commercial Trade and NAFTA on the Southwest Border" produced in 1998 by Operation Alliance, a task force led by the US Customs Service, found traffickers were using "commercial trade-related businesses . . . to exploit the rising tide of cross-border commerce."⁹⁸ Phil Jordan, a former DEA official, explained, "For Mexico's drug gangs, the NAFTA was a deal made in narco-heaven. But since both the United States and Mexico are so committed to free trade, no one wants to admit it has helped the drug lords. It's a taboo subject. . . . While I was at DEA, I was under strict orders not to say anything negative about free trade."⁹⁹

Dermota connected the dots: "In the crucial period straddling the inception of NAFTA, Mexico's imports of legal goods from Colombia increased from \$17 million in 1990 to \$121 million in 1995, while Mexico's trade with the United States doubled." Clearly much of the increased trade was cover for Colombian traffickers, many of whom own and use legitimate companies to move cocaine into Mexico. In 1995, Dermota asked the US ambassador to Colombia if American officials worried that free trade might increase the flow of drugs. The ambassador explained, "It was felt by those who supported NAFTA and by the Clinton Administration that using the argument that any increase in trade could increase drug trafficking and money laundering was not a sufficient argument to overcome the need of the United States for increasing markets for its exports abroad and also to engage in greater trade with countries of the region."¹⁰⁰

By 1996, the DEA described a Mexican drug federation made up of four major cartels: the Tijuana Organization, the Sonora Cartel, the Juarez Cartel, and the Gulf Group. By the end of the decade, the Tijuana and the Juarez cartels were said to be strongest. Cocaine was still produced in the Andes, but heroin poppies and marijuana were being grown and processed in a few regions of central and northern Mexico, particularly in the states of Michoacán, Sinaloa, and Chihuahua. The cartels' organization and diplomacy allowed the new breed of traffickers to sink deep roots into the political power structure and the fabric of everyday life. Corruption deepened in profound and dangerous ways. The post-NAFTA traffickers became increasingly professional and intertwined with the state.

Robert Collier, then foreign editor of the *San Francisco Chronicle*, painted a grimly humorous picture of the quotidian police corruption that now marked life: "At federal police headquarters . . . virtually all the agents wear heavy gold jewelry and gold watches and drive their own late-model, four-wheel-drive vehicles. Three shoeshine boys permanently work the station's hallways, keeping a sparkle on the agents' alligator-skin boots." When Collier asked a cop how he could afford a new Jeep Cherokee on merely \$500 a month, the officer replied, "I save a lot." When Collier asked a Federal Police commander, who was busy busting small marijuana farmers, about Amado Carrillo Fuentes, the commander explained, "I'm not

aware of any problems with Mr. Carrillo. . . . There are no major trafficking organizations here in this state."¹⁰¹

In the late 1990s and early 2000s, methamphetamine also became part of the industry. Again, it was a crackdown north of the border that pushed the action south. New restrictions in the United States on the sale of the cold medications ephedrine and pseudoephedrine, the primary ingredients for methamphetamine production, pushed much of the industrial scale meth cooking into Mexico, where trade in these legal precursors to the drug was booming.¹⁰²

Destabilization

The relative stability of these new corporate-style cartels was not to last. First, Amado Carrillo Fuentes died during botched plastic surgery. A power struggle among his lieutenants ensued, and rival cartels attempted to move in on the Juarez Cartel.¹⁰³ In recent years, the Sinaloa and Juarez cartels and the gangs that work for them, like the Aztecas, have been fighting for control of Ciudad Juarez. After a brief plateau, the violence was again on the rise.

In response to the crisis, rightwing Mexican president Felipe Calderón, who hails from the cowboy culture of Chihuahua, sent in the Mexican army. That might sound like a major step, but it was mere political theater. The deployment came with no real strategy and no additional resources, like extra prosecutors, judges, or development money. Military repression does not set the stage for rebuilding law and order and renovating corrupt civilian institutions. The presence of troops has not changed the fact that very few people are prosecuted for committing murder in Juarez. And the violence only seems to increase.

Already elements of elite Mexican army units have gone over to the drug cartels: the Zetas, ex-special forces, who served the traffickers as muscle, have become their own gang and sometimes get directly involved in trafficking. Some thirty thousand deaths later, President Calderón's crackdown has clearly failed.¹⁰⁴ It pretends to offer a solution, but the situation only gets worse.

Anthony Placido, assistant administrator for intelligence with the DEA, told members of Congress, "The single largest impediment to seriously impacting the drug trafficking problem in Mexico is corruption. . . . In actuality, law enforcement in Mexico is all too often part of the problem rather than part of the solution. This is particularly true at the municipal and state levels of government."¹⁰⁵ Perhaps the most spectacular example of this was the arrest of Noé Ramírez, formerly the head of Mexico's elite antidrug agency. He was charged with accepting a bribe of \$450,000 to leak intelligence from his old colleagues to *narcos*.¹⁰⁶ It is now clear: there is rot at the heart of the Mexican state.

Which Way Mexico?

In December 2008, *Forbes* magazine described Mexico as a "failed state." Former Clinton drug czar Barry McCaffrey wrote a memorandum that described Mexico as "fighting for survival against narco-terrorism." In January 2009, planners with the US Special Forces published a threat assessment report that said, "In terms of worst-case scenarios . . . two large and important states bear consideration for a rapid and sudden collapse: Pakistan and Mexico. . . . The Mexican possibility may seem less likely, but the government, its politicians, police, and judicial infrastructure are all under sustained assault and pressure by criminal gangs and drug cartels. How that internal conflict turns out over the next several years will have a major impact on the stability of the Mexican state. Any descent, by Mexico, into chaos would demand an American response based on the serious implications for homeland security alone."¹⁰⁷

The Mexican government took immediate, and intense, umbrage at this statement; President Calderón called it "absurd."¹⁰⁸ Jorge Castañeda—the man who interprets all things political and Mexican for the North American chattering classes—also rejected the label, reassuring Americans that Mexico "today controls virtually all of its national territory and . . . exercises a quasi monopoly on the use of force within its borders."¹⁰⁹

A very different assessment appeared in a front-page editorial in the main Juarez paper *El Diario*, after *sicarios* gunned down yet another of its

young reporters. An open letter to the city's drug lords, the editorial was titled "¿Qué quieren de nosotros?" or "What do you want from us?" The most chilling lines, in essence, admitted the defeat of reason and law in Juarez: "What are we supposed to publish or not publish, so we know what to abide by," pleaded the editorial. "You are at this time the de facto authorities in this city because the legal authorities have not been able to stop our colleagues from falling."¹⁰

Mexico is not a failed state, but its formless crisis of violence and lawlessness precludes any rational response, or progressive adaptation, to climate change. It is hard to see how this social structure can survive the next fifty years if emissions of greenhouse gases continue at their current pace along a trajectory of unmitigated fossil fuel consumption. A land of billionaires and hungry masses, of drought and floods, one whose social structure and institutions are infected with the gangrene of narco corruption, is not one that can adapt to rising sea levels, extreme weather, declining crop yields, and the mass migrations these processes will set in motion.