CHAPTER 7

Strengthening National Coordination

The biggest gains to society cannot be picked up through uncoordinated individual actions.

—Adapted from Mancur Olson

Many welfare enhancing opportunities can be realized only through coordinated activity, guided by institutions and policy.[1] Because of differences in laws, norms, and systems of government, the political and legal domain for coordinating activity is frequently the nation. Much private sector activity is national in scope and currencies, trade policies, safety regulations, and the like substantially circumscribe the markets. Furthermore since many externalities spill outside municipalities and regions, the nation is also the level at which interests can be balanced—either directly or by facilitating negotiation among localities. In fact, the national government plays a special role in providing a legal framework and in creating an enabling environment for partnerships in which the private sector, civil society, and all levels of government can contribute. Partnerships between government and think-and-do-tanks are one example (chapter 9); those between loggers, NGOs, and local and national government, to create mosaics conserving the productive land uses ahead of the agricultural frontier are another (chapter 5). The smooth evolution of property rights from communal to private (chapter 5) or the enhancement of tenure security in urban slums (chapter 6) depends critically on a facilitating national framework of norms, laws, and organizations. National leadership, including parliamentarians, can be fundamental in directly bringing about change, as with Tunisian President Bourguiba's support for the rights of women (chapter 4) and Nelson Mandela's contribution to the formation of a modern South Africa (chapter 3). National actors also engage in and frame the pursuit of international goals, as elaborated in chapter 8.

This chapter focuses on the reasons that better outcomes emerge when the institutional basis for coordination is strong, encouraging the *make, exchange, and preserve,* which leads to growth and sustainable development, and discouraging the *take,* which leads to waste and conflict. The emphasis is on coordination at the national level—to manage a broader portfolio of assets (chapter 2). The national concerns analyzed here are critical for sustainable development and highlight the institutional levers that can strengthen coordination:

- Promoting inclusiveness and the participation of poor people (fostering access to assets and voice)
- Generating a sound investment climate (attending to macroeconomic fundamentals, strengthening governance, and providing basic infrastructure)
- Managing the environment (dismantling perverse subsidies, husbanding forests and fisheries, and curbing air pollution)
- Using resources effectively (avoiding the natural resource curse and ensuring that external aid does not undermine government accountability)
- Averting violent conflict (using natural resources well and confronting extreme poverty, thereby limiting their inciting effects).

Reducing poverty and providing a sound investment climate strengthens the incentive to work and build communities, and fosters the better use and protection of the environment. Strengthening the management of natural resources, especially certain concentrated resources, helps confront widespread destitution and reduces the likelihood of conflict.

The treatment of each of these issues will attempt to answer three questions:

- Does the institutional environment perform the key functions of picking up signals, balancing interests, and executing decisions?
- What institutional levers might improve the process of organizing dispersed interests and forging credible commitments?
- Do today's processes permit the emergence and evolution of more inclusive institutions over time?

Whether the development process is strong, sustainable, and responsive to new challenges depends largely on the answers to these questions.

Promoting inclusiveness

As noted in the previous chapters, the growth of assets, the production of assets, and the sustainability of social transportation depends on the quality of institutions whose evolution depends on voice and inclusivity of all members of society. There are not many simple adjustments that can be implemented in a 3- to 5-year period, but over a long period, sustained broadening is possible if it starts now and is steadily reinforced at the national level.

Promoting inclusiveness can help realize the potential of a nation more broadly. Poor or excluded people often cannot seize opportunities because of high barriers to participation. Without a stake in the social, economic, and political system, they do not have the incentive to partake, contribute, and be forward looking. Promoting wider participation, with greater access to assets and voice, is a pillar of steady growth and sustainable development, and the institutional environment is central to how national actors address this pressing issue.

Fostering access to assets and services

Much human potential is wasted because of the underprovision of services. A recent study of primary and secondary education based on surveys from 41 countries shows major gaps in educational attainments associated with gender and family income.[2] There is a large female disadvantage in education in South Asia, North Africa, and western and central Africa, and poor people have limited access to education in almost all countries studied.

The study also shows that educated adults, especially women, tend to have fewer, but healthier and better-educated children. Beyond the generalized productivity gains associated with schooling, the surveys suggest that major opportunities are missed in poor countries. The expected returns to a nation of expanding education, particularly for girls, are now well documented, and education is a key part of the MDGs.

The wider extension of access to assets and services will help realize people's potential and improve dynamic efficiency. The institutional environment is central in redistribution through growth. Partnerships with donors are a promising avenue for financing greater inclusiveness, including spending on education and market-based land reform projects where the landless poor receive help in buying land and establishing farms (see chapter 5). This shifts the potential disincentive among taxpayers to higher-income countries, where the effect is easier to absorb. Regardless of source, national or international, the support for assistance from rich to poor will be more feasible politically when resources to provide public services are used more efficiently. In the case of international development assistance, for example, this means mitigating the negative incentive effects that aid can potentially generate, such as weaker government accountability (as discussed in greater detail below). Levers for addressing such incentive issues and improving services include involving the private sector and civil society in delivery; promoting decentralization (fiscal, administrative, and political); and facilitating parental and community influence in schools (voice and other means to raise transparency). Such measures also encourage the emergence of better institutions over time (chapter 4).

Strengthening voice

Mechanisms that strengthen voice—such as a free press, elections, and participation in civil society organizations—are keys to including the disenfranchised, building mandates, and generating consensus. Those excluded, without voice, will not take ownership of a process, action, or outcome. This effect also applies at different scales—local, national, global. Voice can do much to channel dispersed interests (chapter 3).

Box 7.1
Democracy, leadership, and decentralization in Latin America

Between 1989 and 1994 the República Bolivariana de Venezuela and Bolivia implemented sweeping institutional reforms that decentralized political power and enhanced opportunities for participation. In the República Bolivariana de Venezuela, citizens were given the right to vote for mayors and governors for the first time, reversing a long trend toward centralization. In Bolivia, the Law for Popular Participation created hundreds of municipalities and granted them 20 percent of government revenues.

In each case, institutional change resulted from a combination of three factors: widely felt social problems, political leadership, and ready-made proposals crafted by small groups of analysts. In the República Bolivariana de Venezuela, riots in Caracas forcibly demonstrated to political elites the depth of public dissatisfaction with the country's governing institutions. President Pérez responded by proposing a package of democratic reforms designed years earlier by a commission established under his predecessor. The creation of municipalities in Bolivia was an idea developed in a think tank associated with the party of President Sánchez de Lozada. The president became convinced that such an initiative held promise for addressing the concerns of increasingly vocal indigenous groups and local communities.

Leadership played an important role in the decision to decentralize power and in the choice of specific institutional approaches. Political leaders exercised substantial discretion in seeking to balance interests through decentralization, overcoming opposition from vested interests. In Bolivia, for example, powerful unions and departmental civic committees opposed the idea of municipal empowerment.

In addition, political leaders had at their disposal a stock of specific, ready-made proposals that they could offer as solutions for addressing general social dissatisfaction with the performance of public institutions. The proposals were devised by technical analysts in think tanks and presidential commissions that were intimately familiar with national conditions—in many cases through direct contact with grass-roots organizations. Often the proposals were developed many years in advance and were kept alive in discussions among experts and social leaders who made the proposals available for adoption when the political opportunity arose.

Source: Grindle (2000).

Opportunities for reform often arise from economic or political crises that inspire civil society or political elites to demand changes in the status quo and to search for new solutions to long-standing problems. In Latin America, perceived crises in the legitimacy of governing institutions have inspired substantial reforms that give greater voice and power to local communities (box 7.1).

Organizing dispersed interests for improved coordination depends largely on voice. In the form of votes, voice increases accountability and responsiveness, as policymakers in competitive democratic contexts are concerned about reelection. A good example is famine—perhaps the worst sort of coordination failure. In observing that India has not suffered a famine since independence, Nobel Laureate Amartya Sen notes that "with the present political system in India, it is almost impossible for a famine to take place. The pressure of newspapers and diverse political parties make it imperative . . . to organize swift relief."[3]

The proposition that newspapers in a competitive democracy elicit swifter disaster relief has been investigated empirically in 16 Indian states, showing that newspaper circulation strongly increases public food distribution during shortages.[4] The effects are large, robust, and significant, even after controlling for income, urbanization, and population density. The study shows that information, political accountability, and an educated and informed public are critical for picking up dispersed signals of distress. Ensuring a free press and democracy also represents a commitment device to acting. Unfortunately, this mechanism has limitations. As noted by Sen, "the deprivation has to be dramatic to be 'newsworthy' and politically exploitable. The Indian political system may prevent famines but . . . it seems unable to deal effectively with endemic malnutrition."[5]

Education is another example of the importance of voice. And it is a good example of the challenge hinted at by Sen: how can institutions be geared to ensure commitment to activities that are longer term, less visible, but as important? One resounding message from research on education systems is that the participation of families and communities can increase inputs and discipline. Decentralization and the promotion of private sector and NGO involvement can help society meet educational goals. In El Salvador, decentralization encouraged greater family and community involvement in schooling, expanding educational opportunities for the poor in rural areas.[6] In Colombia, a government voucher program used the private sector to expand secondary school enrollment and choice for poor children in a cost-effective way.[7]

Box 7.2
Brazil: changing the rules of the game for better public services

The state of Ceara—in Brazil's poorest region, the northeast—was legendary for clientelism, patronage, and poor public administration. In 1987 a newly elected reformist government, led by Tasso Jereissati, took the reins. Only a few years after the new government launched a public health program, vaccination coverage for measles and polio had tripled to 90 percent of the child population, and infant deaths had fallen from 102 per 1,000 infants to 65. How could a long tradition of clientelism and political opposition be overcome so rapidly? How did reputedly mediocre state agencies deliver and sustain beter performance spanning several years and changes in administration?

The governor and the state administration had to compel reluctant mayors to join the program. Pressure on the mayors came from neighboring *municipios* that had joined the program, and from an unusual and unending flurry of publicity through radio and other means. By creating an informed and demanding community, the state had initiated a dynamic in which the mayors saw political rewards for supporting the program. In so doing, the government contributed to replacing the old patronage dynamic with a more service-oriented one, exploiting an opportunity as a strong third party to improve municipal accountability.

Source: Tendler (1997).

Studies on secondary schools in Argentina show that institutional features, such as school autonomy and parental participation, make a substantial difference in educational outcomes.[8] Parental participation (such as through a school board) empowers families to influence how the school is run—and anchors the school's commitment to serving their children's needs. Autonomy and participation are found to have a positive and significant effect on student learning, as measured by test scores. Interestingly, the effect is at least as strong for children from poor households as it is for the general population.

Voice combined with transparency and access to credible information is a powerful lever for improved coordination. This makes new technologies that promote transparency and bring relevant information closer to all stakeholders all the more exciting. Voice also plays a major role in creating a setting that is conducive to the emergence of better institutions over time (box 7.2).

Creating a sound investment climate

Institutions are crucial to fostering a sound investment climate that favors make over take and enables a broader portfolio of assets to thrive. Whether planting rice saplings in a field, making furniture on the side of a road, setting up a new enterprise, or buying securities on a stock exchange, investors like return and dislike risk. Aspects of the broader investment climate, such as the rate of inflation, the extent of corruption, or the cost of shipping, help determine the incentive to invest.[9] Institutions will be important in addressing these, affecting not only the drive for new investment, but also the productivity and value of the existing stock of assets.

The investment climate encompasses:

- the macroeconomic fundamentals (including sound money, strong fiscal accounts, and stable exchange rates),
- the operation of government (emphasizing effective corruption control and a sound regulatory framework that promotes private sector competition while addressing negative externalities), and
- basic infrastructure (underpinning commerce and the development of human capital).

Set in a broader context that facilitates initiatives like self-regulation through the adoption of the triple bottom line to evaluate a company's performance (gauging profits, social impacts, and environmental effects), these components are critical determinants of transactions costs that shape what is produced and how.[10] Improved criteria are especially important in guiding investment that is long lived (lasting 20–50 years), or where impacts are irreversible. The investment climate will also play an important role in the emergence of better institutions over time.

Attending to macroeconomic fundamentals

Sound management of macroeconomic variables is necessary but not sufficient to foster sustainable development. Macroeconomic crises—especially financial and budget crises—can undo development and undermine sustainability. The macroeconomic landscape is broad, and only a few elements are touched on here: inflation, fiscal balances, and the exchange rate.

Inflation—particularly unexpected inflation—weakens the incentive to produce. There is an extensive literature on inflation, with commitment problems as a major feature: can the government or central bank commit to not printing money? Some institutional remedies involve granting the central bank independence and adopting transparent targets and rules in managing the money supply. Other commitment devices include tying the exchange rate to an appropriate nominal peg.[11]

The fiscal accounts are also an important part of the investment climate. Public finance research has addressed many important aspects of fiscal management, such as spending countercyclically, building a safety net, redistributing income, providing public goods, and the like. One important aspect that illustrates well the approach taken in this Report is fiscal decentralization, which has attracted increased attention based on the promise of improved accountability and the more responsive provision of services and public goods financed closer to the level of the ultimate beneficiaries.

The potential gains from decentralization, however, face several pitfalls, especially the problem of "soft budget" constraints.[12] If localities feel confident that a higher-level government will bail them out in the event of a financial crisis, spending may be excessive, creating uncertainty and gyrations that undermine the incentive to invest. In the extreme, regional fiscal profligacy can lead to national fiscal problems that precipitate inflation and exchange rate crises. So institutions are important in generating a "hard budget constraint" that protects the dispersed interests of taxpayers in other municipalities, and facilitates commitment by the higher levels of government.[13] For example, in 1996 Hungary adopted a law establishing formal bankruptcy proceedings for municipalities. Such arrangements are central to enabling the sound fiscal management that contributes to a strong investment climate.

The exchange rate is another macroeconomic fundamental, important for international transactions on both the current account (trade in goods and services) and the capital account (borrowing and foreign direct investment). Large gyrations in the exchange rate can undermine the incentive to invest. In addition, poor people perceive adverse effects disproportionately, because they have little access to the sophisticated financial instruments needed to protect or hedge against exchange rate movements. Much depends on confidence. Although a lively debate continues on how best to manage the exchange rate, maintaining strong fiscal and monetary policy is essential. And many governments have sought institutional commitment mechanisms including fixed exchange rates, the gold standard, currency boards, and even using the U.S. dollar.

Strengthening the operation of government

The incentive to invest is strongly influenced by maintaining property rights and the rule of law, enforcing contracts, regulating activity, and engaging in other interventions that support make over take. But regulation, for example, can be captured by concentrated interests to the detriment of the many. Similarly, bribe seeking by government officials typically motivates arbitrary harassment, also harming broader interests and the incentive to invest. And once someone has accumulated wealth through judicious investment, it may be subject to seizure, either by private individuals (crime), or by government (expropriation). Can government commit to protecting assets and avoiding predation? If not, much activity will be discouraged, relocate to where it is protected, or move to the informal sector.

As noted in earlier chapters, substantial growth in productivity and employment is required over the next 50 years in order to improve the quality of life for growing populations in developing countries. Small- and medium-scale enterprises are often the most dynamic segments of developing economies, and are central to the expansion of employment opportunities, especially for poor people.[14] Yet these enterprises face many hurdles in difficult business environments. For example, seminal research on entry regulation was done by Hernando de Soto and his team by opening a garment shop with one employee in Lima, Peru. They found that it took 289 days working 6 hours a day to legally register the business, and the cost was more than 30 times the monthly minimum wage.[15] A similar study subsequently looked at the obstacles and costs of formally establishing a business in 85 countries, to see whether the quality of public and private goods—ostensibly the justification for regulation—is better in countries with more regulations.[16] If the quality is better, government works in the public interest—if it is lower, government has a grabbing hand. The authors find that the quality of goods is not better in high-regulation countries; instead, the additional regulation leads to corruption and forces activities to locate in the informal sector, hampering more productive arrangements. The authors conclude that where government institutions are weak it is better to have a smaller government that intervenes and regulates less.[17] This is consistent with one of the main themes of the *World Development Report 1997,* arguing for "a good fit between the states' institutional capabilities and its action."[18]

Another important avenue for broad-based investment is housing and land. Formally acquiring land for housing often involves many steps and takes years.[19] The result again is discouraged investment, the inefficient location of activity in the informal sector, and corruption. Institutional responses include better tenure arrangements, streamlining formal registration procedures, and introducing more transparency and accountability into the process.

Corruption is a major risk entrepreneurs face, because government officials seeking bribes can undermine the viability of an entire investment. Paying bribes to continue business operations also lowers returns, reducing the incentive to invest. A series of World Bank–sponsored surveys of businesses in developing countries show that corruption is a major concern, frequently imposing additional costs on smaller enterprises disproportionately. Ongoing research continues to illuminate the deleterious effects of corruption, and suggests potential remedies that are mainly institutional, including partnering with civil society (box 7.3), providing access to information,

Box 7.3
Civil society and governance

Civil society has emerged as a major force in efforts to improve governance. High levels of corruption are associated with poverty, inequality, reduced domestic and foreign direct investment, and weak overall economic performance.* Corruption control that ensures a well-functioning government is substantially a public good and an intermediate input into the provision of other public goods. This collective action problem is aggravated by difficult incentives: not only would beneficiaries prefer to free-ride and not contribute to governance if others are contributing, but the incentive to defect and engage in corrupt practices is stronger when other actors curb their own illicit activities.

International aspects of corruption further complicate the issue. When the United States enacted the Foreign Corrupt Practices Act of 1977, prohibiting the payment of bribes by U.S. citizens or companies and their subsidiaries, no other nation followed suit with similar legislation. In many countries, foreign bribery was so commonplace that bribes were treated as tax-deductible business expenses. Government subsidies through export financing and insurance accommodated foreign bribery as an unpleasant but necessary ingredient of doing business in emerging markets.

Civil society organizations (CSOs), such as Transparency International (TI), helped change attitudes towards corruption in the 1990s. This organization's basic approach is a nonconfrontational effort to build "national, regional, and global coalitions that embrace the state, civil society, and the private sector to fight domestic and international corruption."† The objective is pursued by building public awareness, lobbying governments, and facilitating agreements to reduce corruption. One of TI's most important and enduring contributions has been to help place corruption firmly on the agenda in both developing and developed countries. This was accomplished mainly by emphasizing the negative effects of corruption (falling disproportionately on the poor), and generating publicity through the annual publication of the Corruption Perceptions Index.‡

The cornerstone of TI's efforts to foster agreements curbing corruption is the integrity pact between governments and companies bidding for projects.** While the details vary depending on the project, the basic idea is a commitment by the authorities not to demand or accept, and by firms not to offer, any bribe or gift in exchange for an advantage in the project award process. These pacts are currently forging coalitions among bidders, government agencies, and CSOs in about 50 competitive situations around the world, and are underpinned by transparency and disclosure procedures, independent third-party oversight, and specific sanctions for noncompliance.

TI has also promoted international collective action to curb corruption, most significantly the OECD Convention. With the support of business leaders, governments, and CSOs, the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions was signed in 1997, went into force in 1999, and, at the end of 2001, had been ratified by 34 of 35 signatory states, including several non-OECD members.***

The Convention is an attempt to make a coordinated escape from the corruption trap, such that firms are not disadvantaged by refraining from corrupt practices. It has no formal mechanism of punishing signatories who cheat and do not contribute to controlling corruption by enforcing antibribery laws, but publicity and national and international condemnation are expected to ensure good faith efforts. It does stipulate an elaborate monitoring system, however, aided in part by CSOs, to further reassure signatories that other participants are complying with the agreed requirements. The experience with international efforts to combat corruption is an important example of how CSOs can contribute to development.

* Lambsdorff (1999).
† Galtung (2000, p. 26).
‡ For a discussion of how corruption impacts the poor disproportionately, see the World Bank (2001c, p. 102).
** TI (2000). Source Book 2000: Confronting Corruption—The Elements of a National Integrity System. Berlin. [http://www.transparency.org/sourcebook].
*** See the OECD Web site for the text: http://www.oecd.org/pdf/M00017000/M00017037.pdf.
Source: Eigen and Eigen-Zucchi (2002).

creating anticorruption agencies, ensuring media and judicial independence, and decentralization.[20]

Providing basic infrastructure

Infrastructure, the third main part of a sound investment climate, is analytically distinct from other investment in that it tends to exhibit a substantial public goods component and economies of scale in production. It also requires the coordination of networked facilities and a sound regulatory regime. Hence, it is often cheaper to provide infrastructure services—sewerage, piped water, power, telecommunications, ports, and roads—in ways that capture scale economies. Greater population density raises the returns to infrastructure investment.[21] Infrastructure also has profound long-term effects on development, with significant path dependence in energy efficiency, mode of transport, and the spatial distribution of activity.

Proximity matters.[22] Not all areas have the same potential. As a result, the spatial distribution of economic activity in general, and of urban centers in particular, is important to sustainable development (box 6.1). The spatial view of urban settlement as a system of cities and towns (linking urban and rural activities) deals with the extent to which the urban population is concentrated in the largest city (measured as "primacy"), and how smaller urban units and secondary cities are dispersed across regions. Excessive primacy can have real economic efficiency costs to countries. Poor accessibility of the rural hinterland to urban markets—caused by a weakly developed system of towns and cities reflecting a thin rural to urban and intercity transport network—also limits options for growth and diversification of the rural economy (chapter 5), and weakens the incentive to invest.

Disproportionate urban concentration often results from an imbalance in national institutions for signaling and balancing interests, especially across regions and levels of government. Democratization, fiscal decentralization, and investments in intercity roads, waterways, and communication can significantly reduce such concentration, permitting wider access to urban assets across the country (box 7.4).[23]

By providing access to urban opportunities and assets, and linking spatially dispersed activity across the country, basic infrastructure helps determine the return on other investments. Farmers need roads to bring produce to the market. Exporters require tele-

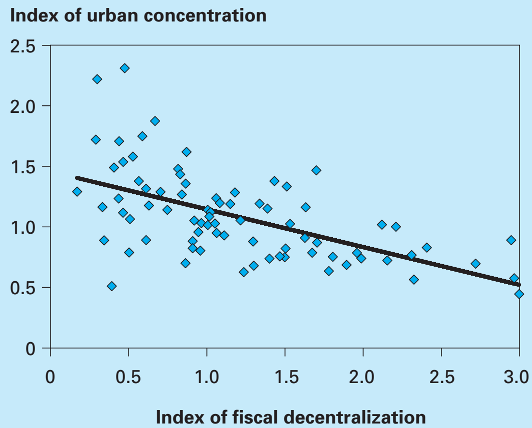
Box 7.4

National policy can generate excessive urban concentration

Urban concentration is positively associated with economic growth in the early stages of development. Focusing development in a few urban centers generates scale economies in production and consumption and conserves scarce infrastructure such as roads, skilled workers, and managerial resources. But excessive concentration is costly, as these gains are increasingly offset by congestion and diminishing returns to additional investments. Further, disproportionately high concentration of economic activity in a few urban areas is likely to have an adverse effect on the interregional distribution of opportunities and welfare. Empirical research shows that urban concentration rises and then falls with economic development. For example, recent work provides evidence that countries' urban concentration increases with growth at low levels of income, peaks at low-middle levels of income (around 1987 PPP income per capita of $2,500), and then declines at higher levels of income.

Policy and politics also influence urban concentration. Moving from the least to the most democratic regimes reduces urban concentration by 10 percent from its mean. Urban concentration is also lower in countries with higher levels of fiscal decentralization (box figure). This relationship holds even when controlling for the scale of the urban population. Infrastructure investments in waterways and roads, usually driven by national policies, also help reduce primacy, as these investments open the hinterland to external trade, domestic and international.

Urban concentration declines with fiscal decentralization



Note: The graph shows that urban concentration (as measured by the size distribution of cities) falls with greater fiscal decentralization (as measured by the share of sub-national revenues in total revenues). This note draws on findings reported in Ades and Glaeser (1995); Henderson (2000); Henderson and Davis (2002); Lall (2002); and Wheaton and Shishido (1982).
Data Sources: World Bank, WDI, and Government Financial Statistics.

communications and ports to make and execute transactions. Small industrial enterprises demand electricity to run equipment. In addition, the reliability of these infrastructure services is a major determinant of risk. Farmers, exporters, and entrepreneurs are exposed to large losses in the event of infrastructure failure. Recent research emphasizes the importance of infrastructure for economic performance, especially in the long run—and its positive spillovers on private investment.[24] Institutional remedies for improving the delivery of infrastructure services include commercial management, competition, stakeholder involvement, and public-private partnerships in financing infrastructure projects.[25] These will be central to building the basic infrastructure underpinning a strong investment climate for sustainable development.

Managing the environment

Many developing countries are responding to environmental concerns sooner than industrial countries did at similar levels of development. Indeed, as noted in chapter 2, the development approach of "grow first, clean up later," and the notion of an environmental Kuznet's curve is increasingly being challenged in recent research.[26] For some pollutants the relationship holds, but for others, like carbon dioxide, emissions continue to grow as per capita incomes rise.[27] New technologies and the spreading knowledge about the impacts of environmental degradation also mean that developing countries can make better environmental choices, as in the case of switching to unleaded gasoline (see below). Still, the environment remains a major challenge for national actors and institutions. Managing forests, water resources, coastal zones, fisheries, and airsheds pose several well-known coordination problems involving externalities and public goods. In many cases, when fisheries, forests, bodies of water, and air are treated as common pool resources, efforts to preserve the environment are underprovided; if coordination were implemented, the gains could be large.

Public finance approaches to these problems are to tax the activities generating negative externalities, subsidize the activity yielding positive externalities, or regulate the activity directly (chapter 2). The tendency to underprovide public goods can be remedied by using the political process to determine the type and the level at which public goods are to be provided—and then levying taxes and subsidies to strengthen the incentives for the supply of public goods or providing the public goods directly, financed out of tax revenues. But these remedies are typically difficult to implement—complicated by disputes about burden and benefit sharing and the nature, importance, and value of the externalities and public goods.

Many environmental issues were not recognized in the early stages of the activities that precipitated the problems. Furthermore, powerful constituencies have emerged to obstruct change and relegate environmental concerns to lower levels of priority. Not only does policy often fail to discourage environmentally damaging activities, but, in the form of perverse subsidies, it frequently encourages such activities. The governance and institutional challenges of effectively managing the environment are examined here by elaborating on perverse subsidies before turning to three environmental concerns at the national level that illustrate well the importance of nationally supported institutions for coordination—managing forests, fisheries, and airsheds.

Dismantling perverse subsidies

Perverse subsidies encourage activities that are harmful to the environment and the economy.[28] Subsidizing coal, for instance, can hurt the economy by allocating scarce tax revenue to an activity that is not competitive at international prices, and damage the environment by encouraging the use of one of the most polluting sources of energy. Subsidies have been instituted for a wide variety of reasons, including many laudable ones such as alleviating poverty or addressing market failures. However, they often fail to achieve these aims or achieve them only at exorbitant cost. The removal of perverse subsidies would simultaneously benefit the economy and the environment, releasing public funds for other purposes. *World Development Report 1992* described such policy actions as win-win.[29]

Unfortunately, policy reforms are often very difficult to implement because in reality the situation is win-win-lose. Once in place, constituencies develop to keep subsidies in place past their publicly useful role. Some politically important stakeholders stand to lose. Another factor obstructing the removal of subsidies—mainly in industrial countries, is the transitional gains trap, whereby the expected subsidy stream becomes capitalized in the associated asset.[30] The removal of an agricultural subsidy, for example, would reduce land prices and hurt current farmers, who may perceive no special benefit from the subsidy program once the higher price they paid initially for the land is included in the calculation. The biggest beneficiaries of the subsidy stream were the farmers who owned land at the time the subsidy was first introduced. So, current farmers can be expected to resist the removal of subsidies strenuously (compensation in exchange for greater dynamic efficiency is very difficult to address).

Agriculture is subsidized worldwide for a variety of reasons—among them ensuring the supply of food, reducing the variance of farm prices, maintaining the farming sector, and supporting rural communities. The bulk of global subsidies to agriculture are dispensed in OECD countries (most developing countries impose net taxes on their agricultural sector), where they are estimated to have exceeded $325 billion in 2000 (compared with official net resource flows to developing countries of about $37 billion in 2001), and much of this is perverse.[31] Agricultural production spurred by subsidies degrades the environment by encouraging the following practices:

- Overly rapid conversion of forested land or wetlands for agricultural use
- Overgrazing on range land
- Excessive application of pesticides and fertilizers
- High water use and aquifer depletion.

Many agricultural subsidies were intended to be temporary—to provide assistance in a farm crisis, for example (see chapter 5). However, their removal has proven difficult, even in cases in which the initial legislation contained a sunset clause. Agricultural subsidies benefit a concentrated group and hurt dispersed interests, including consumers, taxpayers, and those who bear the environmental costs, especially in the OECD countries, where farming is a small part of the economy (box 7.5).

Perverse subsidies to agriculture also seriously undermine development. Those in the North distort domestic economies and depress world prices, blocking trading opportunities in agricultural commodities that generate more than half the export earnings for 40 developing countries.[32] Perverse agricultural subsidies in the South primarily involve specific inputs like water, fertilizer, and pesticides, but can have similarly adverse environmental effects, as shown by the underpricing of water in the Aral Sea basin (box 2.3 in chapter 2).

Box 7.5
Perverse sugar subsidies in the United States

Sugar in the United States is an extreme case of perverse subsidies, and the classic example used by Anne Krueger to help spawn the literature on rent seeking.* Because of a program of price supports and import quotas, American consumers pay at least twice the world price for sugar. More than $3 is lost to consumers and the economy for each $1 transferred to the sugar growers, and the subsidy to each grower is more than twice the average family income in the United States. Furthermore, most sugar production is concentrated in southern Florida, drawing water from the Everglades and returning it with fertilizer, leading to eutrophication.

The U.S. Army Corps of Engineers and the South Florida Water Management District have developed a plan to reverse some of the environmental degradation in the Florida Everglades, at an estimated cost of $8 billion and to be implemented over 20 years.† Generating information about the environmental and economic cost will be central to organizing dispersed interests to overcome the vested interests surrounding current U.S. sugar policies. Some institutional progress is being made. The Environmental Working Group (EWG), an NGO, is publishing the amount of subsidies received by agricultural producers and others, which may eventually help catalyze a change in policy.‡ International pressure is also growing for liberalizing trade to promote sustainable development, because the U.S. policy, and similar policies in the EU that protect sugarbeet farmers, undermines the development prospects of more competitive sugar growers in developing countries.

* Krueger (1974, 1996).
† See http://www.discovery.com/news/features/everglades/everglades.html for details.
‡ See EWG's Web site at www.ewg.org.
Source: Myers and Kent (2001), p. 47.

Perverse subsidies also abound in energy (box 7.6). Much of the production and distribution of energy is controlled by governments. When the fiscal and regulatory framework fails to price energy in a way that internalizes the full social costs of its use, consumption is excessive, with high costs of pollution. Developing and transition countries provide subsidies of more than $120 billion to electricity production, and in eight large developing countries, total energy subsidies exceed $83 billion.[33] In the OECD, as noted in chapter 2, total energy subsidies in this group are about $71 billion, and coal subsidies are about $8 billion a year.[34] The dispersed interests of those who bear the environmental and other costs are not captured adequately in the decisionmaking process. While energy

Box 7.6
Perverse energy subsidies in the Islamic Republic of Iran

The Iranian economy is heavily distorted, such that reforms would yield welfare gains estimated at about 19 percent of the GDP. A large part of this stems from petroleum prices that are only about 10 percent of world prices, with an implicit subsidy to petroleum products that amounts to more than 18 percent of GDP. Such subsidies encourage excessive and wasteful energy consumption, with substantial foreign exchange earnings forgone.

Poor people usually do not benefit from these subsidies and their removal would release vast resources that could be redirected toward environmental, social, and other expenditures underpinning sustainable development. The prospects for reform hinge on the opening of the political process, allowing greater voice and participation. The first step in addressing fuel subsidies is to display them explicitly in the budget. This would highlight their magnitude in relation to other priority areas, and facilitate a process of gradually lowering the subsidy to allow fuel prices in Iran to rise to world levels over a 3-year period once reforms are initiated.

Source: World Bank (2001d).

Box 7.7
Aid and compensation to address obstacles to reform in the Russian Federation's coal sector

The Russian Government's coal sector restructuring program is aimed at reducing subsidies and redirecting resources from loss-making production (among other reform goals). It illustrates how aid combined with increased transparency and effective institutional arrangements can help overcome obstacles to reform. Total subsidies to the coal sector in Russia were $2.76 billion in 1994 (1.02 percent of the GDP), and production was inefficient. Initial efforts to restructure the coal sector by redirecting government support ran into difficulties, mainly due to a lack of transparency in the transfer system, and implementation problems in the early phases of transition. During the second stage of the restructuring program, supported by the World Bank, new institutional mechanisms, including checks and balances, were put in place with the explicit aim of bringing transparency into the allocation and transfer of support. This included funds for the social protection of laid-off workers, physical works at closing mines, job-creation programs, and safety measures. The World Bank also provided a separate technical assistance loan to the Russian government in advance, in order to build capacity and help address implementation problems more effectively. This loan was instrumental to the success of the larger sectoral restructuring program, which led to a fall in total coal subsidies to $0.28 billion in 2000 (0.12 percent of the GDP). After 10 years of lowering subsidy-induced overproduction, the output of coal began to grow again in 1998, and the industry's production is now increasingly market-driven without distortive subsidies but not yet subject to externality-correcting taxes.

Source: Kudat, Ozbilgin, and Borisov (1997) and World Bank staff.

use is broad based, the subsidies generally benefit high-income groups disproportionately. The impact of such subsidies is also felt for a long time because the stock of capital with low energy efficiency (transport, buildings, and production processes) takes many years (and some- times decades) to change.

Perverse subsidies also exist in other sectors, such as water management, roads, fisheries, and forestry. And debate continues on how some of these subsidies serve such policy goals as reducing poverty and inequality. Still, the staggering sums suggest that policy reform could substantially improve environmental conditions, strengthen economic performance, and release vast resources for more equitable development. There has been some progress in the last decade and international development assistance can facilitate the process (box 7.7). Indeed, reforming policy to stop encouraging environmental degradation is the first step to implementing broader measures to ensure that environmental assets such as forests, fish, and airsheds are not squandered.

Getting the most from forests—governance, markets, and partnerships

Natural forests are being converted at an unprecedented 12.6 million hectares net a year.[35] The value of forests for maintaining biodiversity and sequestering carbon needs to be more fully recognized as an integral part of sustainable development strategies. Forest resources underpin the livelihoods of 90 percent of the 1.2 billion people living in extreme poverty—and are important to the agriculture and food security of almost half the people in low-income countries.[36] Illegal logging and mismanagement lead to substantial losses and forgone government revenues that are larger than total World Bank lending to these countries.[37] In addition, at present, much of the carbon emitted by developing countries, between 10 and 30 percent of global emissions, is from burning forests.[38]

When traditional methods of managing forest resources are supplanted by mechanisms that are formal but weak, the resource is squandered, often because those who are in and near the forest perceive less secure future control. Races for property rights can be very damaging to forests, accelerating the rate of conversion into agricultural land (chapter 5). And perverse subsidies to industrial forestry—through tax breaks, underpricing for commercial loggers, infrastructure spending, and lack of enforcement of regulations—are substantial.

Institutional levers to correct this include the following:

- Improving the policy and legal frameworks to establish and maintain the property rights of local communities
- Promoting partnerships with local groups and CSOs to integrate forestry, small-scale enterprise, and conservation activities into rural development and watershed management
- Seeking reforms of governance and timber concession policies
- Building international markets that channel funds to countries providing the global public goods of preserving biodiversity and sequestering carbon
- Fostering partnerships with private actors and CSOs to move to sustainable harvesting and forest management with credible performance-based certification by independent third parties.

Each of these levers is important for strong forest management that recognizes the different benefits to different stakeholders, and performs the functions of picking up signals, balancing interests, and executing decisions. When property rights are well specified, it is more likely that actors will be receptive to signals about the state of their asset, and will weigh tradeoffs between present and deferred uses. When transparency and governance are strong (i.e., the public is an active partner of government and bureaucrats are not accepting bribes), government will have a greater capacity to balance broader societal interests with the narrower interests of loggers. The relevant government agency is also better able to implement informed concession policies that mobilize fiscal revenues. Forest management requires nested institutions that can ensure that property rights, assigned to local communities for food, fuel, and shelter, do not overlook the regional or provincial watershed benefits of forest conservation, nor global interests in a forest's carbon and biodiversity services. The latter set of dispersed interests can be channeled with funds from around the globe through newly created markets (including initiatives such as the World Bank's Prototype Carbon Fund, discussed in chapter 8). Partnerships with CSOs and private sector actors can also encourage sustainable forest management practices by rewarding responsible behavior, driving rent seekers and corrupt actors out of business, and creating the basis for credible, independent certification by internationally recognized bodies. Many of these features are illustrated in the promising steps taken toward reforming forest management practices in Cameroon (box 7.8).

Getting the most from fisheries—overcoming the tragedy of the commons and improving information

As discussed in chapter 3, fishery resources present major opportunities and challenges. Managing this renewable resource to maximize well-being in a sustainable way is critical for development. About 30 million people living in developing countries are engaged in fisheries, and "coastal fishing communities are frequently among the poorest of the poor."[39] For about 1 billion people living in poor countries, fish are also a vital source of protein, and an important component of food security.[40] Yet, as noted in chapter 1, 70 percent of the world's fisheries are being overexploited or are at capacity. Subsidies in fishing are between $14 billion and $20 billion a year globally, of which half are given in OECD countries, leading to substantial overcapacity.[41] By some estimates, the maximum sustainable yield worldwide could be caught with half the existing fishing fleet.[42] The two main reasons for the difficulty in managing fisheries are the open access or common pool nature of the resource, and the lack of information. This leads to spectacular coordination failures in the form of waste and sometimes even in the collapse of fish stocks. The institutional framework is key to preventing such failures and in underpinning strong fishery management.

The common pool nature of fisheries gives rise to dispersed interests and commitment problems. In the absence of clear property rights, individual fishermen are unable to manage fish resources effectively and commit to limiting the catch to a sustainable level. The gains from reduced fishing effort by an individual fisherman accrues to the whole group, and cooperative arrangements are complicated by strong incentives to cheat. The inability to forge credible commitments undermines cooperation, and the common pool is overfished. When fish stocks and fishing incomes fall, the problem is compounded by politi-

Box 7.8
Cameroon: The path to improved forest governance

As Africa's largest wood exporter, Cameroon generates substantial income from the exploitation of forest resources, and the rich biodiversity and other environmental services provided by these forests make them important globally. As in some other forest-rich nations, logging has been poorly regulated. Until the mid-1990s, logging permits were awarded through an opaque administrative process linked to deep-seated patronage. Permit holders were not required to adhere to forest management plans. There was little enforcement of basic logging regulation. Furthermore, the five-year license provided no incentive for long-term care of forest resources. Without enforcement, loggers built roads deep into the forest. This opened previously inaccessible areas to agricultural conversion and facilitated the bushmeat trade, imperiling rare wildlife and the forest's long-term ecological integrity. The system of allocating forest permits was prone to corruption and was generally insecure for long-term investors. Moreover, the forests yielded very low, unsteady revenues for the state, local administrations, and local communities.

A new law to auction concessions

After years of policy dialogue with donors, Cameroon's executive branch brought to parliament a new forestry law in 1994, providing for the auction of forest concessions on the basis of per-hectare bids by prequalified bidders. This was intended to increase transparency, discourage unnecessary expansion of the logging road networks, and encourage high value-added industrial activity. The law also required management plans and allocated half the revenues to local governments and communities. But the law's implementation decrees ran into public opposition, both from those who perceived it as benefiting foreign companies and from those who preferred the status quo. In the end the proposed reforms were adopted to comply with structural adjustment loan conditions but without strong initial local ownership.

Support builds

After a slow start, the reforms developed local support and began to yield results. The first round of concession allocations, in 1997, was flawed and drew criticism from the World Bank and from local and international NGOs. Soon afterwards, a third World Bank–supported structural adjustment operation provided a new, more flexible framework for debating and supporting the implementation of the forestry law. Progress was due in part to the emergence of constituencies for reform, including a strong team of reformers in government, and the communities that began to benefit from increased revenue sharing.

Consultations among stakeholders have intensified. And transparency has increased: newspapers publish details describing which companies are authorized to operate in which locations, helping local residents identify illegal operators. Also important was the widespread formal use of independent observers. Respected Cameroonians are hired to observe the concession allocation process. Cameroonian and international NGOs are contracted to assist in verifying concessionaire compliance with logging regulations, both through on-the-ground inspection and through the use of satellite imagery. This helps to ensure that the bidding system does not encourage overexploitation of the forests.

Progress so far

- *Improved transparency.* Global Forest Watch Cameroon concluded, "The June 2000 round of concession allocations was far more transparent than those of 1997 . . . the new allocations appear to be in compliance with government guidelines, which have recently been clarified. This change attests to Cameroon's commitment to develop a complex market-based auction system aimed at increased transparency and rents captured from logging." The annual area fee per hectare increased from $0.14 in 1996 to $6.00 in 2002, and the total value of multiyear contracts awarded since June 2000 exceeds $600 million.
- *Introduction of the first legal framework for community forestry in central Africa,* including priority access to forest land secured to local communities.
- *Clarification and simplification of forest management regulations,* resuming field inspections and prosecuting illegal logging, with fines up to $15 million being levied on a single company.
- *Gradual exit of short-term speculators* and increase in long-term investors with a positive impact on high value-added industry and local employment.
- *Enhanced revenue capture in the interest of the nation and rural communities,* as annual forest revenues increased from less than $3 million in 1995 to more than $30 million in 2001 (excluding timber export taxes and duties). Fiscal revenues accruing to local communities increased from negligible levels in 1998 to $8 million in 2002.
- *Stronger commitment for biodiversity conservation, including* the creation of new protected areas and ongoing negotiations on conservation concessions with international NGOs.

Time will tell if these reforms hold up. An encouraging sign is that the forest sector's lessons in negotiating reforms, dealing with vested interests, and increasing transparency are now being applied to other sectors including the national procurement system. This may prompt emulation elsewhere in the Congo Basin, and suggests that the existing process is conducive to institutional strengthening over time.

Sources: Bank staff; Essama-Nssah and Gockowski (2000); Brunner and Ekoko (2000); Collomb and Bikié (2001).

cal economy dynamics that frequently enable the concentrated interests of fishermen to elicit government subsidies, harming dispersed interests (other taxpayers) and prolonging overfishing (see box 3.4).

Poor information is also a major problem. Not only is it difficult to monitor fishing and landed catch, but it is also hard to monitor stocks. The concern about reliable fishery statistics is illustrated by the ongoing debates about whether the total world catch has peaked (in part depending on the accuracy of Chinese fishery data), and the extensive efforts made by governments and international organizations to ensure dependable statistics.[43] Such data form the basis for establishing maximum sustainable yields and other key aspects of fishery management. Aggregate data on caught fish by weight mask the composition of the fish, making it hard to account for changes in the quality of fish. There is also little information on the relationship between fishing and marine ecosystems, an area that is generating growing interest.[44]

The challenge of sound fishery management is magnified in developing countries, where fishing often represents employment of last resort, "attracting increasing numbers of poorly remunerated fishworkers who have to resort to damaging fishing practices to make a meager living."[45] When fishing is on a small scale and done by poor communities in the informal sector, authoritative intervention is more challenging administratively and politically, and the capacity for monitoring and enforcement is likely to be weak. A broader development process that creates alternative employment opportunities is important not only for reducing poverty, but also for improving fisheries management.

Institutions are central to improving coordination in the management of fish resources. Mechanisms need to be found to restrict fishing to levels that maximize the value of the resource. Such improvements would significantly raise the total value of landed fish. This will depend on stronger protective institutions, including improved monitoring and enforcement of fishing rules. For example, the Thai government has made extensive efforts to improve fishery management during the 1990s, more than doubling related expenditures to reach 1.6 percent of the total gross revenues from marine fish landings in 1999.[46] Still, a ban on push-net fishing from 1972 remains unenforced. The same fishery management–spending ratio in Iceland is 3 percent; in Norway it is about 8 percent, and in Newfoundland, Canada, it is estimated to be 20 percent of the catch value.[47] Improving monitoring, enforcement, and research capacity is costly, but a growing trend in fisheries management is to use part of the increased wealth generated by strengthened management of the fishery to finance this capacity. This is a marked change from financing those activities from general taxation.

A major difficulty in restricting catch for improved fishery management is the international race for property rights over marine resources. The Third U.N. Conference on the Law of the Sea (passed in 1982, ratified in 1994) brought an important institutional change in this regard, giving coastal nations a 200-mile exclusive economic zone.[48] This facilitates more productive use of fishery resources since most fishing takes place within this zone and responsibility for good management falls to a smaller group of stakeholders. Although many types of fish migrate between the territorial waters of different countries, and swim into international waters outside the exclusive zone, cooperation is easier when it involves fewer nations, and fishery issues can often be resolved on a bilateral basis.

While establishing property rights over fish stocks is rare, efforts to address the common property problem have focused on some form of exclusive use rights, such as individual transferable quotas, licenses to own and operate fishing vessels, and territorial use rights.[49] These mechanisms exhibit varying strengths and weaknesses, depending upon the context, but they generally aim to improve the private incentives faced by fishermen to ensure sustainable management, sometimes by creating tradable fishing rights. These practices have generated some success stories (Iceland and New Zealand), but were unsuccessful in other instances, such as the collapse of cod stocks off Newfoundland, Canada, in the early 1990s (box 3.4).

Although fishery priorities vary—with developed countries seeking to reduce capacity and allow the regeneration of fully or overexploited stocks, and developing countries aiming to develop new resources and improve technology—all nations are trying to maximize the benefits from this great renewable resource.[50] Actors must be able to pick up signals about the status and trends of fisheries, develop confidence in each other, and commit to restraint. The FAO is involved in improving reporting and strengthening capacity in developing countries.[51] A Code of Conduct for Responsible Fisheries, promoting stronger fishery management in national legislation, underpins the efforts of governments, civil society, and private sector actors.[52] There is also a growing recognition that balancing the interests of fishermen, present and future, requires consensus and partnerships among all stakeholders, and that CSOs working through the market can play an important role (box 7.9).

Box 7.9
Partnership for sustainable fisheries

As one of the world's largest buyers of fish from around the globe, Unilever shares the growing concern about the sustainability of fishing practices in many areas, especially since a reportedly stable gross tonnage of landed fish masks a fall in recent years of white fish, the type used most in Unilever products. In response, Unilever joined with the WWF to found the Marine Stewardship Council (MSC) in 1997. The MSC's mission is "to safeguard the world's seafood supply by promoting the best environmental choice."* Through extensive negotiations with key fishery stakeholders around the world, the MSC developed a set of strong environmental standards. The MSC encourages the certification of fisheries to this standard, provides an ecolabel for products from certified fisheries (pictured at right), and promotes sourcing from MSC certified fisheries. The MSC became fully independent in 1998, and continues to refine the MSC standard, accredit independent third party certifiers, and build public awareness. Unilever supports these initiatives and seeks to promote sustainable fishing practices in part through its sourcing decisions. At the end of 2001, 5 percent of Unilever's fish inputs were purchased from certified sustainable fisheries (through the certification of the Hoki fishery in New Zealand). By the end of 2002, Unilever hopes to increase this share to 25 percent (as certifications expand to cover larger fisheries), and by 2005, all fish are to be purchased exclusively from sustainability certified fisheries.

MSC illustrates how partnerships between private sector actors, NGOs, and government can generate an institutional response that improves coordination for sustainable development. A large private sector firm recognizes the threat to its core businesses from overfishing, and partners with an NGO to generate a credible, independent certification agency. By establishing environmental standards and promoting an ecolabel, the new agency connects the consumer to the management of fisheries, helping to underpin government efforts to establish, maintain, and enforce sound rules for exploiting fish resources. While some of the certification decisions have been controversial, the partnership process offers some hope that the management of fish resources will improve over time. The example of the MSC may also spark ideas for how partnerships can help in other areas as well.

* See the pages on vision, mission, and values within the MSC Web site.
Source: MSC Web site at: http://www.msc.org/, and Frozen Fish International GmbH presentation "Verpflichtung des Marktes zur bestandserhaltenden Fischerei—Fortschritte und Herausforderungen," at the Berlin Forum—Committed to Sustainability, Berlin, May 20–23, 2002.

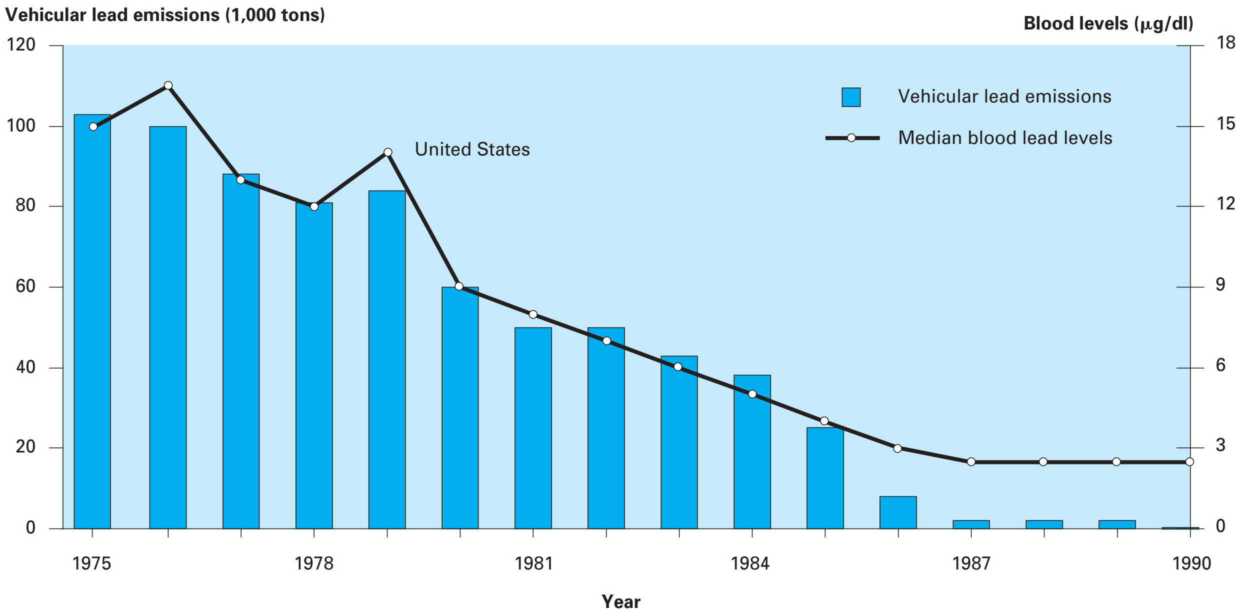
Curbing air pollution at the national level: the role of information

As noted in chapter 6, air pollution causes serious damage at the local level in many developing and transition country cities.[53] Air pollution is mainly an issue about externalities, where the dispersed interests of people negatively affected are not accounted for by polluters. Although many actions and initiatives are taken at the local level, control strategies, such as standards for fuels and new cars, generally have—and need—support in a broader national framework. National level actors are also engaged in addressing air pollution problems, such as ground-level ozone and sulfur, that affect larger regions and neighboring countries (see chapter 8 for a discussion of sulfur in Europe). In the absence of broader institutional support, traditional public finance approaches are often not adopted or implemented. The role of information is critical.[54]

As noted in chapter 2, developing countries do not need to go through a prolonged period of hazardous air quality on their path to development. They can benefit as latecomers at many levels. First, cost-effective, low-emission technologies have already been developed. Second, institutional mechanisms and policy approaches, developed elsewhere, can help countries and communities avoid mistakes and escape some regrets.[55] Third, and perhaps most important, in a realm where political economy considerations are paramount, the increasing global flow of information about people's experiences elsewhere strengthens the position of those adversely affected in any given country.

Lead in gasoline: latecomers escape some regrets.[56] Leaded gasoline is a good example. By the end of the 1990s, most developing countries outside Africa had made substantial progress switching to unleaded gasoline, and about 16 had completely phased out leaded gasoline.[57] Tetra-ethyl lead is an inexpensive additive used to raise the power of gasoline. It was introduced in the United States in the 1920s, and was not removed until more than half a century later. Initially, there was scant information about the effects of lead, and over time, industry interests became entrenched and blocked efforts to remove lead from gasoline. As the United States switched to unleaded gasoline, however, it quickly became clear that removing lead from gasoline is associated with

Figure 7.1
Lead in gasoline and in blood in the United States, 1975–90



Source: Lovei (1999).

falling lead levels in human blood (figure 7.1), lowering hypertension and heart attacks, and avoiding harm to children's intelligence (removing lead from paint also played a role).

The phasing out of leaded gasoline in Vietnam is a good example of how an institutional context that encourages actors to pick up signals, balance interests, and execute decisions can help address a difficult challenge, even at relatively low levels of economic development.[58] Initial attempts to phase out lead in gasoline began in 1995, but were resisted due to concerns about the cost of switching and the impact on older vehicles. A workshop was held in December 1999, which included representatives from government, the military, the police, industry, academia, and the media, as well as experts from neighboring countries (such as Thailand) with fresh experience and experts from other countries with earlier experience. The "South-South" consultations were very important to allaying continuing concerns. Following the meeting, the government of Vietnam started reevaluating more carefully the costs of switching, and launched a program to raise public awareness. Consultations with various stakeholders indicated that a rapid switch would be technically feasible and cost-effective, and Vietnam switched virtually overnight to unleaded gasoline on July 1, 2001. Leaded gasoline was banned in September 2001. Vietnam was well placed to switch, since competitively priced unleaded gasoline was already available on international markets, and the absence of substantial refining interests within Vietnam also meant that there was little opposition from this sector. Still, information dissemination and stakeholder involvement to help overcome misperceptions about leaded gasoline were central to the process and may be replicated to address other similar challenges.

Information helps curb air pollution in China. Information was important to the process of switching to unleaded gasoline, described above, and can catalyze significant improvements in air quality more generally, as evidenced in China. Air pollution in China is a serious problem. Thousands of city-dwellers die prematurely from it every year. Millions more are ill with pollution-related diseases. Despite problems in Chinese policy for air pollution, there have been successes, and new tools are being developed to improve the process. These tools are based on experience gained with information disclosure programs about firms' environmental performance, which have "been characterized as the 'third wave' of environmental regulation, after command-and-control and market-based approaches."[59]

Chinese policymakers and institutions clearly recognize the value of environmental monitoring and how it can shift balances and strengthen accountability. "One of the strongest elements of the State Environmental Protection Agency's environmental strategy has been its work on public participation, public dissemination of environmental information, and environmental information at all levels."[60] The central government explicitly emphasizes openness, and Premier Zhu Rongji stated in the spring of 2001 that all environmental information should be public.[61]

The province of Jiangsu is a good example of how access to information can improve environmental outcomes. A pilot industrial performance rating and disclosure program was established in the city of Zhenjiang in 2000.[62] After a series of workshops, the provincial government scaled up the initiative to cover the entire province of Jiangsu. By mid-2002, about 2,500 industrial companies, responsible for in excess of 80 percent of the total industrial pollution in the province, were included in the program.[63]

In these programs information is generated in order to promote the involvement of the wider community in the regulatory process, to help put pressure on polluters with "informal regulation."[64] Where formal regulatory capacity is weak, as in many developing countries, information catalyzes the participation of civil society, political leaders, and the private sector. Concerns about environmental liabilities may also induce private creditors to avoid making loans to heavy polluters, and consumers to avoid their products. In addition, consumers and CSOs in industrial countries pay close attention to the activities of multinationals. Firms that face social, political, and economic sanctions are more likely to negotiate with local actors.[65]

Environmental outcomes are sensitive to institutional arrangements. This highlights the need to avoid focusing exclusively on emission standards and pollution taxes and instead to complement the latter with the voice of the environment's beneficiaries and other mechanisms to improve environmental choices.[66] Such initiatives are not substitutes for efforts to develop more formal institutions and official policy instruments, but clear complements which lower the eventual cost of adopting and implementing policy measures. Information empowers dispersed interests through multiple channels: product markets—labeling and certification; legislatures—increasing voter pressure for reform; capital markets—shareholders; courts—citizen suits, tort actions, and complaint processes. None of these channels works without adequate information.

Managing natural resources and using aid effectively

The exploitation of natural resources is often a major challenge for national actors and institutions. The exploitation of natural resources creates revenue for government that in a weak institutional context makes it less accountable and responsive to citizen taxpayers, encourages rent seeking and other unproductive competition, and can lead to macroeconomic imbalances, weaker economic performance, and in extreme cases, violent conflict. It thus has the potential to impair the emergence of good institutions, which in the longer term are critical for strong, sustained growth. International aid can have similar effects in impeding the emergence of inclusive and responsive institutions. The challenge lies in avoiding these negative potentials from being realized.

Natural resources—blessing or curse?

There is much discussion about whether and under what circumstances natural resources are "treasure or trouble."[67] Will the exploitation of vast new-found oil in central Asia be a source of great wealth and economic dynamism, or will it bring misfortune? The importance of institutions has emerged as a key aspect of the debate. In the context of a viable social contract, based on widely agreed formal and informal rules for the allocation of resources and the settlement of grievances, institutional arrangements can be sufficient to restrain opportunistic behavior and the violent expression of grievance. An extensive World Bank study on natural resources in Latin America "found . . . that the key to success is to complement natural resource wealth with good institutions, human capital, and knowledge."[68] Where institutions are weak, however, exploiting natural resources can have negative consequences, with some authors even pointing to a "resource curse."[69] One central mechanism is that the availability of revenue from such resources may free the government from developing institutions that are accountable to the populace at large. For example, the question of whether oil and minerals hinder the emergence of democratic institutions has been tested empirically and found to hold for a panel of 113 countries between 1971 and 1997.[70]

The adverse effects are magnified when the natural resource endowment—say, petrochemicals and minerals—is "point-sourced," meaning that its production and revenue patterns are concentrated.[71] Coffee and cocoa take on point-source characteristics when shipped, and are similar to petrochemicals and minerals.[72] When governments control the revenues from resource extraction, their activities can be financed to a greater extent without the consent of taxpayers, reducing accountability. Where government is less open, easily appropriable rents weaken governance and institutions, both of which are critical for long-term economic performance (see box 4.7 on mining in Peru). In a context where government is responsive to its citizens, these adverse effects are muted.

Data on real per capita GDP show that developing countries with few natural resources grew 2–3 times faster between 1960 and 1990 than natural resource–abundant countries, an observation that appears to be robust with regard to alternative methods for classifying countries as natural resource–poor or natural resource–abundant.[73] Indeed, figure 7.2 presents a list of 45 countries whose growth was not sustained, in that they achieved their 1999 level of GDP per capita in an earlier decade—many as far back as the 1960s.[74] Of these 45 countries, all but six are point-source economies.[75] The majority of the countries with point-source natural resources also suffered violent conflict in the 1990s (indicated in bold in figure 7.2).

Angola is a striking example of this tragedy. Civil strife has persisted in Angola since the mid-1970s,

Figure 7.2
Unsustained growth performance is closely associated with point-source natural resources, and conflict*

COUNTRIES WITH UNSUSTAINED GROWTH

1999 GDP per capita (1995 US$) was reached:

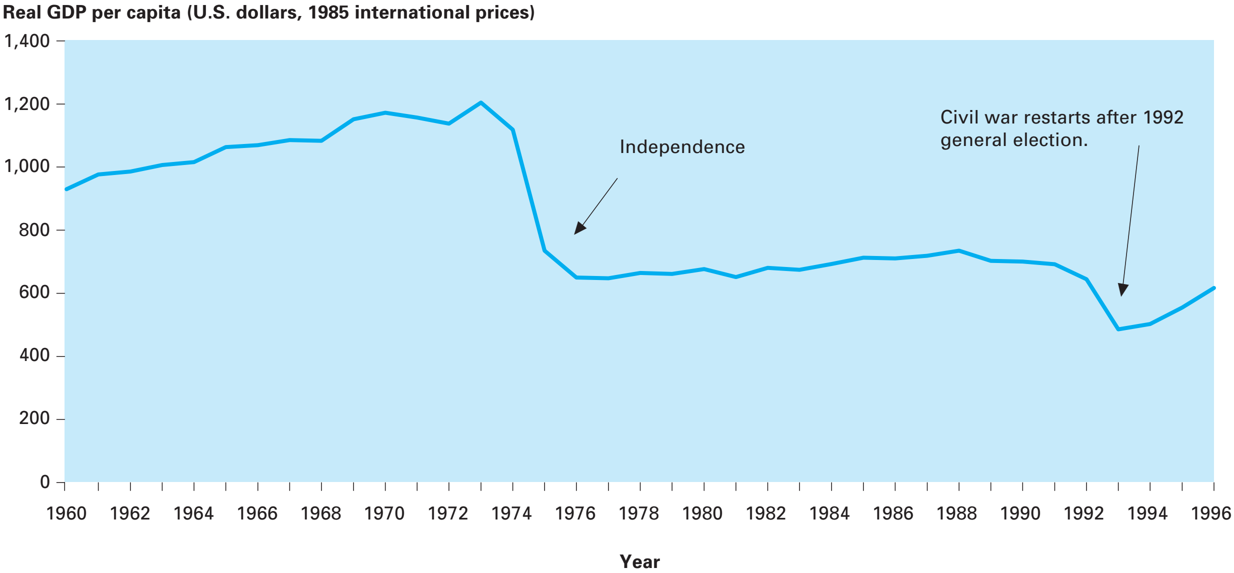
	In 1960 or before	During the 1960s	During the 1970s	During the 1980s		
	Senegal ***Somalia***		Honduras ***Mali*** ***Philippines*** Zimbabwe			
COUNTRIES WITH POINT SOURCE NATURAL RESOURCES	***Angola*** ***Cen. African Rep.*** ***Chad*** ***Dem. Rep. of Congo*** Ghana ***Haiti*** ***Liberia*** Madagascar Nicaragua Niger Nigeria ***Rwanda*** ***Sierra Leone*** Venezuela, Rep. B. de Zambia	Bolivia Côte d'Ivoire Jamaica Mauritania Togo	***Algeria*** ***Burundi*** Cameroon ***El Salvador*** Gabon ***Guatemala*** Guyana Iran, Islamic Rep. of Malawi ***Peru***	Ecuador ***Ethiopia*** ***Iraq*** Jordan Kenya Paraguay ***Rep. of Congo*** Tanzania Trinidad and Tobago	Benin Botswana Brazil Burkina Faso Chile ***Colombia*** Costa Rica Dominican Rep. Egypt, Arab Rep. of Fiji Guinea Indonesia Mauritius Mexico Morocco	Oman ***Papua New Guinea*** ***South Africa*** ***Sudan*** Syrian Arab Republic Tunisia ***Uganda***

* Countries in italic were reported to be in civil conflict in the 1990s; civil conflict is defined as war that has caused more than 1,000 battle deaths, challenged the sovereignty of an internationally recognized state, occurred within its recognized boundary, involved the state as a principal combatant, and subjected the state to an organized military opposition that inflicted significant casualties (Sambanis 2000).

Note: Countries for which data are available show unsustained growth if their 1999 per capita GDP (1999 U.S. dollars) was reached in some prior period (Murshed 2002). Countries are categorized as point-source economies if their two most important exports are of fuels, minerals or plantation crops (with some judgments made where there was some ambiguity) (Isham and others 2002).

Source: Authors.

Figure 7.3
Angola: real GDP per capita, 1960–96



Source: Araujo and Costa (1999).

and "has been associated with weak (sometimes non-existent) institutions—political instability and violence, little rule of law, and an underpaid and corrupt bureaucracy—which have presided over an average annual change in GDP per capita since 1973 of –4.3 percent" (figure 7.3).[76] This, in a country with abundant diamond and oil resources.

The institutional context is crucial. Where norms and rules are weak, greater endowments of natural resources lead to worse economic performance in the long run, compared with countries that have smaller resource endowments. Existing institutions are eroded, and the emergence of new institutions is hampered.[77] There are two key issues in dealing with natural resources: how are *resources managed,* and how are the resulting *proceeds deployed*?

Effective natural *resource management* hinges on property rights, whether ownership is held individually, as a group, or by government. While there are exceptions involving some multinational corporations promoting sustainable practices due to concerns about reputation, in general when property rights have not been established or are poorly defended, time horizons are short, and damaging races for control ensue. As chapter 5 noted for forests, if private sector actors and other claimants are uncertain about future control over the resource, they are likely to extract the resources as fast as possible—with little regard for market conditions, the impact on local communities, the environment, or sustainable yields. In the midst of violent conflict, resource management is even less likely to be optimal, because future control is very uncertain. If it is inherently difficult to establish property rights and the resource remains in a common pool, management is also likely to be wasteful.

While formal participants enjoying property rights typically are able to receive market signals, exploiting natural resources involves substantial externalities with wide social and environmental impacts. Implementing standard remedies, such as regulation and taxes, is difficult. Where accountability is weak and government leaders have short time horizons, the resource is again likely to be extracted as fast as possible—with little regard for the broader ramifications.[78]

In these instances, the institutional context is central to the ability of national actors to improve coordination. Secure property rights rely on an enforceable commitment by all stakeholders, especially the government and other nexuses of power that employ force, to refrain from looting. Only then will the resources be husbanded in the process of extraction. The same goal will be served by finding ways of formalizing the rights of those who have de facto control, such as landless farmers in the Amazon forest (chapter 5).

Managing natural resources also involves major problems in channeling dispersed interests. As a result of resource extraction, communities may need to move or the local environment may suffer substantial degradation. There is an important role for government in managing these impacts—setting a framework for responsible private sector participation and facilitating the efforts of CSOs. Social cohesion and institutional development will be served by using resource wealth to promote the participation of poor people and to share the benefits broadly (even though it is more difficult to compensate affected communities that operate outside the cash economy). The Cameroonian forests project described in box 7.8 and the Chad-Cameroon oil pipeline described in box 7.11 are promising examples of how broad partnerships can improve the process.

Another set of problems arises with *deploying the proceeds* from natural resource exploitation. The availability of associated funds in government coffers complicates the relationship between government leaders and the citizenry. When government must finance its activities through general taxation, it must interact and negotiate with taxpayers, giving citizens greater opportunities for holding their leaders accountable. But having funds available from natural resources, especially when production involves a concentrated few, enables government leaders and others with de facto control to pursue their own agenda. The funds confer power, facilitate patronage, and provide a basis for co-option. And the country is likely to experience more corruption, rent seeking, and other unproductive activities in the costly competition for the resources, including civil conflict.[79]

Such a country is also likely to end up with macroeconomic imbalances stemming from price volatility and "Dutch disease," whereby the real effective exchange rate appreciates, increasing the relative price of nontradables and impairing the production of tradables. Domestic manufacturing loses competitiveness and is undermined, weakening the opportunities for human capital development and generating unemployment. The phenomenon also slows urbanization and the demographic transition to slower population growth.[80] And by inhibiting competitively honed industrialization and urbanization, it also impedes the emergence of favorable institutions that ultimately are more important for long-term economic performance and the creation of a continuous stream of new opportunities.

In the presence of large accumulated funds, can budget constraints still be binding? How can government leaders commit to honest use in the interest of broader sustainable development? Overcoming short-term rent seeking is a major challenge, requiring a strong "no bailout commitment" for struggling sectors of the economy or local governments. Transparency, independent audits, and open dialogues with all stakeholders are central to effective processes—especially when creating investment funds (sometimes offshore) for future generations as part of a long-term strategy to ward off Dutch disease–type problems.[81]

Once the share of total revenues to be placed in these investment funds is determined, their effective management would benefit from an independent board whose sole objective is to maximize returns. Civil society can perform a key monitoring function, as in Cameroon (box 7.8) and Chad (box 7.11). And reaching broad agreement on corporate codes of conduct can be important, as with the attempts by some international oil companies to improve accountability by publicizing the beneficiaries and accounts of their royalty payments in Angola.

That natural resources can undermine institutions and hamper their evolution is not destiny. Malaysia (box 7.10) and Botswana have both leveraged their natural resources to foster development.[82] In addition to sound macroeconomic policies, the "good" examples of resource-rich countries point to the importance of shared growth—or inclusive access to assets—by which resource rents are invested in education and agriculture improvements targeting the poor. Taking advantage of resource rents to promote inclusiveness in access to assets also encourages social cohesion and institutional development, where such initiatives financed from taxing the affluent might have been more difficult. Reducing polarization and fostering a capacity for negotiations and coalition building as well as an ability to commit to and sustain reforms, can also be decisive in responding to external shocks.[83] When managed and deployed well,

Box 7.10
Malaysia: ethnic diversity, conflict resolution, and development

Despite the rich natural resource base (tin, rubber, forestry products, oil and gas, and large tracts of cultivable land), Malaysia's successful economic transition was not obvious in the years following independence from British colonial rule in 1957. A communist insurgency raged in rural areas, Singapore separated in 1965 in acrimony, and urban centers simmered with ethnic tension.* There was a strong perception in the majority Malay ethnic group that they had lost out to the Chinese in securing well-paid urban jobs and in benefiting from high-income growth.[†] In the federal elections of 1969 political parties promoting non-Malay interests did well, and Malay frustration ended in riots with hundreds of deaths. Parliament was suspended, and a state of emergency was declared. Malaysia's future looked bleak.

Response to crisis

In response to the crisis, the government announced the New Economic Policy (NEP) in 1970, a 20-year program aimed at sharply reducing poverty, improving living standards through the expansion of education and health services, and eliminating the identification of race with economic function. Employment and output growth were to be sustained by large investments in land development programs, and smallholder agriculture, an expansion of the public sector, and a welcoming foreign investment regime.

By 1990 many objectives were met. The incidence of poverty fell countrywide from 44 percent in the early 1970s to 15 percent in the late 1980s, with Malays registering the largest decline. Primary education was made universal, and life expectancy at birth increased from 58 to 71 years, with all ethnic groups registering impressive gains. Unemployment in peninsular Malaysia was reduced to less than 4 percent, and Malays and Chinese had an equal opportunity of securing a well-paid urban job. Annual GDP growth during the NEP period was sustained at an average of 6.5 percent and the structure of the economy was modernized with manufactured goods replacing natural resources for the bulk of exports.

What were the factors that largely enabled Malaysia to avoid the resource curse, defuse complex ethnic conflict, and successfully transform the economy?

An egalitarian ethos

One explanation is the absence in Malaysia of a feudal elite that might have siphoned away rents and prevented institutional development. As a result of legislation enacted during the British colonial rule, 60 percent of the agricultural land on peninsular Malaysia was owned by smallholders and 30 percent was under estates owned mainly by non-Malaysians at the time of independence.[‡] While reservations and smallholdings discouraged Malays from playing a role in urban life, they promoted an egalitarian Malay ethos that contributed to the success of NEP.

Furthermore, Malaysia developed a sultanate system that cooperated with the federal government in consensus building and conflict resolution. The British had a protectorate agreement with the Malay sultans whereby the resident British officer did not interfere with the sultan in matters of Malay religion and customs even though the sultan's status was that of a titled courtier.** This set a good precedent for the cooperative relationship after independence between the federal government and the states and blunted potential competitive claims to natural resource rents.

Good distributional solutions

Malaysia's delicate ethnic balance was also a strong incentive for the Malay political elite to seek out distributional solutions that delivered resources to low-income Malays. Even a small shift of the Malay vote could undermine the parliamentary majority and control of government, and tilt the balance toward non-Malay elites. Strengthening the civil service and other political, economic, and social institutions for cost-effective delivery of resources to poor Malays was thus a political necessity.

The pragmatic political leadership was committed to an outward orientation of Malaysia in trade and investment, requiring a long-term perspective on development and distributional outcomes, and a consensual approach to decisionmaking. This was acceptable to the electorate because the Malay political leadership enjoyed credibility stemming from success in steering the country to independence from colonial rule.[#]

A critical but less well-documented factor in Malaysia's success lay in fostering ethnic harmony through a tacit understanding with Chinese citizens on distributional mechanisms. The NEP strategy was to redistribute growth in favor of ethnic Malays, while avoiding expropriation of existing assets for redistribution.[††] Furthermore, while natural resource rents helped fund public programs aimed primarily at low-income Malays, taxation of income, trade, and commerce continued to be light, primarily helping Chinese groups whose presence in activities that generated such tax revenues was stronger.[‡‡]

While several important challenges persist, Malaysia's substantial development success lies in fostering inclusiveness by using natural resource rents to create an ethnically diverse middle class with a stake in conflict resolution and economic progress. Contributing factors include the absence of a feudal class, a delicate ethnic balance, and a credible and forward-looking political leadership.

* With about 55 percent Malays, 35 percent Chinese, and 10 percent Indians, Malaysia is an ethnically diverse country.

† In the 1960s, average Malay per capita income was half that of the average Chinese, 80 percent of Malays worked in rural areas in agriculture, and the incidence of poverty among rural Malays was high (Ross-Larson 1980).

‡ The legislation was the Malay Reservation Enactment of 1913.

** Steinberg (1987). Independent Malaysia's Constitution continues to protect the privileges of the Sultans. The hereditary rulers and governors constitute the Conference of Rulers. The hereditary rulers elect one of their number to serve a term of five years as the Supreme Head of State or *Yang di-Pertuan Agong*.

\# Parliamentary government resumed in Malaysia after launching the NEP and elections were held every four years starting in 1974. Barisan Nasional (National Front), a pragmatic multiethnic alliance constituted along the lines of the alliance that launched the independence struggle in 1951, was voted into power throughout the NEP period.

†† Chinese per capita income was 64 percent higher than Malay per capita income in 1973; in 1987 it was still higher but by a more moderate 44 percent.

‡‡ World Bank (1992a).

Source: World Bank staff.

the rents from natural resources present an important opportunity for accelerating more sustainable development.

Ensuring that aid does not make government less accountable

Development assistance can help governments leverage domestic resources to bring about change. However, aid and natural resource rents share a key attribute: the potential for weakening the accountability of government to its citizens. Aid provides a source of funds to government leaders, again without the need for interaction and negotiation with members of the polity. This effect is clearly identified in research on odious debts, where government leaders raise international loans—and proceed to misallocate funds to poorly conceived projects or, in the extreme, to steal and squander the funds without the consent of those in whose name the obligations were contracted.[84] That the loans are still extended and debt service is still demanded from subsequent governments, despite a weak relationship between the initial contracting government and its citizens, shows that in a weak institutional context, official lending can have damaging effects. The 1998 World Bank aid effectiveness study and other research offer sobering observations:[85]

- In the past, countries with poor policies received as much aid as those making positive reform efforts.
- Aid has sometimes prolonged bad policies.
- Aid is fungible: Funds for schools may facilitate the acquisition of planes.[86]

The study found that aid amounting to 1 percent of national income contributed 0.5 percent to growth in countries with good policies, zero percent in countries with mediocre policies, and –0.3 percent in countries with bad policies. Other studies find evidence that less corrupt countries were not preferentially funded by donors, and that foreign aid eroded the quality of governance, as measured by indexes of corruption, the rule of law, and bureaucratic quality.[87]

Similar to the natural resource curse, development aid gives rise to commitment and dispersed interest problems. But as with natural resources, it is possible to find innovative solutions to increase aid effectiveness without incurring undue transaction costs. In a weak institutional context, donors need to ensure that the limited accountability of government officials to their constituents is enhanced (or temporarily offset) by other accountability mechanisms, such as detailed project involvement or conditionality, until the development of more permanent domestic measures based on transparency and participation. Donors and other creditors need to be receptive to signals from the dispersed interest of the populations shouldering the debt service, for example, when providing funds to concentrated interests—those who control the proceeds from new international obligations.

Donors have become more selective, directing aid to countries with good policies and institutions (“institutional conditionality”).[88] International financial institutions increasingly seek to promote the emergence of better institutions and participatory approaches, aiming to strengthen coordination by directly addressing the problem of finding channels for the dispersed interests harmed by ill-conceived policies. Debt relief seeks to encourage reform and channel funds to development. Recipient governments as well as donors are permitting greater transparency in the process, especially in providing access to information and facilitating the participation of civil society (box 7.11). Support is growing for the preparation of Poverty Reduction Strategy Papers, which aim: “To strengthen country ownership of poverty reduction strategies; to broaden the representation of civil society—particularly the poor themselves—in the design of such strategies; to improve coordination among development partners; and to focus the analytical, advisory, and financial resources of the international community on achieving results in reducing poverty.”[89]

Averting violent conflict

Violent conflict breaks down the institutional framework that enables people to get the most out of life and to work together toward sustainable development. When death and destruction are widespread, prevention, reconciliation, and reconstruction must be the first order of business. Since 1990, more than half of all low-income countries have experienced significant conflict, generating substantial transnational spillovers that demand a response from the global community—for example, in helping refugees, providing third-party mediation, underpinning commit-

Box 7.11
Improving the process: the Chad-Cameroon Pipeline Project

The development experience in Chad suggests that aid can be made more effective in reducing poverty. The exploitation of oil is a major new opportunity to accelerate development in one of the world's poorest countries. To facilitate extraction, contribute to poverty reduction, and avoid adverse environmental and social impacts, the World Bank is supporting the construction of the Chad-Cameroon oil pipeline through three projects.

But the institutional environment in Chad is weak. Extracting point-source natural resources and managing the associated revenues often add to the institutional challenges. Moreover, part of the pipeline passes through forest areas and is close to indigenous communities in Cameroon.

International aid to facilitate the exploitation of oil in Chad aims to address these concerns with the following measures to strengthen the management of oil revenues and to mitigate any negative environmental and social impacts:

- By law, direct net incomes (dividends and royalties) are to be deposited in an offshore escrow account to ensure annually published audits according to international accounting standards.
- By law, 10 percent of revenues will be deposited in a Future Generations Fund. The remainder will be allocated as follows: 80 percent for priority sectors, including public health and social affairs, education, infrastructure, rural development, environment, and water resources; 5 percent for development in the producing area (Doba); and 15 percent for government operating and investment expenses.
- An Oil Revenues Control and Monitoring Board, established to authorize and monitor disbursements, comprises nine members, four of whom are representatives from civil society and one who is a parliamentarian from the opposition.
- The World Bank is also committed to monitoring the use of oil revenues, and violations of agreements could trigger accelerated repayment of loans under the program, and affect the level of development assistance more generally from the World Bank and other donors.
- The project will comply with World Bank safeguard policies for environmental assessments, natural habitats, indigenous peoples, cultural property, resettlement, and forests.
- A small area of tropical forest (10–15 square kilometers) will be lost as a result of the pipeline construction, but to compensate for this loss two large new national parks (5,000 square kilometers) have been created in Cameroon, to be managed for better biodiversity conservation in those areas.

These measures, which emphasize capacity building, transparency, and accountability, combined with continuous civic engagement in spending decisions, should help ensure that revenues are targeted to the poor.

The program still faces challenges. Some of the first payments received by the government of Chad in mid-2000 were used for military purposes. Since these funds were "prepayments"—and therefore not included in the framework of the project—they did not violate the letter of the pipeline agreements but they highlight the potential difficulties in improving aid effectiveness. The military spending was made public, provoking debate, and the government later took steps to make spending plans for the remainder of the signing bonus more transparent. The hope is that the process will enable further institutional strengthening over time.

Source: World Bank staff.

ment guarantees, and supporting reconstruction.[90] In Africa major conflict has visited virtually every country or an immediate neighbor over the last decade.[91] Although some aspects of security may be resolved at the local level, the formation of the state and challenges to the state are national in scope, making conflict a major national issue.

Chapter 3 argued that people and assets—human-made and natural—need to be protected to thrive. Threats to people and assets are held in check by informal norms, values, and sanctions, but also by such institutions as laws and a state that upholds them. This protection may fail on the small scale, leading to extortion and crime—or on the large scale, resulting in challenges to the state and civil war. It is worth noting that in addition to destroying lives and physical assets, violent conflict also assaults social capital, undermining trust and social networks, and devastates the environment, wasting natural assets. As argued in chapter 2, there are interdependencies in the portfolio of assets, and their destruction can spawn vicious cycles, as evidenced by the greater likelihood of conflict returning to areas that have recently suffered conflict.[92]

Civil conflict and homicides (table 7.1) stem from similar underlying factors, including the potential gains from violence, such as the available loot—and from the breakdown or weakness of defensive structures, such as traditional norms, sanctions, and government-enforced rule of law.[93] Table 7.1 shows that:

- For the world as a whole, the average number of annual deaths from civil wars was four to five times greater than from homicides between 1944 and 1996.
- In Sub-Saharan Africa, both civil conflict deaths *and* homicides are higher than in other regions.

Table 7.1
Civil conflict and reported homicides
(per 100,000 people)

	Total civil conflict deaths per year (1944–96)	Total homicides per year
All regions (population-weighted average)	10.3	2.3
Sub-Saharan Africa	30.3	7.4
East Asia and Pacific	10.1	0.6
Middle East and North Africa	9.4	1.2
South Asia	7.4	1.9
Europe and Central Asia	3.4	1.8
Latin America and the Caribbean	3.2	4.5

Sources: Sambanis (2000); Jacobs, Aeron-Thomas, and Astrop (2000); Fajnzylber, Lederman, and Loayza (2000).

- East Asia and Pacific, and the Middle East and North Africa, by contrast, have relatively high civil conflict deaths and low homicides. This suggests that state institutions have less success in mediating tension and containing civil violence than norms and sanctions do in limiting homicide.
- In Latin America, where incomes and inequality are somewhat higher, civil conflict deaths are relatively low, but homicides are high. This suggests that the state has been well "defended," partly through periods of military rule, but that factors such as high levels of inequality continue to fuel homicides.[94]

"Atypically severe grievances" and religious or ethnic divisions in society have been cited as important causes of civil conflict.[95] Studies by Easterly (forthcoming) and others suggest that the institutional framework is central to constraining the divisive effects of such social characteristics, and that other factors may be more important.[96] Empirical findings suggest that two other factors are important to the incidence and duration of civil conflict: the presence of natural resources, and the incidence of extreme poverty and unsustained growth.

Natural resources and civil war

There is evidence that dependence on natural resources increases the likelihood of conflict, especially if they are location specific and lootable, giving opposition groups funding opportunities.[97] This is distinct from the broader impact of point-source, natural resources elaborated earlier.[98] There is also a link between natural resource extraction and civil war based on grievances related to "land expropriation, environmental damage, and labor migration."[99] The potential access to resource rents makes it easier for private armies or warlords to acquire the arms that contribute to the incidence of civil conflict.

Similar mechanisms may affect the duration and intensity of conflict.[100] Resource wealth makes it easier for weak groups to continue rather than be crushed, and their leaders might derive greater resource rents during conflict than they would obtain in peace.[101] The presence of natural resources may also make it harder to reach peace accords, because leaders have difficulty controlling looting by subordinates. For 13 cases of civil conflict—in countries such as Angola, Sierra Leone, and the Democratic Republic of Congo—these mechanisms were evident.[102]

In addition, the government and the international community may be unable to convince violent rebel groups that they will not benefit from the resources extracted. To the contrary, rebel groups successfully pay for weapons and other support with "booty futures," trading diamond concessions for mercenary services, for example, before the conflict has even begun.[103] Rebels agree to peace in exchange for regional autonomy only if the government can credibly commit to its promises, but the presence of natural resources increases the incentive for the government to renege on peace agreements.[104]

Institutional remedies are emerging, but they need to be strengthened. Civil society organizations continue to focus international attention on the practices of failing governments and violent rebel groups. The publicity is also encouraging private actors to adopt codes of conduct for resource extraction, illustrated by efforts to label diamonds and exclude "conflict diamonds" originating in Sierra Leone and Angola from the market. International pressure is growing to curb the looting by neighbors, now fueling conflict in the Democratic Republic of Congo, and to promote democracy and participation to help prevent the accumulation of grievances that boil over into violence. Indeed, as noted above, recent research on the "resource curse" suggests another less direct mechanism by which resources raise the probability of violent conflict—by undermining the institutional framework that is critical to economic growth and poverty reduction.

Extreme poverty, inclusiveness, and civil war

The high level of conflict in Africa can be largely explained by low incomes and poor growth.[105] Still, the likelihood of conflict rises as poverty is concentrated in a group—distinct by ethnicity, religion, or region. Systematic discrimination, denied access to public services, "extreme poverty and poor social conditions (including refugee camps) also facilitate conflict by providing more readily available combatants."[106]

The concentration of poverty in a particular group suggests that decisionmakers are not receptive to signals, especially from the fringes, and national potential is being wasted. Government leaders may also be politically unable to take better care of aggrieved groups to prevent violence. Adapting institutions, by expanding democracy, for example, can help. Rulers of England strengthened the hand of the nobility by creating a parliament.[107] Indeed, democracy (or a dramatic extension of suffrage to new groups) can be a commitment to redistribution. In many states democracy has been extended in response to social tensions—bringing about successive reductions in inequality.[108] After the cessation of hostilities, the decentralization of power is sometimes sought to reduce tensions by allowing greater autonomy. But it does not guarantee peace.[109] It can also allow regions to drift farther apart, and the center often reasserts its powers over time. For this reason, offers of greater autonomy often suffer the same commitment problems as other elements of peace proposals.

Governments need to move to nondiscriminatory policies and help those in extreme poverty. Recall Malaysia, which used natural resource rents (rather than aggressive asset redistribution) to finance an improvement in poor and excluded people's access to assets, helping overcome ethnic and socioeconomic conflict (see box 7.10). International aid agencies may be able to contribute in a similar way, by providing aid to leverage a new base of assets for poor and excluded people that enables greater participation. In addition, by helping to guarantee agreements, the international community can help overcome the serious commitment problems associated with laying down arms. The resolution of conflicts and commitment to reconstruction is thus facilitated not only by moving from the local level to engaging institutions at the national level, but further by inviting global participation.

Conclusion

Fostering sustainable development requires the effective management of broad portfolios of assets—human-made, human, natural, intellectual, and social. This requires improving coordination across communities and localities at the national level, particularly for assets with beneficiaries that are widely dispersed or poor. The institutional environment is central to this process, enabling government as well as private and civil actors to be receptive to signals, balance divergent interests, and execute collective decisions. Good processes also promote the emergence of better institutions over time—discouraging the propensity to take, and providing incentives to make, exchange, and preserve.

Motivated by the take, and engendered largely by extreme poverty and unproductive competition for natural resources, conflict breaks institutions down. But strengthening voice, broadening participation, and ensuring more inclusive access to assets can limit the tendencies to take. It can contribute to better institutions—with support and reach that are broader and deeper. Inclusive institutions can liberate creative potential by extending protection to groups and assets previously unprotected. Discouraging the take hinges on rendering institutions more inclusive and receptive to dispersed beneficiaries, which is crucial for better management of the environment. Encouraging the make hinges on fostering a sound investment climate that provides the conditions for growth and for assets to thrive, which is crucial for reducing poverty and generating innovations to reduce the demands on the environment.

Partnerships among government, civil society, and private sector actors offer substantial promise for improving development outcomes. These nexuses of interests, especially national governments, also play key roles in addressing transnational issues, and improving global coordination, as will be elaborated in the next chapter.