

may sometimes be realized, and that Rwanda may be a distressing model of that scenario in operation. Severe problems of overpopulation, environmental impact, and climate change cannot persist indefinitely: sooner or later they are likely to resolve themselves, whether in the manner of Rwanda or in some other manner not of our devising, if we don't succeed in solving them by our own actions. In the case of Rwanda's collapse we can put faces and motives on the events. I would guess that similar motives

were operative in the Rwandan collapse. The faces, in the future, in the underlying problem today is the same. The population today is still increasing. The first child at age 15, the sense is that the

The Rwandan survivors had done the horror. The survivors had done the horror.

"A cow was killed and at times after the owners were dead. In a country this was not a negligible incentive."

The survivor is a Tutsi teacher whom Prunier interviewed, and who survived only because he happened to be away from his house when killers arrived and murdered his wife and four of his five children:

"The people whose children had to walk barefoot to school killed the people who could buy shoes for theirs."

CHAPTER 11

One Island, Two Peoples, Two Histories: The Dominican Republic and Haiti

Differences ■ Histories ■ Causes of divergence ■
Dominican environmental impacts ■ Balaguer ■ The Dominican
environment today ■ The future ■

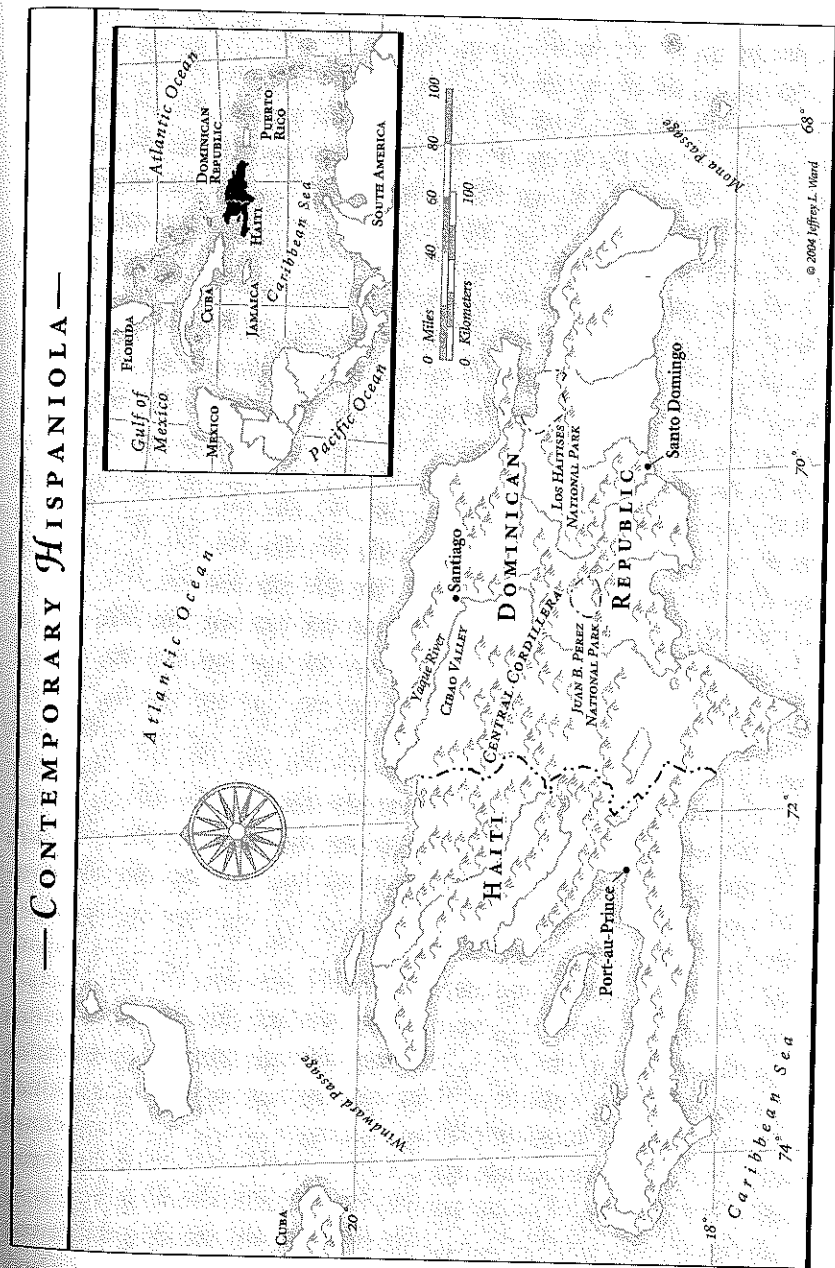
To anyone interested in understanding the modern world's problems, it's a dramatic challenge to understand the 120-mile-long border between the Dominican Republic and Haiti, the two nations dividing the large Caribbean island of Hispaniola that lies southeast of Florida (map, p. 331). From an airplane flying high overhead, the border looks like a sharp line with bends, cut arbitrarily across the island by a knife, and abruptly dividing a darker and greener landscape east of the line (the Dominican side) from a paler and browner landscape west of the line (the Haitian side). On the ground, one can stand on the border at many places, face east, and look into pine forest, then turn around, face west, and see nothing except fields almost devoid of trees.

That contrast visible at the border exemplifies a difference between the two countries as a whole. Originally, both parts of the island were largely forested: the first European visitors noted as Hispaniola's most striking characteristic the exuberance of its forests, full of trees with valuable wood. Both countries have lost forest cover, but Haiti has lost far more (Plates 23, 24), to the point where it now supports just seven substantial patches of forest, only two of which are protected as national parks, both of them subject to illegal logging. Today, 28% of the Dominican Republic is still forested, but only 1% of Haiti. I was surprised at the extent of woodlands even in the area comprising the Dominican Republic's richest farmland, lying between its two largest cities of Santo Domingo and Santiago. In Haiti and the Dominican Republic just as elsewhere in the world, the consequences of all that deforestation include loss of timber and other forest building materials, soil erosion, loss of soil fertility, sediment loads in the rivers, loss of watershed protection and hence of potential hydroelectric power, and decreased

rainfall. All of those problems are more severe in Haiti than in the Dominican Republic. In Haiti, more urgent than any of those just-mentioned consequences is the problem of the loss of wood for making charcoal, Haiti's main fuel for cooking.

The difference in forest cover between the two countries is paralleled by differences in their economies. Both Haiti and the Dominican Republic are poor countries, suffering from the usual disadvantages of most of the world's other tropical countries that were former European colonies: corrupt or weak governments, serious problems of public health, and lower agricultural productivity than in the temperate zones. On all those counts, though, Haiti's difficulties are much more serious than those of the Dominican Republic. It is the poorest country in the New World, and one of the poorest in the world outside of Africa. Its perennially corrupt government offers minimal public services; much or most of the population lives chronically or periodically without public electricity, water, sewage, medical care, and schooling. Haiti is among the most overpopulated countries of the New World, much more so than the Dominican Republic, with barely one-third of Hispaniola's land area but nearly two-thirds of its population (about 10 million), and an average population density approaching 1,000 per square mile. Most of those people are subsistence farmers. The market economy is modest, consisting principally of some coffee and sugar production for export, a mere 20,000 people employed at low wages in free trade zones making clothing and some other export goods, a few vacation enclaves on the coast where foreign tourists can isolate themselves from Haiti's problems, and a large but unquantified trade in drugs being transhipped from Colombia to the U.S. (That's why Haiti is sometimes referred to as a "narcostate.") There is extreme polarization between the masses of poor people living in rural areas or in the slums of the capital of Port-au-Prince, and a tiny population of rich elite in the cooler mountain suburb of Pétionville a half hour drive from the center of Port-au-Prince, enjoying expensive French restaurants with fine wines. Haiti's rate of population growth, and its rates of infection with AIDS, tuberculosis, and malaria, are among the highest in the New World. The question that all visitors to Haiti ask themselves is whether there is any hope for the country, and the usual answer is "no."

The Dominican Republic is also a developing country sharing Haiti's problems, but it is more developed and the problems are less acute. Per-capita income is five times higher, and the population density and population growth rate are lower. For the past 38 years the Dominican Republic



has been at least nominally a democracy without any military coup, and with some presidential elections from 1978 onwards resulting in the defeat of the incumbent and the inauguration of a challenger, along with others marred by fraud and intimidation. Within the booming economy, industries earning foreign exchange include an iron and nickel mine, until recently a gold mine, and formerly a bauxite mine; industrial free trade zones that employ 200,000 workers and export overseas; agricultural exports that include coffee, cacao, tobacco, cigars, fresh flowers, and avocados (the Dominican Republic is the world's third largest exporter of avocados); telecommunications; and a large tourist industry. Several dozen dams generate hydroelectric power. As American sports fans know, the Dominican Republic also produces and exports great baseball players. (I wrote the first draft of this chapter in a state of shock, having just watched the great Dominican pitcher Pedro Martínez, pitching for my favorite team the Boston Red Sox, go down to defeat in extra innings at the hands of their nemesis the New York Yankees in the last game of the 2003 American League Championship Series). Others on the long list of Dominican baseball players who have gone on to achieve fame in the U.S. include the Alou brothers, Joaquín Andujar, George Bell, Adrian Beltre, Rico Carty, Mariano Duncan, Tony Fernández, Pedro Guerrero, Juan Marichal, José Offerman, Tony Peña, Alex Rodríguez, Juan Samuel, Ozzie Virgil, and of course the "jorón king" Sammy Sosa. As one drives along the Dominican Republic's roads, one cannot go far without seeing a road sign pointing to the nearest stadium for *béisbol*, as the sport is known locally.

The contrasts between the two countries are also reflected in their national park systems. That of Haiti is tiny, consisting of just four parks threatened with encroachment by peasants felling the trees to make charcoal. In contrast, the natural reserve system of the Dominican Republic is relatively the most comprehensive and largest in the Americas, encompassing 32% of the country's land area in 74 parks or reserves, and it incorporates all important types of habitat. Of course the system also suffers from an abundance of problems and a deficiency of funding, but it is nevertheless impressive for a poor country with other problems and priorities. Behind the reserve system stands a vigorous indigenous conservation movement with many non-governmental organizations staffed by Dominicans themselves, rather than foisted on the country by foreign advisors.

All those dissimilarities in forest cover, economy, and natural reserve system arose despite the fact that the two countries share the same island. They also share histories of European colonialism and American occupa-

tions, overwhelmingly Catholic religion coexisting with a voodoo pantheon (more notably in Haiti), and mixed African-European ancestry (with a higher proportion of African ancestry in Haiti). For three periods of their history they were joined as a single colony or country.

The differences that exist despite those similarities become even more striking when one reflects that Haiti used to be much richer and more powerful than its neighbor. In the 19th century it launched several major invasions of the Dominican Republic and annexed it for 22 years. Why were the outcomes so different in the two countries, and why was it Haiti rather than the Dominican Republic that went into steep decline? Some environmental differences do exist between the two halves of the island and made some contribution to the outcomes, but that is the smaller part of the explanation. Most of the explanation has instead to do with differences between the two peoples in their histories, attitudes, self-defined identity, and institutions, as well as between their recent leaders of government. For anyone inclined to caricature environmental history as "environmental determinism," the contrasting histories of the Dominican Republic and Haiti provide a useful antidote. Yes, environmental problems do constrain human societies, but the societies' responses also make a difference. So, too, for better or for worse, do the actions and inactions of their leaders.

This chapter will begin by tracing the differing trajectories of political and economic history by which the Dominican Republic and Haiti arrived at their current differences, and the reasons behind those different trajectories. Then I shall discuss the development of Dominican environmental policies, which prove to be a mix of bottom-up and top-down initiatives. The chapter will conclude by examining the current status of environmental problems, the future and hopes of each side of the island, and their effects on each other and on the world.

When Christopher Columbus arrived at Hispaniola during his first transatlantic voyage in the year A.D. 1492, the island had already been settled by Native Americans for about 5,000 years. The occupants in Columbus's time were a group of Arawak Indians called Tainos who lived by farming, were organized into five chiefdoms, and numbered around half a million (the estimates range from 100,000 to 2,000,000). Columbus initially found them peaceful and friendly, until he and his Spaniards began mistreating them.

Unfortunately for the Tainos, they had gold, which the Spanish coveted but didn't want to go to the work of mining themselves. Hence the

conquerors divided up the island and its Indian population among individual Spaniards, who put the Indians to work as virtual slaves, accidentally infected them with Eurasian diseases, and murdered them. By the year 1519, 27 years after Columbus's arrival, that original population of half a million had been reduced to about 11,000, most of whom died that year of smallpox to bring the population down to 3,000, and those survivors gradually died out or became assimilated within the next few decades. That forced the Spaniards to look elsewhere for slave laborers.

Around 1520 the Spaniards discovered that Hispaniola was suitable for growing sugar, and so they began importing slaves from Africa. The island's sugar plantations made it a rich colony for much of the 16th century. However, the Spaniards' interest became diverted from Hispaniola for multiple reasons, including their discovery of far more populous and richer Indian societies on the American mainland, particularly in Mexico, Peru, and Bolivia, offering much larger Indian populations to exploit, politically more advanced societies to take over, and rich silver mines in Bolivia. Hence Spain turned its attention elsewhere and devoted little resources to Hispaniola, especially as buying and transporting slaves from Africa were expensive and as Native Americans could be obtained just for the cost of conquering them. In addition, English, French, and Dutch pirates overran the Caribbean and attacked Spanish settlements on Hispaniola and elsewhere. Spain itself gradually went into political and economic decline, to the benefit of the English, French, and Dutch.

Along with those French pirates, French traders and adventurers built up a settlement at the western end of Hispaniola, far from the eastern part where the Spanish were concentrated. France, now much richer and politically stronger than Spain, invested heavily in importing slaves and developing plantations in its western part of the island, to a degree that the Spanish could not afford, and the histories of the two parts of the island began to diverge. During the 1700s the Spanish colony had a low population, few slaves, and a small economy based on raising cattle and selling their hides, while the French colony had a much larger population, more slaves (700,000 in 1785, compared to only 30,000 in the Spanish part), a proportionately much lower non-slave population (only 10% compared to 85%), and an economy based on sugar plantations. French Saint-Domingue, as it was called, became the richest European colony in the New World and contributed one-quarter of France's wealth.

In 1795, Spain finally ceded its no-longer-valuable eastern part of the island to France, so that Hispaniola became briefly unified under France.

After a slave rebellion broke out in French Saint-Domingue in 1791 and 1801, the French sent an army that was defeated by the slave army plus the effects of heavy losses to diseases. In 1804, having sold its North American holdings to the United States as the Louisiana Purchase, France gave up and abandoned Hispaniola. Not surprisingly, French Hispaniola's former slaves, who renamed their country Haiti (the original Taino Indian name for the island), killed many of Haiti's whites, destroyed the plantations and their infrastructure in order to make it impossible to rebuild the plantation slave system, and divided the plantations into small family farms. While that was what the former slaves wanted for themselves as individuals, it proved in the long run disastrous for Haiti's agricultural productivity, exports, and economy when the farmers received little help from subsequent Haitian governments in their efforts to develop cash crops. Haiti also lost human resources with the killing of much of its white population and the emigration of the remainder.

Nevertheless, at the time Haiti achieved independence in 1804, it was still the richer, stronger, and more populous part of the island. In 1805 the Haitians twice invaded the eastern (former Spanish) part of the island, then known as Santo Domingo. Four years later, at their own request, the Spanish settlers reassumed their status as a colony of Spain, which however governed Santo Domingo ineptly and with so little interest that the settlers declared independence in 1821. They were promptly reannexed by the Haitians, who remained until they were expelled in 1844, after which the Haitians continued to launch invasions to conquer the east into the 1850s.

Thus, as of 1850 Haiti in the west controlled less area than its neighbor but had a larger population, a subsistence farming economy with little exporting, and a population composed of a majority of blacks of African descent and a minority of mulattoes (people of mixed ancestry). Although the mulatto elite spoke French and identified themselves closely with France, Haiti's experience and fear of slavery led to the adoption of a constitution forbidding foreigners to own land or to control means of production through investments. The large majority of Haitians spoke a language of their own that had evolved there from French, termed Creole. The Dominicans in the east had a larger area but smaller population, still had an economy based on cattle, welcomed and offered citizenship to immigrants, and spoke Spanish. Over the course of the 19th century, numerically small but economically significant immigrant groups in the Dominican Republic included Curaçao Jews, Canary Islanders, Lebanese, Palestinians, Cubans, Puerto Ricans, Germans, and Italians, to be joined by Austrian Jews,

Japanese, and more Spaniards after 1930. The political aspect in which Haiti and the Dominican Republic most resembled each other was in their political instability. Coups followed on each other frequently, and control passed or alternated between local leaders with their private armies. Out of Haiti's 22 presidents from 1843 to 1915, 21 were assassinated or driven out of office, while the Dominican Republic between 1844 and 1930 had 50 changes of president, including 30 revolutions. In each part of the island the presidents governed in order to enrich themselves and their followers.

Outside powers viewed and treated Haiti and the Dominican Republic differently. To European eyes, the oversimplified image was of the Dominican Republic as a Spanish-speaking, partly European society receptive to European immigrants and trade, while Haiti was seen as a Creole-speaking African society composed of ex-slaves and hostile to foreigners. With the help of invested capital from Europe and later from the U.S., the Dominican Republic began to develop a market export economy, Haiti far less so. That Dominican economy was based on cacao, tobacco, coffee, and (beginning in the 1870s) sugar plantations, which (ironically) had formerly characterized Haiti rather than the Dominican Republic. But both sides of the island continued to be characterized by political instability. A Dominican president towards the end of the 19th century borrowed and failed to repay so much money from European lenders that France, Italy, Belgium, and Germany all sent warships and threatened to occupy the country in order to collect their debts. To forestall that risk of European occupation, the United States took over the Dominican customs service, the sole source of government revenues, and allocated half of the receipts to pay those foreign debts. During World War I, concerned about risks to the Panama Canal posed by political unrest in the Caribbean, the United States imposed a military occupation on both parts of the island, which lasted from 1915 to 1934 in Haiti and from 1916 to 1924 in the Dominican Republic. Thereafter, both parts quickly reverted to their previous political instability and strife between competing would-be presidents.

Instability in both parts was ended, in the Dominican Republic long before Haiti, by the two most evil dictators in Latin America's long history of evil dictators. Rafael Trujillo was the Dominican chief of the national police and then the head of the army that the U.S. military government established and trained. After he took advantage of that position to get himself elected as president in 1930 and to become dictator, he proceeded to remain in power as a result of being very hardworking, a superior administrator, a shrewd judge of people, a clever politician, and absolutely ruthless—and of

appearing to act in the broad interests of much of Dominican society. He tortured or killed his possible opponents and imposed an all-intrusive police state.

At the same time, in an effort to modernize the Dominican Republic, Trujillo developed the economy, infrastructure, and industries, mostly running the country as his own private business. He and his family eventually came to own or control most of the country's economy. In particular, either directly or through relatives or allies as front men, Trujillo held national monopolies of beef export, cement, chocolate, cigarettes, coffee, insurance, milk, rice, salt, slaughterhouses, tobacco, and wood. He owned or controlled most forestry operations and sugar production, and owned airlines, banks, hotels, much land, and shipping lines. He took for himself a portion of prostitution earnings and 10% of all public employee salaries. He promoted himself ubiquitously: the capital city was renamed from Santo Domingo to Ciudad Trujillo (Trujillo City), the country's highest mountain was renamed from Pico Duarte to Pico Trujillo, the country's educational system inculcated giving thanks to Trujillo, and signs of thanks posted on every public water faucet proclaimed "Trujillo gives water." To reduce the possibility of a successful rebellion or invasion, the Trujillo government spent half of its budget on a huge army, navy, and air force, the largest in the Caribbean area, larger even than those of Mexico.

In the 1950s, however, several developments conspired to cause Trujillo to begin to lose the former support that he had maintained through his combination of terror methods, economic growth, and distributing land to peasants. The economy deteriorated through a combination of government overspending on a festival to celebrate the 25th anniversary of the Trujillo regime, overspending to buy up privately owned sugar mills and electricity plants, a decline in world prices for coffee and other Dominican exports, and a decision to make a major investment in state sugar production that proved economically unsuccessful. The government responded to an unsuccessful Cuban-backed invasion by Dominican exiles in 1959, and to Cuban radio broadcasts encouraging revolt, by increasing arrests, assassinations, and torture. On May 30, 1961, while traveling in a chauffeur-driven unaccompanied car late at night to visit his mistress, Trujillo was ambushed and assassinated in a dramatic car chase and gun battle by Dominicans, apparently with CIA support.

Throughout most of the Trujillo era in the Dominican Republic, Haiti continued to have an unstable succession of presidents until it too in 1957 passed under the control of its own evil dictator, François "Papa Doc"

Duvalier. While a physician and better educated than Trujillo, he proved to be an equally clever and ruthless politician, equally successful in terrorizing his country by secret police, and ended up killing far more of his countrymen than did Trujillo. Papa Doc Duvalier differed from Trujillo in his lack of interest in modernizing his country or in developing an industrial economy for his country or for himself. He died a natural death in 1971, to be succeeded by his son Jean-Claude "Baby Doc" Duvalier, who ruled until forced into exile in 1986.

Since the end of the Duvalier dictatorships, Haiti has resumed its former political instability, and its already weak economy has continued to shrink. It still exports coffee, but the amount exported has remained constant while the population has continued to grow. Its human development index, an index based on a combination of human lifespan and education and standard of living, is the lowest in the world outside Africa. After Trujillo's assassination, the Dominican Republic also remained politically unstable until 1966, including a civil war in 1965 that triggered the arrival again of U.S. marines and the beginning of large-scale Dominican emigration to the U.S. That period of instability ended with the election of Joaquín Balaguer, former president under Trujillo, to the presidency in 1966, helped by ex-Trujillo army officers who carried out a terrorist campaign against the opposing party. Balaguer, a distinctive person whom we shall consider at more length below, continued to dominate Dominican politics for the next 34 years, ruling as president from 1966 to 1978 and again from 1986 until 1996, and exercising much influence even while out of office from 1978 to 1986. His last decisive intervention into Dominican politics, his rescue of the country's natural reserve system, came in the year 2000 at the age of 94, when he was blind, sick, and two years short of his death.

During those post-Trujillo years from 1961 to the present, the Dominican Republic continued to industrialize and modernize. For a time its export economy depended heavily on sugar, which then yielded in importance to mining, free trade zone industrial exports, and non-sugar agricultural exports, as mentioned earlier in this chapter. Also important to the economies of both the Dominican Republic and Haiti has been the export of people. More than a million Haitians and a million Dominicans now living overseas, especially in the United States, send home earnings that account for a significant fraction of the economies of both countries. The Dominican Republic still rates as a poor country (per-capita income only \$2,200 per year), but it exhibits many hallmarks of a growing economy that

were obvious during my visit, including a massive construction boom and urban traffic jams.

With that historical background, let's now return to one of those surprising differences with which this chapter began: why did the political, economic, and ecological histories of these two countries sharing the same island unfold so differently?

Part of the answer involves environmental differences. Hispaniola's rains come mainly from the east. Hence the Dominican (eastern) part of the island receives more rain and thus supports higher rates of plant growth. Hispaniola's highest mountains (over 10,000 feet high) are on the Dominican side, and the rivers from those high mountains mainly flow eastwards into the Dominican side. The Dominican side has broad valleys, plains, and plateaus, and much thicker soils; in particular, the Cibao Valley in the north is one of the richest agricultural areas in the world. In contrast, the Haitian side is drier because of that barrier of high mountains blocking rains from the east. Compared to the Dominican Republic, a higher percentage of Haiti's area is mountainous, the area of flat land good for intensive agriculture is much smaller, there is more limestone terrain, and the soils are thinner and less fertile and have a lower capacity for recovery. Note the paradox: the Haitian side of the island was less well endowed environmentally but developed a rich agricultural economy before the Dominican side. The explanation of this paradox is that Haiti's burst of agricultural wealth came at the expense of its environmental capital of forests and soils. This lesson—in effect, that an impressive-looking bank account may conceal a negative cash flow—is a theme to which we shall return in the last chapter.

While those environmental differences did contribute to the different economic trajectories of the two countries, a larger part of the explanation involved social and political differences, of which there were many that eventually penalized the Haitian economy relative to the Dominican economy. In that sense, the differing developments of the two countries were overdetermined: numerous separate factors coincided in tipping the result in the same direction.

One of those social and political differences involved the accident that Haiti was a colony of rich France and became the most valuable colony in France's overseas empire, while the Dominican Republic was a colony of Spain, which by the late 1500s was neglecting Hispaniola and was in eco-

conomic and political decline itself. Hence France could and chose to invest in developing intensive slave-based plantation agriculture in Haiti, which the Spanish could not or chose not to develop in their side of the island. France imported far more slaves into its colony than did Spain. As a result, Haiti had a population seven times higher than its neighbor during colonial times, and it still has a somewhat larger population today, about 10,000,000 versus 8,800,000. But Haiti's area is only slightly more than half of that of the Dominican Republic, so that Haiti with a larger population and smaller area has double the Republic's population density. The combination of that higher population density and lower rainfall was the main factor behind the more rapid deforestation and loss of soil fertility on the Haitian side. In addition, all of those French ships that brought slaves to Haiti returned to Europe with cargos of Haitian timber, so that Haiti's lowlands and mid-mountain slopes had been largely stripped of timber by the mid-19th century.

A second social and political factor is that the Dominican Republic, with its Spanish-speaking population of predominantly European ancestry, was both more receptive and more attractive to European immigrants and investors than was Haiti with its Creole-speaking population composed overwhelmingly of black former slaves. Hence European immigration and investment were negligible and restricted by the constitution in Haiti after 1804 but eventually became important in the Dominican Republic. Those Dominican immigrants included many middle-class businesspeople and skilled professionals who contributed to the country's development. The people of the Dominican Republic even *chose* to resume their status as a Spanish colony from 1812 to 1821, and its president *chose* to make his country a protectorate of Spain from 1861 to 1865.

Still another social difference contributing to the different economies is that, as a legacy of their country's slave history and slave revolt, most Haitians owned their own land, used it to feed themselves, and received no help from their government in developing cash crops for trade with overseas European countries, while the Dominican Republic eventually did develop an export economy and overseas trade. Haiti's elite identified strongly with France rather than with their own landscape, did not acquire land or develop commercial agriculture, and sought mainly to extract wealth from the peasants.

A recent cause of divergence lies in the differing aspirations of the two dictators: Trujillo sought to develop an industrial economy and modern state (for his own benefit), but Duvalier did not. This might perhaps be

viewed just as an idiosyncratic personal difference between the two dictators, but it may also mirror their different societies.

Finally, Haiti's problems of deforestation and poverty compared to those of the Dominican Republic have become compounded within the last 40 years. Because the Dominican Republic retained much forest cover and began to industrialize, the Trujillo regime initially planned, and the regimes of Balaguer and subsequent presidents constructed, dams to generate hydroelectric power. Balaguer launched a crash program to spare forest use for fuel by instead importing propane and liquefied natural gas. But Haiti's poverty forced its people to remain dependent on forest-derived charcoal from fuel, thereby accelerating the destruction of its last remaining forests.

Thus, there were many reasons why deforestation and other environmental problems began earlier, developed over a longer time, and proceeded further in Haiti than in the Dominican Republic. The reasons involved four of the factors in this book's five-factor framework: differences in human environmental impacts, in variously friendly policies or unfriendly policies of other countries, and in responses by the societies and their leaders. Of the case studies described in this book, the contrast between Haiti and the Dominican Republic discussed in this chapter, and the contrast between the fates of the Norse and the Inuit in Greenland discussed in Chapter 8, provide the clearest illustrations that a society's fate lies in its own hands and depends substantially on its own choices.

What about the Dominican Republic's own environmental problems, and what about the countermeasures that it adopted? To use the terminology that I introduced in Chapter 9, Dominican measures to protect the environment began from the bottom up, shifted to top-down control after 1930, and are now a mixture of both. Exploitation of valuable trees in the Republic increased in the 1860s and 1870s, resulting already then in some local depletion or extinction of valuable tree species. Rates of deforestation increased in the late 19th century due to forest clearance for sugar plantations and other cash crops, then continued to increase in the early 20th century as the demand for wood for railroad ties and for incipient urbanization rose. Soon after 1900 we encounter the first mentions of damage to forest in low-rainfall areas from harvesting wood for fuel, and of contamination of streams by agricultural activities along their banks. The first municipal regulation prohibiting logging and the contamination of streams was passed in 1901.

Bottom-up environmental protection was launched in a serious way between 1919 and 1930 in the area around Santiago, the Republic's second largest city and the center of its richest and most heavily exploited agricultural area. The lawyer Juan Bautista Pérez Rancier and the physician and surveyor Miguel Canela y Lázaro, struck by the sequence of logging and its associated road network leading to agricultural settlement and watershed damage, lobbied the Santiago Chamber of Commerce to buy land as a forest reserve, and they also sought to raise the necessary funds by public subscription. Success was achieved in 1927, when the Republic's secretary of agriculture contributed additional government funds to make possible the purchase of the first natural reserve, the Vedado del Yaque. The Yaque River is the country's largest river, and a *vedado* is an area of land to which entry is controlled or forbidden.

After 1930, the dictator Trujillo shifted the impetus for environmental management to a top-down approach. His regime expanded the area of the Vedado del Yaque, created other *vedados*, established in 1934 the first national park, set up a corps of forest guards to enforce protection of forests, suppressed the wasteful use of fire to burn forest in order to clear land for agriculture, and banned the cutting of pine trees without his permission in the area around Constanza in the Central Cordillera. Trujillo undertook these measures in the name of environmental protection, but he was probably motivated more strongly by economic considerations, including his own personal economic advantage. In 1937 his regime commissioned a famous Puerto Rican environmental scientist, Dr. Carlos Chardón, to survey the Dominican Republic's natural resources (its agricultural, mineral, and forestry potential). In particular, Chardón calculated the commercial logging potential of the Republic's pine forest, by far the most extensive pine forest in the Caribbean, to be around \$40,000,000, a large sum in those days. On the basis of that report, Trujillo himself became involved in logging of pines, and came to own large areas of pine forest and to be the joint owner of the country's main sawmills. In their logging operations, Trujillo's foresters adopted the environmentally sound measure of leaving some mature trees standing as sources of seed for natural reforestation, and those big old trees can still be recognized today in the regenerated forest. Environmental measures under Trujillo in the 1950s included commissioning a Swedish study of the Republic's potential for building dams for hydroelectric power, the planning of such dams, the convening of the country's first environmental congress in 1958, and the establishment of more na-

tional parks, at least partly to protect watersheds that would be important for hydroelectric power generation.

Under his dictatorship, Trujillo (as usual, often acting with family members and allies as front men) carried out extensive logging himself, but his dictatorial government prevented others from logging and establishing unauthorized settlements. After Trujillo's death in 1961, that wall against widespread pillaging of the Dominican environment fell. Squatters occupied land and used forest fires to clear woodlands for agriculture; a disorganized large-scale immigration from the countryside into urban barrios sprung up; and four wealthy families of the Santiago area began logging at a rate faster than the rate under Trujillo. Two years after Trujillo's death, the democratically elected President Juan Bosch attempted to persuade loggers to spare the pine forests so that they could remain as watersheds for the planned Yaque and Nizao dams, but the loggers instead joined with other interests to overthrow Bosch. Rates of logging accelerated until the election of Joaquín Balaguer as president in 1966.

Balaguer recognized the country's urgent need for maintaining forested watersheds in order to meet the Republic's energy requirements through hydroelectric power, and to ensure a supply of water sufficient for industrial and domestic needs. Soon after becoming president, he took drastic action by banning all commercial logging in the country, and by closing all of the country's sawmills. That action provoked strong resistance by rich powerful families, who responded by pulling back their logging operations out of public view into more remote areas of forests, and by operating their sawmills at night. Balaguer reacted with the even more drastic step of taking responsibility for enforcing forest protection away from the Department of Agriculture, turning it over to the armed forces, and declaring illegal logging to be a crime against state security. To stop logging, the armed forces initiated a program of survey flights and military operations, which climaxed in 1967 in one of the landmark events of Dominican environmental history, a night raid by the military on a clandestine large logging camp. In the ensuing gunfight a dozen loggers were killed. That strong signal served as a shock to the loggers. While some illegal logging continued, it was met with further raids and shootings of loggers, and it decreased greatly during Balaguer's first period as president (1966 to 1978, comprising three consecutive terms in office).

That was only one of a host of Balaguer's far-reaching environmental measures. Some of the others were as follows. During the eight years when

Balaguer was out of office from 1978 to 1986, other presidents reopened some logging camps and sawmills, and allowed charcoal production from forests to increase. On the first day of his return to the presidency in 1986, Balaguer began issuing executive orders to close logging camps and sawmills again, and on the next day he deployed military helicopters to detect illegal logging and intrusions into national parks. Military operations resumed to capture and imprison loggers, and to remove poor squatters, plus rich agribusinesses and mansions (some of them belonging to Balaguer's own friends), from the parks. The most notorious of those operations took place in 1992 in Los Haitises National Park, 90% of whose forest had been destroyed; the army expelled thousands of squatters. In a further such operation two years later, personally directed by Balaguer, the army drove bulldozers through luxury houses built by wealthy Dominicans within Juan B. Pérez National Park. Balaguer banned the use of fire as an agricultural method, and even passed a law (which proved difficult to enforce) that every fence post should consist of live rooted trees rather than felled timber. As two sets of measures to undermine demand for Dominican tree products and to replace them with something else, he opened the market to wood imports from Chile, Honduras, and the U.S. (thereby eliminating most demand for Dominican timber in the country's stores); and he reduced traditional charcoal production from trees (the curse of Haiti) by contracting for liquefied natural gas imports from Venezuela, building several terminals to import that gas, subsidizing the cost of gas to the public to outcompete charcoal, and calling for the distribution without cost of propane stoves and cylinders in order to encourage people to shift from charcoal. He greatly expanded the natural reserve system, declared the country's first two coastal national parks, added two submerged banks in the ocean to Dominican territory as humpback whale sanctuaries, protected land within 20 yards of rivers and within 60 yards of the coast, protected wetlands, signed the Rio convention on the environment, and banned hunting for 10 years. He put pressure on industries to treat their wastes, launched with limited success some efforts to control air pollution, and slapped a big tax on mining companies. Among the many environmentally damaging proposals that he opposed or blocked were projects for a road to the port of Sanchez through a national park, a north-south road over the Central Cordillera, an international airport at Santiago, a superport, and a dam at Madrigal. He refused to repair an existing road over the highlands, with the result that it became nearly unusable. In Santa Domingo he founded the Aquarium, the Botanical Garden, and the Natural

History Museum and rebuilt the National Zoo, all of which have become major attractions.

As Balaguer's final political act at the age of 94, he teamed up with President-elect Mejia to block President Fernández's plan to reduce and weaken the natural reserve system. Balaguer and Mejia achieved that goal by a clever legislative maneuver in which they amended President Fernández's proposal with a rider that converted the natural reserve system from one existing only by executive order (hence subject to alterations such as those proposed by Fernández), to one established instead by law, in the condition that it had existed in 1996 at the close of Balaguer's last presidency and before Fernández's maneuvers. Thus, Balaguer ended his political career by saving the reserve system to which he had devoted so much attention.

All of those actions by Balaguer climaxed the era of top-down environmental management in the Dominican Republic. In the same era, bottom-up efforts also resumed after vanishing under Trujillo. During the 1970s and 1980s scientists did much inventorying of the country's coastal, marine, and terrestrial natural resources. As Dominicans slowly relearned the methods of private civic participation after decades without it under Trujillo, the 1980s saw the founding of many non-governmental organizations, including several dozen environmental organizations that have become increasingly effective. In contrast to the situation in many developing countries, where environmental efforts are mainly developed by affiliates of international environmental organizations, the bottom-up impetus in the Dominican Republic has come from local NGOs concerned with the environment. Along with universities and with the Dominican Academy of Sciences, these NGOs have now become the leaders of a homegrown Dominican environmental movement.

Why did Balaguer push such a broad range of measures on behalf of the environment? To many of us, it is difficult to reconcile that apparently strong and far-sighted commitment to the environment with his repellent qualities. For 31 years he served under dictator Rafael Trujillo and defended Trujillo's massacres of Haitians in 1937. He ended up as Trujillo's puppet president, but he also served Trujillo in positions where he exercised influence, such as secretary of state. Anyone willing to work with such an evil person as Trujillo immediately becomes suspect and tarnished by association. Balaguer also accumulated his own list of evil deeds after Trujillo's death—deeds that can be blamed only on Balaguer himself. While he won

the presidency honestly in the election of 1986, he resorted to fraud, violence, and intimidation to secure his election in 1966 and his reelection in 1970, 1974, 1990, and 1994. He operated his own squads of thugs to assassinate hundreds or perhaps thousands of members of the opposition. He ordered many forced removals of poor people from national parks, and he ordered or tolerated the shooting of illegal loggers. He tolerated widespread corruption. He belonged to Latin America's tradition of political strongmen or *caudillos*. Among the quotes attributed to him is: "The constitution is nothing more than a piece of paper."

Chapters 14 and 15 of this book will discuss the often-complicated reasons why people do or don't pursue environmentalist policies. While I was visiting the Dominican Republic, I was especially interested in learning, from those who had known Balaguer personally or lived through his presidencies, what could have motivated him. I asked every Dominican whom I interviewed their views of him. Among the 20 Dominicans whom I interviewed at length, I got 20 different answers. Many of them were people who had the strongest possible personal motives for loathing Balaguer: they had been imprisoned by him, or had been imprisoned and tortured by the Trujillo government that he served, or had close relatives and friends who had been killed.

Among this divergence of opinion, there were nevertheless numerous points mentioned independently by many of my informants. Balaguer was described as almost uniquely complex and puzzling. He wanted political power, and his pursuit of policies in which he believed was tempered by concern not to do things that would cost him his power (but he still often pushed dangerously close to that limit of losing power through unpopular policies). He was an extremely skilled, cynical, practical politician whose ability nobody else in the last 42 years of Dominican political history has come remotely close to matching, and who exemplified the adjective "Machiavellian." He constantly maintained a delicate balancing act between the military, the masses, and competing scheming groups of elites; he succeeded in forestalling military coups against him by fragmenting the military into competing groups; and he was able to inspire such fear even in military officers abusing forests and national parks that, in the sequel to a famous unplanned confrontation recorded on television in 1994, I was told that an army colonel who had opposed Balaguer's forest protection measures and whom Balaguer angrily summoned ended up urinating in his trousers in terror. In the picturesque words of one historian whom I interviewed, "Balaguer was a snake who shed and changed his skin as needed."

Under Balaguer there was a great deal of corruption that he tolerated, but he himself was not corrupt nor interested in personal wealth, unlike Trujillo. In his own words, "Corruption stops at the door of my office."

Finally, as one Dominican who had been both imprisoned and tortured summed it up for me, "Balaguer was an evil, but a necessary evil at that stage in Dominican history." By that phrase, my informant meant that, at the time Trujillo was assassinated in 1961, there were many Dominicans both overseas and in the country with worthy aspirations, but none of them had a fraction of Balaguer's practical experience in government. Through his actions, he is credited with having consolidated the Dominican middle class, Dominican capitalism, and the country as it exists today, and with having presided over a major improvement in the Dominican economy. Those outcomes inclined many Dominicans to put up with Balaguer's evil qualities.

In response to my question why Balaguer pursued his environmentalist policies, I encountered much more disagreement. Some Dominicans told me that they thought it was just a sham, either to win votes or to polish his international image. One person viewed Balaguer's evictions of squatters from national parks as just part of a broad plot to move peasants out of remote forests where they might hatch a pro-Castro rebellion; to depopulate public lands that could eventually be redeveloped as resorts owned by rich Dominicans, rich overseas resort developers, or military people; and to cement Balaguer's ties with the military.

While there may be some substance to all of those suspected motives, nevertheless the wide range of Balaguer's environmental actions, and the public unpopularity of some of them and public disinterest in others, make it difficult for me to view his policies as just a sham. Some of his environmental actions, especially his use of the military to relocate squatters, made him look very bad, cost him votes (albeit buffered by his rigging of elections), and cost him support of powerful members of the elite and military (although many others of his policies gained him their support). In the case of many of his environmental measures that I listed, I cannot discern a possible connection to wealthy resort developers, counterinsurgency measures, or currying favor with the army. Instead, Balaguer, as an experienced practical politician, seems to have pursued pro-environment policies as vigorously as he could get away with it, without losing too many votes or too many influential supporters or provoking a military coup against him.

Another issue raised by some of the Dominicans whom I interviewed was that Balaguer's environmental policies were selective, sometimes inef-

fective, and exhibited blind spots. He allowed his supporters to do things destructive to the environment, such as damaging riverbeds by extracting rock, gravel, sand, and other building materials. Some of his laws, such as those against hunting and air pollution and fence poles, didn't work. He sometimes drew back if he encountered opposition to his policies. An especially serious failing of his as an environmentalist was that he neglected to harmonize the needs of rural farmers with environmental concerns, and he could have done much more to foster popular support for the environment. But he still managed to undertake more diverse and more radical pro-environment actions than any other Dominican politician, or indeed than most modern politicians known to me in other countries.

On reflection, it seems to me that the most likely interpretation of Balaguer's policies is that he really did care about the environment, as he claimed. He mentioned it in almost every speech; he said that conserving forests, rivers, and mountains had been his dream since his childhood; and he stressed it in his first speeches on becoming president in 1966 and again in 1986, and in his last (1994) reinaugural speech. When President Fernández asserted that devoting 32% of the country's territory to protected areas was excessive, Balaguer responded that the whole country should be a protected area. But as for how he arrived at his pro-environment views, no two people gave me the same opinion. One person said that Balaguer might have been influenced by exposure to environmentalists during early years in his life that he spent in Europe; one noted that Balaguer was consistently anti-Haitian, and that he may have sought to improve the Dominican Republic's landscape in order to contrast it with Haiti's devastation; another thought that he had been influenced by his sisters, to whom he was close, and who were said to have been horrified by the deforestation and river siltation that they saw resulting from the Trujillo years; and still another person commented that Balaguer was already 60 years old when he ascended to the post-Trujillo presidency and 90 years old when he stepped down from it, so that he might have been motivated by the changes that he saw around him in his country during his long life.

I don't know the answers to these questions about Balaguer. Part of our problem in understanding him may be our own unrealistic expectations. We may subconsciously expect people to be homogeneously "good" or "bad," as if there were a single quality of virtue that should shine through every aspect of a person's behavior. If we find people virtuous or admirable in one respect, it troubles us to find them not so in another respect. It is difficult for us to acknowledge that people are not consistent, but are instead

mosaics of traits formed by different sets of experiences that often do not correlate with each other.

We may also be troubled that, if we really acknowledge Balaguer as an environmentalist, his evil traits would unfairly tarnish environmentalism. Yet, as one friend said to me, "Adolf Hitler loved dogs and brushed his teeth, but that doesn't mean that we should hate dogs and stop brushing our teeth." I also have to reflect on my own experiences while working in Indonesia from 1979 to 1996 under its military dictatorship. I loathed and feared that dictatorship because of its policies, and also for personal reasons: especially because of the things that it did to many of my New Guinea friends, and because of its soldiers almost killing me. I was therefore surprised to find that that dictatorship set up a comprehensive and effective national park system in Indonesian New Guinea. I arrived in Indonesian New Guinea after years of experience in the democracy of Papua New Guinea, and I expected to find environmental policies much more advanced under the virtuous democracy than under the evil dictatorship. Instead, I had to acknowledge that the reverse was true.

None of the Dominicans to whom I talked claimed to understand Balaguer. In referring to him, they used phrases such as "full of paradoxes," "controversial," and "enigmatic." One person applied to Balaguer the phrase that Winston Churchill used to describe Russia: "a riddle wrapped in a mystery inside an enigma." The struggle to understand Balaguer reminds me that history, as well as life itself, is complicated; neither life nor history is an enterprise for those who seek simplicity and consistency.

In light of that history of environmental impacts in the Dominican Republic, what is the current status of the country's environmental problems, and of its natural reserve system? The major problems fall into eight of the list of 12 categories of environmental problems that will be summarized in Chapter 16: problems involving forests, marine resources, soil, water, toxic substances, alien species, population growth, and population impact.

Deforestation of the pine forests became locally heavy under Trujillo, and then rampant in the five years immediately following his assassination. Balaguer's ban on logging was relaxed under some other recent presidents. The exodus of Dominicans from rural areas to the cities and overseas has decreased pressure on the forests, but deforestation is continuing especially near the Haitian border, where desperate Haitians cross the border from their almost completely deforested country in order to fell trees for

making charcoal arid for clearing land to farm as squatters on the Dominican side. In the year 2000, the enforcement of forest protection reverted from the armed forces to the Ministry of the Environment, which is weaker and lacks the necessary funds, so that forest protection is now less effective than it was from 1967 to 2000.

Along most of the Republic's coastline, marine habitats and coral reefs have been heavily damaged and overfished.

Soil loss by erosion on deforested land has been massive. There is concern about that erosion leading to sediment buildup in the reservoirs behind the dams used to generate the country's hydroelectric power. Salinization has developed in some irrigated areas, such as at the Barahona Sugar Plantation.

Water quality in the country's rivers is now very poor because of sediment buildup from erosion, as well as toxic pollution and waste disposal. Rivers that until a few decades ago were clean and safe for swimming are now brown with sediment and unswimmable. Industries dump their wastes into streams, as do residents of urban barrios with inadequate or non-existent public waste disposal. Riverbeds have been heavily damaged by industrial dredging to extract materials for the construction industry.

Beginning in the 1970s, there have been massive applications of toxic pesticides, insecticides, and herbicides in rich agricultural areas, such as the Cibao Valley. The Dominican Republic has continued to use toxins that were banned in their overseas countries of manufacture long ago. That toxin use has been tolerated by the government, because Dominican agriculture is so profitable. Workers in rural areas, even children, routinely apply toxic agricultural products without face or hand protection. As a result, effects of agricultural toxins on human health have now been well documented. I was struck by the near-absence of birds in the Cibao Valley's rich agricultural areas: if the toxins are so bad for birds, they presumably are also bad for people. Other toxic problems arise from the large Falconbridge iron/nickel mine, whose smoke fills the air along parts of the highway between the country's two largest cities (Santo Domingo and Santiago). The Rosario gold mine has been temporarily closed down because the country lacks the technology to treat the mine's cyanide and acid effluents. Both Santo Domingo and Santiago have smog, resulting from mass transit using obsolete vehicles, increased energy consumption, and the abundance of private generators that people maintain in their homes and businesses because of the frequent power failures of the public electricity systems. (I experienced several power failures each day that I was in Santo Domingo, and af-

ter my return my Dominican friends wrote me that they were now suffering under 21-hour blackouts.)

As for alien species, in order to reforest logged lands and hurricane-damaged lands in recent decades, the country has resorted to alien tree species that grow more quickly than does the slow-growing native Dominican pine. Among the alien species that I saw in abundance were Honduras pine, casuarinas, several species of acacias, and teak. Some of those alien species have prospered, while others have failed. They raise concern because some of them are prone to diseases to which the native Dominican pine is resistant, so that reforested slopes could lose their cover again if their trees are attacked by disease.

While the country's rate of population increase has decreased, it is estimated as still around 1.6% per year.

More serious than the country's growing population is its rapidly growing per-capita human impact. (By that term, which will recur in the remainder of this book, I mean the average resource consumption and waste production of one person: much higher for modern First World citizens than for modern Third World citizens or for any people in the past. A society's total impact equals its per-capita impact multiplied by its number of people.) Overseas trips by Dominicans, visits to the country by tourists, and television make people well aware of the higher standard of living in Puerto Rico and the United States. Billboards advertising consumer products are everywhere, and I saw street vendors selling cell telephone equipment and CDs at any major intersection in the cities. The country is becoming increasingly dedicated to a consumerism that is not currently supported by the economy and resources of the Dominican Republic itself, and that depends partly on earnings sent home by Dominicans working overseas. All of those people acquiring large amounts of consumer products are putting out correspondingly large amounts of wastes that overwhelm municipal waste disposal systems. One can see the trash accumulating in the streams, along roads, along city streets, and in the countryside. As one Dominican said to me, "The apocalypse here will not take the form of an earthquake or hurricane, but of a world buried in garbage."

The country's natural reserve system of protected areas directly addresses all of these threats except for population growth and consumer impact. The system is a comprehensive one that consists of 74 reserves of various types (national parks, protected marine reserves, and so on) and covers a third of the country's land area. That is an impressive achievement for a densely populated small and poor country whose per-capita income is

only one-tenth that of the United States. Equally impressive is that that reserve system was not urged and designed by international environmental organizations but by Dominican NGOs. In my discussions at three of these Dominican organizations—the Academy of Sciences in Santo Domingo, the Fundación Moscoso Puello, and the Santo Domingo branch of The Nature Conservancy (the latter unique among my Dominican contacts in being affiliated with an international organization rather than purely local)—without exception every staff member whom I met was a Dominican. That situation contrasts with the situation to which I have become accustomed in Papua New Guinea, Indonesia, the Solomon Islands, and other developing countries, where scientists from overseas hold key positions and also serve as visiting consultants.

What about the future of the Dominican Republic? Will the reserve system survive under the pressures that it faces? Is there hope for the country?

On these questions I again encountered divergence of opinion among even my Dominican friends. Reasons for environmental pessimism begin with the fact that the reserve system is no longer backed by the iron fist of Joaquín Balaguer. It is underfunded, underpoliced, and has been only weakly supported by recent presidents, some of whom have tried to trim its area or even to sell it. The universities are staffed by few well-trained scientists, so that they in turn cannot educate a cadre of well-trained students. The government provides negligible support for scientific studies. Some of my friends were concerned that the Dominican reserves are turning into parks that exist more on paper than in reality.

On the other hand, a major reason for environmental optimism is the country's growing, well-organized, bottom-up environmental movement that is almost unprecedented in the developing world. It is willing and able to challenge the government; some of my friends in the NGOs were sent to jail for those challenges but won their release and resumed their challenges. The Dominican environmental movement is as determined and effective as in any other country with which I am familiar. Thus, as elsewhere in the world, I see in the Dominican Republic what one friend described as "an exponentially accelerating horse race of unpredictable outcome" between destructive and constructive forces. Both the threats to the environment, and the environmental movement opposing those threats, are gathering strength in the Dominican Republic, and we cannot foresee which will eventually prevail.

Similarly, the prospects of the country's economy and society arouse divergence of opinion. Five of my Dominican friends are now deeply pessimistic, virtually without hope. They feel especially discouraged by the weakness and corruptness of recent governments seemingly interested only in helping the ruling politicians and their friends, and by recent severe setbacks to the Dominican economy. Those setbacks include the virtually complete collapse of the formerly dominant sugar export market, the devaluation of the currency, increasing competition from other countries with lower labor costs for producing free trade zone export products, the collapses of two major banks, and government overborrowing and overspending. Consumerist aspirations are rampant and beyond levels that the country could support. In the opinion of my most pessimistic friends, the Dominican Republic is slipping downhill in the direction of Haiti's grinding desperation, but it is slipping more rapidly than Haiti did: the descent into economic decline that stretched over a century and a half in Haiti will be accomplished within a few decades in the Dominican Republic. According to this view, the Republic's capital city of Santo Domingo will come to rival the misery of Haiti's capital of Port-au-Prince, where most of the population lives below the poverty level in slums lacking public services, while the rich elite sip their French wines in their separate suburb.

That's the worst-case scenario. Others of my Dominican friends responded that they have seen governments come and go over the last 40 years. Yes, they said, the current government is especially weak and corrupt, but it will surely lose the next election, and all of the candidates to become the next president seem preferable to the current president. (In fact, the government did lose the election a few months after that conversation.) Fundamental facts about the Dominican Republic brightening its prospects are that it is a small country in which environmental problems become readily visible to everybody. It is also a "face-to-face society" where concerned and knowledgeable private individuals outside the government have ready access to government ministers, unlike the situation in the United States. Perhaps most important of all, one has to remember that the Dominican Republic is a resilient country that has survived a history of problems far more daunting than its present ones. It survived 22 years of Haitian occupation, then an almost uninterrupted succession of weak or corrupt presidents from 1844 until 1916 and again from 1924 to 1930, and American military occupations from 1916 to 1924 and from 1965 to 1966. It succeeded in rebuilding itself after 31 years under Rafael Trujillo, one of the most evil and destructive dictators in the world's recent history. From the

years 1900 to 2000, the Dominican Republic underwent more dramatic socioeconomic change than did almost any other country in the New World.

Because of globalization, what happens to the Dominican Republic affects not only Dominicans but also the rest of the world. It especially affects the United States lying only 600 miles away, and already home to a million Dominicans. New York City now supports the second largest Dominican population of any city in the world, second only to the Republic's own capital of Santo Domingo. There are also large overseas Dominican populations in Canada, the Netherlands, Spain, and Venezuela. The U.S. has already experienced how events in the Caribbean country immediately west of Hispaniola, namely, Cuba, threatened our survival in 1962. Hence the U.S. has a lot at stake in whether the Dominican Republic succeeds in solving its problems.

What about the future of Haiti? Already the poorest and one of the most overcrowded countries in the New World, Haiti is nevertheless continuing to become even poorer and more crowded, with a population growth rate of nearly 3% per year. Haiti is so poor, and so deficient in natural resources and in trained or educated human resources, that it really is difficult to see what might bring about improvement. If one instead looks to the outside world to help through government foreign aid, NGO initiatives, or private efforts, Haiti even lacks the capacity to utilize outside assistance effectively. For instance, the USAID program has put money into Haiti at seven times the rate at which it has put money into the Dominican Republic, but the results in Haiti have still been much more meager, because of the country's deficiency in people and organizations of its own that could utilize the aid. Everyone familiar with Haiti whom I asked about its prospects used the words "no hope" in their answer. Most of them answered simply that they saw no hope. Those who did see hope began by acknowledging that they were in a minority and that most people saw no hope, but they themselves then went on to name some reason why they clung to hope, such as the possibilities of reforestation spreading out from Haiti's existing small forest reserves, the existence of two agricultural areas in Haiti that do produce surplus food for internal export to the capital of Port-au-Prince and the tourist enclaves on the north coast, and Haiti's remarkable achievement in abolishing its army without descending into a constant morass of secession movements and local militias.

Just as the Dominican Republic's future affects others because of global-

ization, Haiti also affects others through globalization. Just as with Dominicans, that effect of globalization includes the effects of Haitians living overseas—in the United States, Cuba, Mexico, South America, Canada, the Bahamas, the Lesser Antilles, and France. Even more important, though, is the "globalization" of Haiti's problems within the island of Hispaniola, through Haiti's effects on the neighboring Dominican Republic. Near the Dominican border, Haitians commute from their homes to the Dominican side for jobs that at least provide them with meals, and for wood fuel to bring back to their deforested homes. Haitian squatters try to eke out a living as farmers on Dominican land near the border, even on poor-quality land that Dominican farmers scorn. More than a million people of Haitian background live and work in the Dominican Republic, mostly illegally, attracted by the better economic opportunities and greater availability of land in the Dominican Republic, even though the latter itself is a poor country. Hence the exodus of over a million Dominicans overseas has been matched by the arrival of as many Haitians, who now constitute about 12% of the population. Haitians take low-paying and hard jobs that few Dominicans currently want for themselves—especially in the construction industry, as agricultural workers, doing the back-breaking and painful work of cutting sugarcane, in the tourist industry, as watchmen, as domestic workers, and operating bicycle transport (pedaling bicycles while carrying and balancing huge quantities of goods for sale or delivery). The Dominican economy utilizes those Haitians as low-paid laborers, but Dominicans are reluctant in return to provide education, medical care, and housing when they are strapped for funds to provide those public services to themselves. Dominicans and Haitians in the Dominican Republic are divided not only economically but also culturally: they speak different languages, dress differently, eat different foods, and on the average look different (Haitians tending to be darker-skinned and more African in appearance).

As I listened to my Dominican friends describing the situation of Haitians in the Dominican Republic, I became astonished by the close parallels with the situation of illegal immigrants from Mexico and other Latin American countries in the United States. I heard those sentences about "jobs that Dominicans don't want," "low-paying jobs but still better than what's available for them at home," "those Haitians bring AIDS, TB, and malaria," "they speak a different language and look darker-skinned," and "we have no obligation and can't afford to provide medical care, education, and housing to illegal immigrants." In those sentences, all I had to do was

to replace the words "Haitians" and "Dominicans" with "Latin American immigrants" and "American citizens," and the result would be a typical expression of American attitudes towards Latin American immigrants.

At the present rate at which Dominicans are leaving the Dominican Republic for the U.S. and Puerto Rico while Haitians are leaving Haiti for the Dominican Republic, the Republic is becoming a nation with an increasing Haitian minority, just as many parts of the United States are becoming increasingly "Hispanic" (i.e., Latin American). That makes it in the vital interests of the Dominican Republic for Haiti to solve its problems, just as it is in the vital interests of the United States for Latin America to solve its own problems. The Dominican Republic is affected more by Haiti than by any other country in the world.

Might the Dominican Republic play a constructive role in Haiti's future? At first glance, the Republic looks like a very unlikely source of solutions to Haiti's problems. The Republic is poor and has enough problems helping its own citizens. The two countries are separated by that cultural gulf that includes different languages and different self-images. There is a long, deeply rooted tradition of antagonism on both sides, with many Dominicans viewing Haiti as part of Africa and looking down on Haitians, and with many Haitians in turn suspicious of foreign meddling. Haitians and Dominicans cannot forget the history of cruelties that each country inflicted on the other. Dominicans remember Haiti's invasions of the Dominican Republic in the 19th century, including the 22-year occupation (forgetting that occupation's positive aspects, such as its abolition of slavery). Haitians remember Trujillo's worst single atrocity, his ordering the slaughter (by machete) of all 20,000 Haitians living in the northwestern Dominican Republic and parts of the Cibao Valley between October 2 and October 8, 1937. Today, there is little collaboration between the two governments, which tend to view each other warily or with hostility.

But none of these considerations changes two fundamental facts: that the Dominican environment merges continuously into the Haitian environment, and that Haiti is the country with the strongest effect upon the Dominican Republic. Some signs of collaboration between the two are starting to emerge. For example, while I was in the Dominican Republic, for the first time a group of Dominican scientists was about to travel to Haiti for joint meetings with Haitian scientists, and a return visit of the Haitian scientists to Santo Domingo was already scheduled. If the lot of Haiti is to improve at all, I don't see how that could happen without more involvement on the part of the Dominican Republic, even though that is undesired

and almost unthinkable to most Dominicans today. Ultimately, though, for the Republic not to be involved with Haiti is even more unthinkable. While the Republic's own resources are scarce, at minimum it could assume a larger role as a bridge, in ways to be explored, between the outside world and Haiti.

Will Dominicans come to share those views? In the past, the Dominican people have accomplished feats much more difficult than becoming constructively engaged with Haiti. Among the many unknowns hanging over the futures of my Dominican friends, I see that as the biggest one.