

Achievements and Challenges

World Development Report 2003 is about sustainable development. It is about people and how we deal with each other. It is about our home planet and its fabric of life. And it is about our aspirations for prosperity and posterity.

Any serious attempt at reducing poverty requires sustained economic growth in order to increase productivity and income in developing countries. But there is more to development than just economic growth—much more. This Report argues that ensuring sustainable development requires attention not just to economic growth but also to environmental and social issues. Unless the transformation of society and the management of the environment are addressed integrally along with economic growth, growth itself will be jeopardized over the longer term.

Environment and social issues, when not addressed, accumulate over time and have consequences that do not show up in the shorter time horizons typical of economic policymaking. That is why this Report adopts a longer time horizon of 20 to 50 years. Within this time frame it is possible to identify environmental and social problems—local, national, and global—that can have very costly or even irreversible consequences if not addressed immediately. For other problems, where the consequences are not irreversible, the longer time horizon provides the lead time to start changing attitudes and institutions and so make it possible to respond before the problems become crises.

In short, this Report takes a comprehensive, longer term, and dynamic view of sustainability, with a clear focus on poverty reduction.

The core development challenge

Most current estimates suggest that 2 billion people will be added to the world's population over the next 30 years and another billion in the following 20 years.¹ Virtually all of this increase will be in developing countries, the bulk of it in urban areas. In these same countries, 2.5 billion to 3 billion people now live on less than \$2 a day.² The core challenge for development is to ensure productive work and a better quality of life for all these people. This will require substantial growth in productivity and incomes in developing countries.

The challenge may seem daunting—and it is. But over the past 30 years world population also rose by 2 billion.³ And this growth was accompanied by considerable progress in improving human well-being, as measured by human development indicators. Average income per capita (population-weighted in 1995 dollars) in developing countries grew from \$989 in 1980 to \$1,354 in 2000.⁴ Infant mortality was cut in half, from 107 per 1,000 live births to 58, as was adult illiteracy, from 47 to 25 percent.⁵

Looking back to the 1950s and 1960s, it was feared at the time that the developing countries—particularly China, India, and Indonesia—would not be able to feed their rapidly growing populations. Thanks to the green revolution in agriculture, the doomsday scenarios of famine and starvation did not materialize in these, the most populous, developing countries. In the 1960s and 1970s the Club of Rome and many other groups forecast that the Earth would rapidly run out of key natural resources. So

far, this has not happened, again because changes in technology and in preferences have allowed the substitution of new resources for existing ones—for example, fiber optics in place of copper. Global action has also led to major strides in eliminating disease scourges (smallpox and river blindness), and in addressing new problems (ozone depletion).

But accompanying these achievements were some negative social and environmental patterns that must not be repeated in the next 50 years if development is to be sustained.

- *Poverty: declining, but still a challenge.* There has been a significant drop in the percentage of people living in extreme poverty (that is, living on less than \$1 per day). Even the absolute number of very poor people declined between 1980 and 1998 by at least 200 million, to almost 1.2 billion in 1998.⁶ The decrease was primarily due to the decline in the number of very poor people in China as a result of its strong growth from 1980 onward.⁷ Since 1993, there have also been encouraging signs of renewed poverty reduction in India. Sub-Saharan Africa, by contrast, has seen its number of very poor people increase steadily. Yet in 1998, despite the decline in Asia and the increase in Sub-Saharan Africa, East Asia and South Asia still accounted for two-thirds of the world's very poor people, and Sub-Saharan Africa for one-quarter. Development strategies will need to do better in eliminating abject poverty. The estimated 1 billion very poor people is of the same order of magnitude as the independently generated figures on the number of people who are undernourished and underweight.⁸
- *Inequality: widening.* The average income in the richest 20 countries is now 37 times that in the poorest 20. This ratio has doubled in the past 40 years, mainly because of lack of growth in the poorest countries.⁹ Similar increases in inequality are found within many (but not all) countries.
- *Conflict: devastating.* In the 1990s, 46 countries were involved in conflict, primarily civil.¹⁰ This included more than half of the poorest countries (17 out of 33). These conflicts have very high costs, destroying past development gains and leaving a legacy of damaged assets and mistrust that impedes future gains.

The increased scale and reach of human activity have also put great pressure on local and global common property resources (water, soil, and fisheries), as well as on local and global sinks (the ability of the biosphere to absorb waste and regulate climate).

- *Air: polluted.* At the local level, hundreds of developing-country cities have unhealthy levels of air pollution (see chapter 3, figure 3.4). At the global level, the biosphere's capacity to absorb carbon dioxide without altering temperatures has been compromised because of heavy reliance on fossil fuels for energy. Global energy use traditionally has grown at the same rate as gross domestic product (GDP). Greenhouse gas (GHG) emissions will continue to grow unless a concerted effort is made to increase energy efficiency and move away from today's heavy reliance on fossil fuels.¹¹ In the past 50 years excess nitrogen—mainly from fertilizers, human sewage, and combustion of fossil fuels—has begun to overwhelm the global nitrogen cycle, giving rise to a variety of ill effects ranging from reduced soil fertility to excess nutrients in lakes, rivers, and coastal waters. On current trends, the amount of biologically available nitrogen will double in 25 years.¹²
- *Fresh water: increasingly scarce.* Fresh water consumption is rising quickly, and the availability of water in some regions is likely to become one of the most pressing issues of the 21st century. One-third of the world's people live in countries that are already experiencing moderate to high water shortages. That proportion could (at current population forecasts) rise to half or more in the next 30 years unless institutions change to ensure better conservation and allocation of water.¹³ More than a billion people in low- and middle-income countries—and 50 million people in high-income countries—lacked access to safe water for drinking, personal hygiene, and domestic use in 1995.¹⁴
- *Soil: being degraded.* Nearly 2 million hectares of land worldwide (23 percent of all cropland, pasture, forest, and woodland) have been degraded since the 1950s. About 39 percent of these lands are lightly degraded, 46 percent moderately degraded, and 16 percent so severely degraded that the change is too costly to reverse. Some areas face sharp losses in productivity. Grasslands do not fare much better: close to 54 percent show degradation, with 5 percent being strongly degraded.¹⁵

- *Forests: being destroyed.* Deforestation is proceeding at a significant rate. One-fifth of all tropical forests have been cleared since 1960.¹⁶ According to the Food and Agriculture Organization of the United Nations (FAO), deforestation has been concentrated in the developing world, which lost nearly 200 million hectares between 1980 and 1995. In the Brazilian Amazon annual deforestation rates varied between 11,000 and 29,000 square kilometers a year in the 1990s. Deforestation in developing countries has several causes, including the conversion of forests to large-scale ranching and plantations and the expansion of subsistence farming. At the same time, forest cover in industrial countries is stable or even increasing slightly, although the forest ecosystem has been somewhat altered. According to a 1997 World Resources Institute (WRI) assessment, just one-fifth of the Earth's original forest remains in large, relatively natural ecosystems.¹⁷
- *Biodiversity: disappearing.* Through a series of local extinctions, the ranges of many plants and animals have been reduced from those at the beginning of the century. In addition, many plants and animals are unique to certain areas. One-third of terrestrial biodiversity, accounting for 1.4 percent of the Earth's surface, is in vulnerable "hot spots" and is threatened with complete loss in the event of natural disasters or further human encroachment.¹⁸ Some statistics suggest that 20 percent of all endangered species are threatened by species, introduced by human activity, alien to the locality.¹⁹
- *Fisheries: declining.* The aquatic environment and its productivity are on the decline. About 58 percent of the world's coral reefs and 34 percent of all fish species are at risk from human activities.²⁰ Seventy percent of the world's commercial fisheries are fully exploited or overexploited and experiencing declining yields.²¹

None of these social and environmental patterns is consistent with sustained growth in an interdependent world over the long term. Given the social and environmental stresses caused by past development strategies, the goal of raising human well-being worldwide must be pursued through a development process that "does better"—a poverty-eliminating growth path that integrates social and environmen-

tal concerns in pursuit of the goal of sustained improvements in well-being.

Windows of opportunity

The development process is about change and transformation. Economies evolve. Societies and cultures evolve. Nature evolves. But they evolve at different speeds, creating stresses that need to be addressed and managed.²² Moreover, in an era of globalization, the growing scale and speed of change in human activity are in some cases outpacing the rate at which natural processes and life-support systems can adapt.²³ Globalization and faster technological change are also altering the nature of social interaction and affecting the efficacy of existing institutions. Although globalization and technological change offer many benefits, they can have deleterious side effects if institutions at local, national, and international levels do not evolve fast enough to deal with the adverse spillovers. The consequences of previous patterns of development are also beginning to bind, restricting certain growth paths or making them more costly.²⁴

But these processes, if managed well, can create new opportunities. Of the many interrelated drivers of change and transformation, four stand out: scientific and technological innovation, income growth, population growth, and urbanization. The first two are likely to continue changing preferences and providing new opportunities to satisfy these preferences. The demographic and urban transitions, by contrast, are one-time changes, and the opportunities they offer are perhaps less well recognized. These are discussed in the next section.

- *Scientific and technological innovation.* The flow of information and ideas, boosted greatly by the Internet, can enable developing countries to learn more rapidly from each other and from industrial countries. It can also facilitate the emergence of networks to monitor a wider array of development impacts. Other technological changes can enable developing countries to leapfrog stages in the development process that rely on inefficient uses of natural resources. Science and technology can help address major socioeconomic problems. As noted, the green revolution was critical in enabling many developing countries to avoid widespread starvation. To benefit from these opportunities, institutions are needed that can stimulate and diffuse

technological innovations and avoid or mitigate any deleterious consequences.

- *Income growth.* A projected growth in global income of 3 percent a year over the next 50 years implies a fourfold increase in global GDP. Increasing income growth may place a strain on the environmental and social fabric if there is too little attention to shifting consumption and production patterns. But this future economic growth will also require major investments in new human-made capital to expand capacity and to replace existing capacity as it ages. Making these investments (many of which are long lived) more environmentally and socially responsible through appropriate investment criteria will go a long way toward putting development on a more sustainable path—an opportunity not to be missed.

Opportunities in the demographic transition

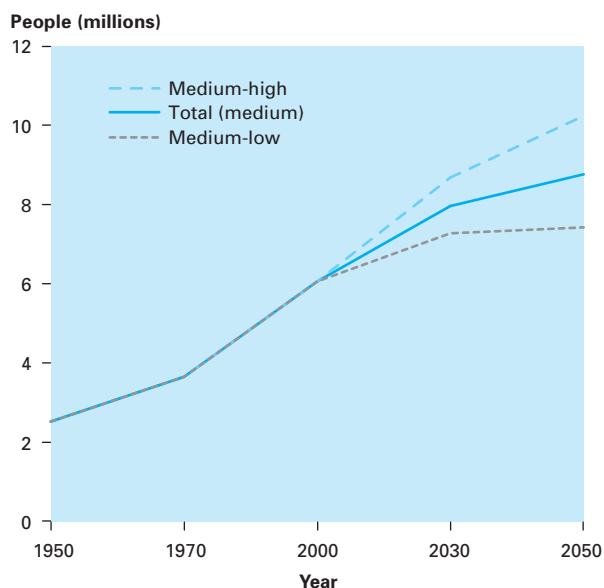
When today's industrial countries were themselves developing, their population densities and growth rates were much lower than those of developing countries today, and the pressure on their resources was consequently lower. They also had a more evenly distributed age structure and lower dependency rates, allowing social institutions to adapt gradually to the requirements of a changing population.

Populations in industrial countries as a group were fairly stable for most of the second half of the 20th century. As a result, the growth in world population in this period has been driven primarily by population growth in developing countries. The stresses and spillovers from this population growth are generally observed not, as was originally expected, at the aggregate level (for example, in large-scale famines and food shortages) but, rather, in more insidious ways—in many smaller interactions between population, poverty, and resources.²⁵ The outcomes are felt in greater pressures on fragile lands, in lower wages, and in persistent unemployment.

It is now clear that a global demographic transition is well underway, even if it is not yet complete. This is a major historic opportunity. World population is expected to stabilize by the end of this century at 9 billion to 10 billion people, 20 to 30 percent lower than forecast in the 1960s and 1970s. Many factors have contributed to this slowdown:

- More educated, employed women and smaller families

Figure 1.1
Global population approaching stability



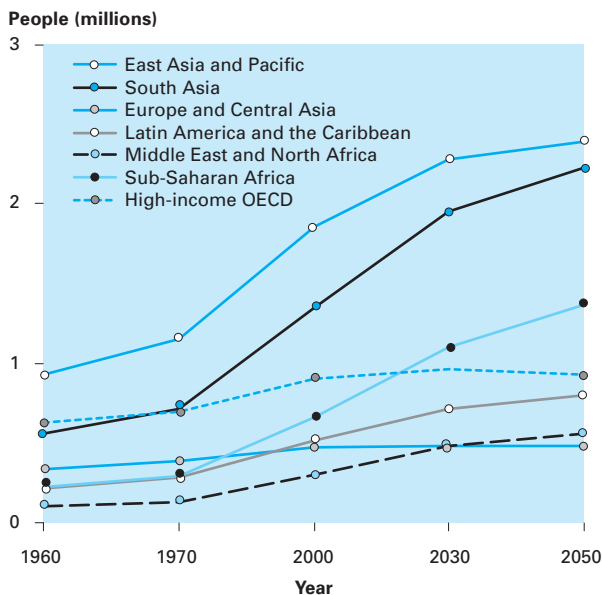
Note: Medium-high and medium-low variants based on U.N. projections of medium-high and medium-low scenarios scaled to World Bank aggregates.

Source: World Bank estimates.

- Greater off-farm opportunities, creating a need for more education for children
- Widespread dissemination of modern contraceptive technology, making it easier for people to plan childbearing.

Of the expected population increase, 85 percent (3 billion) will be born in the next 50 years (figure 1.1). But the speed of the transition, and the resulting population size and structure, will vary by region (figure 1.2) and by country. If fertility rates do not fall as rapidly as now projected, aggregate populations will be larger, putting greater pressures on natural resources and the social fabric. If they drop faster, many countries will have to deal sooner than expected with another problem—an aging population. This can have major consequences, especially for rural populations, for whom formal social safety nets are either nonexistent or not well developed. For example, one consequence of China's one-child policy—which dramatically and successfully lowered aggregate population—may be that by 2030 as much as one-third of the population will be over age 65.²⁶

Figure 1.2
Some regions growing fast, others stable



Source: WDI database and SIMA.

Influencing the demographic processes in many countries is the growing incidence of HIV/AIDS, malaria, and tuberculosis. For example, current estimates and projections in Sub-Saharan Africa indicate increasingly large losses of working-age people to the AIDS epidemic. The economic impact of such high mortality is especially serious because enormous private and public investments have already been made in members of this age group. The loss of their productive lives leaves large and unpredictable gaps in the labor force. Malaria causes high levels of adult sickness rather than deaths, but this too inflicts heavy losses on labor productivity. Changes in the incidence of disease will have profound effects on health expenditures in these African countries.

With declining fertility, the age structure of the population changes, opening a window of opportunity in developing countries for a few decades—a window they can use for catching up and raising welfare for all. As figure 1.3 shows, the proportion of the working-age population rises in relation to the proportions of children (those under 15) and the elderly (over 65), enabling societies to spend less on school construction and on old-age medical expenses and to invest the savings in generating economic growth. But such benefits will materialize only if the

members of the working-age population are gainfully employed and have opportunities to expand their asset base. Eventually, dependency ratios rise again as these workers age, and the window of opportunity starts to close, as it will soon begin doing in East Asia and Eastern Europe (see figure 1.3).

Some regions, notably East Asia, have benefited substantially from the drop in the ratio of dependents to workers.²⁷ Investment in forming a skilled, healthy labor force, combined with policy and institutional settings conducive to using this labor force effectively, helped generate strong economic growth. Two keys to success were maintenance of an open economy and investment in sectors with high growth potential. Since most developing regions will continue to experience relatively low dependency ratios for some decades, careful preparation now can help make the most of their windows of opportunity.

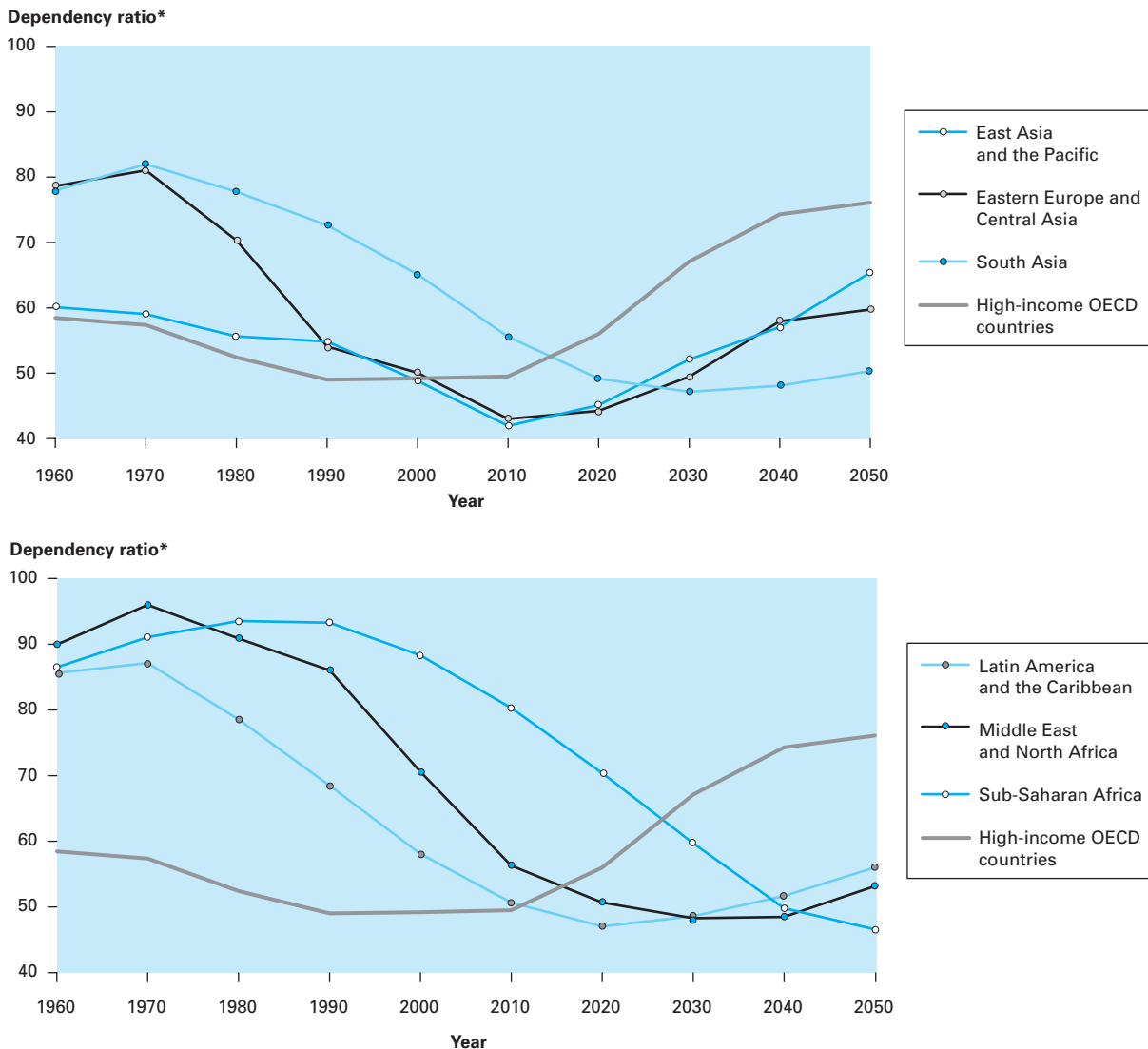
Until now, populations have been growing too rapidly for fiscally constrained governments to expand the provision of jobs, infrastructure, and public services enough to keep pace with people's needs. This task will become easier now that the global population is approaching stability. Governments in both urban and rural areas can move from catching up with the quantitative need for services, to upgrading their quality. Much of the social tension and frustration arising from unemployment and poor public services can then be attenuated.

Lower rates of population growth will reduce pressure on natural resources, but this will be offset by the increase in per capita consumption. The latter trend makes it essential to adopt the technologies and growth paths for production and consumption that will ensure the sustainable use of natural resources. To benefit from the opportunities a stabilizing population provides, it is critical to anticipate problems and identify development strategies for getting through the transition period (the next 20 to 50 years) without creating conditions that generate further conflict or resource degradation.

Opportunities in the urban transition

As countries move from poverty to affluence, the required growth in productivity involves a shift from heavy dependence on agriculture as a primary source of employment and income to nonagricultural activities that do not make intensive use of land. This is generally accompanied by a major shift in population from rural to urban areas. Indeed, the most

Figure 1.3
Dependency ratios on the decline—for a while



* The dependency ratio is the ratio of the non-working-age population (under 15 years old and over 64 years old) to the working-age population (ages 15 to 64).

Source: World Bank (2001g)

important socioeconomic and cultural transformation over the past 150 years has been the transformation of relatively closed, exclusive, custom-based rural societies into relatively open, inclusive, innovation-oriented urban societies.²⁸

Rural communities, especially in less accessible areas, have long adapted to their circumstances, developing vibrant, self-sufficient communities. As long as risks could be absorbed locally, these communities continued to learn and adapt. Dependence on local

ecosystems, however, imposed limits on risk taking and innovation. This autonomous development path changes as rural areas become drawn into larger markets and strengthen their links with urban areas, making trade networks and distance from market centers more critical features of development opportunities and local resource pressures.

Increasing densities in towns and cities, and the greater connectivity between cities, as well as between urban and rural areas, increases the catchment area of

markets and the returns to economic endeavor. If managed well, this transformation enables the emergence of new activities and productive job opportunities. Towns, as market centers for a rural hinterland, start the process of creating economies of scale for nonagricultural activities. Urban society also permits the spreading of risks over larger numbers of people and activities. Knowledge flows more readily, through increased opportunities for face-to-face contacts among various actors. And the need to accommodate diverse views and meet rapidly changing challenges stimulates innovation and new applications of technology. As a result, larger cities become incubators of new values—among them, risk taking and innovation.

Creativity, knowledge flow, the increasing scale of activities, and larger catchment areas are central to specialization and productivity growth. This is true not just for the production of goods but also for the provision of services. A village or neighborhood can support a primary school or basic clinic, and the local teacher or doctor can be a generalist. But providing higher, more sophisticated, and more differentiated education and health care requires more specialized skills. Because of the fixed costs of supporting these specialized skills, a larger catchment area (a town or a subsection of a city) is required. The higher population densities, lower transport costs, and lower communications costs in towns and cities make the more specialized operations possible. In moving further up the hierarchy of required specialization, the required catchment area also increases. So, the transition from villages to towns, and from cities to metropolitan areas, corresponds to the different functional capabilities of larger, higher-density conurbations. The potential benefits of higher densities and greater connectivity can be more easily realized if the investment climate is improved through better enabling rules and frameworks and better physical infrastructure. Stimulating and attracting investments—in particular, by the small and medium-size enterprises that provide most of the jobs for growing urban populations—is the key to accommodating the expected growth in urban populations and ensuring their ability to pay for needed urban services and amenities.

Seeing the socioeconomic transformations in spatial terms

Economists and engineers focus on the sectoral changes that accompany economic growth and technological innovations. This is understandable when

focusing on GDP and the emergence or obsolescence of industries, but it is not very helpful for understanding the impact of these changes on society and nature. The most fundamental social and economic transformation—from traditional rural to modern urban—is manifested spatially. Except in the most populous countries, such as China and India, rural societies are relatively low in density and heavily dependent on agriculture as the primary source of employment and output. Modern urban societies are generally higher in density and dependent on activities that benefit from proximity and do not require a great deal of land, such as manufacturing and services. These activities and land use patterns generate different types of sociocultural and environmental problems.

Most ecosystems, too, are defined spatially. Much flora and fauna is locally unique and adapts gradually to changes in local circumstances. Local problems and stresses appear earliest, whether in the form of local extinctions, the reduction of the ranges of many plants and animals, or soil, air, and water pollution. These changes, the result of local development pressures, do not show up at national and global levels until they accumulate, but they provide early warning of problematic consequences of current development patterns.

The jurisdictions of many institutions that make or implement rules and laws (legislatures, constitutions, and government agencies) are also defined spatially. Often, the spatial jurisdiction of institutions does not match the spatial nature of the social and environmental problems generated by economic activity—one reason for the persistence of these problems.

Given our interest in people, where they live, and how they interact with each other and with nature, it is important to look at where people are now and where they are likely to be in the future. The world's population increased by more than 3.5 billion people in the past 50 years, and 85 percent of these added people were in developing and transition countries (see Figure 1 in the Roadmap). The number of people living in fragile rural areas in developing countries doubled, in stark contrast to the declining numbers in this category in high-income countries. The number of cities with a population of more than 10 million people went from 0 to 15 in developing countries but only from 1 to 4 in high-income countries.

In the next 30 to 50 years the 2 billion to 3 billion increase in the world's population will be almost

exclusively (97 percent) in developing and transition countries, and virtually all of it will be in urban areas. The growth of the urban population is driven by natural increase, rural-to-urban migration, and the incorporation of high-density rural areas on the urban fringe. The number of megacities in developing countries is likely to increase to 54, while it will stabilize at 5 in high-income countries. It is not yet clear whether the number of people living in fragile areas will continue to increase, but it probably will unless migration opportunities change. As many as 2 billion people will live in two areas that are difficult to manage: fragile rural areas and megacities.²⁹ Dealing with these people's needs will be a major challenge, since there is not much experience in industrial countries that can be adapted to their needs.

The following are some of the key questions with local and global implications that will face the world's population over the next two to five decades:

- Will rural populations—especially those on fragile lands, in more commercially active areas, and on agricultural frontiers—be able to overcome poverty, improve their livelihoods, and adapt to new opportunities, including opportunities in towns and cities?
- Will the rapidly growing cities of the developing world live up to their potential as dynamic engines of growth and social modernization, or will they get mired in poverty, pollution, congestion, and crime?
- Will renewable resources—particularly forests, soil, water, biodiversity, and fisheries—be depleted, or will they be managed as indefinitely sustained sources of livelihood and well-being?
- Will societies be sufficiently creative, resilient, and forward-looking as they undergo sweeping transformations in patterns of growth and migration? Will they be able to promote more equitable development and cope with unexpected shocks?
- Will poor countries be able to accelerate their growth without destabilizing social and environmental stresses? Will the prospective \$140 trillion world GDP at mid-century generate fewer environmental and social stresses than the much smaller global economy today?

These are difficult but important questions, which this Report cannot answer definitely. However, it

identifies an approach and process that should generate more dialogue and creativity in finding answers.

The interactions among society, economy, and nature vary in the different spatial arenas, although problems across locations are linked. Productivity increases in agriculture help feed the cities. Innovation and productivity increases in the cities help raise productivity and the quality of life in rural areas. Geography matters because of the characteristics of local ecosystems, such as the cost of overcoming local diseases.³⁰ Geography also matters because of geometry in the form of connectivity and distance to central nodes and markets; the cost of transport is more important here than that of communication.³¹ Indeed, the strong association between rural poverty in remote and fragile ecosystems becomes more apparent when the problem is viewed through a spatial lens.

For this reason, the Report is organized by spatial areas that have different characteristics and require correspondingly different approaches to their development.

Fragile lands. The estimated 1.3 billion people living on fragile lands have modest assets that can help bring them out of extreme poverty, but these assets are seldom nurtured by local or national institutions. The people have land that is subject to many constraints, making it vulnerable to degradation, erosion, floods, and landslides. They possess human capital, which is handicapped by restrictive traditions, limited mobility, lack of voice, and poor access to services. This is even more true for women, who are thus the most marginal group. The mainly poor people on fragile lands also face circumstances vastly different from their counterparts on Europe's rural periphery 50 to 100 years ago. Today, international migration is highly restricted, and while rural-to-urban migration is important for them, there are limited numbers of jobs at above-subsistence wages for unskilled workers, especially in the low-growth economies. As a result, as noted above, instead of declining sharply, the number of people living on fragile lands is estimated to have doubled in the past 50 years—despite some outmigration.

Rural areas with potential for commercial crops. The problem of feeding a growing and more urban population calls for better management of the interaction with nature, particularly with respect to land and water (extensification versus intensification of agriculture). Whether or not rural families

have land, water, and education is critical to their current livelihood, as well as to their ability to move to cities in the future. More egalitarian access to these assets is also crucial for determining the quality of society's institutions. A successful rural-urban transition requires the elimination of poverty for those who stay in the countryside and better preparation of those who move to the cities. It also demands protection of remaining natural ecosystems and habitats, given their central role in maintaining life-support systems and biodiversity. This latter requirement is one reason to intensify agricultural production in areas already under commercial crops and pasture. Intensification in such areas not only minimizes pressure on biodiversity and on marginal agricultural areas but also increases the food available to cities and leads to dynamic rural-urban linkages. Higher population density in these rural areas would also make investments in health and education more cost-effective and would increase the potential for off-farm employment and help farmers accept risk and innovate.

Urban areas. Cities of the developing world face a formidable undertaking, given the expected rapid rate of growth and sheer numbers of urban residents to be employed, housed, and serviced. The characteristics of periurban settlements, towns, cities, and megacities—higher density, large scale of settlement, and greater social diversity—facilitate the creation of productive employment opportunities, efficient provision of services, and access to ideas and learning. But having many people at close quarters also creates the potential for social problems—crime and social dislocation—and for environmental spillovers that pose health and safety hazards, especially for those living in neighborhoods without sanitation or drainage and in potential disaster zones. The long life of urban physical capital stock can lock in certain development paths, making changes costly. If managed well, urban areas can be the future engines of growth. If not, their environmental and social problems will be concentrated and difficult to fix.

The discussion of problems affecting fragile lands, rural commercial areas, and urban settings, and of possible solutions, is important because many public goods and externalities are local in nature and are, in principle, amenable to action at the local level. An enabling framework for local action and the principle of subsidiarity require that public goods and ex-

ternalities that affect wider catchments be addressed, at higher levels—national and global.

At the national level. The political, legal, and market domain for coordinating many activities is frequently the nation. Many externalities spill over beyond local communities and municipalities, and even across regional boundaries. The nation is thus often the level at which interests can be balanced, either directly or by facilitating negotiation among localities. National actors may be better placed to organize the provision of public goods and to take advantage of scale economies when the beneficiaries extend beyond subnational regions. Generating a strong investment climate, including sound macroeconomic fundamentals, good governance, and basic infrastructure, requires a framework that is typically national in scope. Dismantling perverse subsidies, husbanding forests and fisheries, and curbing water and air pollution in river basins and airsheds are major national challenges. Managing foreign aid and avoiding civil conflict are other key national concerns that determine whether development is sustainable.

At the global level. Many economic, environmental, and social processes—knowledge, conflict, disease, pollution, migration, and finance—spill over national boundaries. A few of these processes generate problems that are purely global: depletion of the stratospheric ozone layer is an example. But most global problems and opportunities are experienced at the local level as well. Automobiles that pollute local airsheds also generate greenhouse gases; wetland destruction that disrupts local water resources also undermines biodiversity of global significance; new ideas that are generated in one place can benefit people in other places, near and far. The public goods nature of many of these issues and the need to address the negative externalities requires coordination across boundaries. The distinctive challenge for global issues is to balance interests and commit to solutions in the absence of a global authority.

Act now—for long-term problems

Before proceeding to a discussion of local, national, and global issues, this Report sets forth a framework which argues that social and environmental outcomes have a bearing on human well-being both directly and through their effect on growth. When social and environmental issues are systematically neglected for long periods, economic growth will be

affected. That is why improving the quality of life for those living in poverty today—and for the 2 billion to 3 billion people who will be added to the world's population over the next 50 years—will require a growth path that integrates environmental and social concerns more explicitly.

Some problems of sustainability are already urgent and require immediate action; examples are local ecosystems where population is pressing on deeply degraded soils, and forests and water stocks that have been nearly depleted. In such cases productivity is already on the decline and opportunities for correction or mitigation may even have been lost; abandonment of existing practices and outmigration may be necessary. The urgency of some of these problems has been overlooked because the people most affected are physically remote from centers of power, or because their voices are not heard, or both.

Some issues call for immediate action because there are good prospects for reversing the damage to the environment at relatively low cost, as in taking measures against air and water pollution. Even then, undoing some of the damage to the affected population (such as the respiratory damage caused by breathing air laden with particulates) may not be fully possible. But knowing the health impacts does create a moral imperative to protect those affected from further exposure, to compensate them to the extent possible, and to prevent others from becoming victims.

Another category of issues unfolds over a longer time horizon. The problems may not yet be urgent, but the direction of change is unmistakable. For these, it is essential to get ahead of the curve and prevent a worsening crisis before it is too costly. Biodiversity loss and climate change are in this category: there is already a need to adapt to the consequences of past and current behavior, but there is also still scope for mitigation, though not for complacency. Similarly, the need to anticipate urban growth by facilitating low-income settlements in safe areas and by setting aside major rights-of-way and spaces for public amenities makes it necessary to act now to avoid greater costs and regrets later.

What is clear is that almost all of the challenges of sustainable development require that action be initiated in the near term, whether to confront immediate crises, such as the health risks to children from unsanitary living conditions in existing slums, or to stem the tide of crises where concerted action in the

near term could avert much greater costs and disruption to human development in the longer term.

In looking back over past successes and failures in solving development problems, it is clear that there have been more successes where markets function well (for example, in providing food to people with effective demand), even where the problems that markets have to solve (such as transport and communications) are relatively complex. The major problems that remain (inclusion, poverty reduction, deforestation, biodiversity, and global warming) are, however, generally not amenable to standard market solutions, although markets can help solve subsets of these problems.

One difficulty is that environmental and social assets suffer from underinvestment and overuse because they have the characteristics of public goods:

- Sometimes, ignorance of the consequences of action leads to overuse or underprovision. The ignorance is in part due to underinvestment in knowledge and understanding—itself a public good.³²
- In other cases there are no mechanisms for facilitating cooperation among individuals, communities, or countries even when it is clear to those involved that the returns to cooperation (especially in the long run), exceed the returns to unilateral action (especially in the short run).
- In still other cases the gains from acting in the broader interests of society fail to be realized because correcting a spillover has distributional consequences and the potential losers resist change.
- Sometimes underprovision is a response to perceived tradeoffs between growth and the costs of correcting externalities. These tradeoffs may be the unfortunate outcome of having been boxed into a corner through a past failure of foresight. Or there may be genuinely difficult choices in balancing legitimate interests and assessing the value of nonmarket benefits and risk reduction, especially if those who would benefit are dispersed over current and future generations.

Environmental and social stresses reflect the failure of institutions to manage and provide public goods, to correct spillovers, and to broker differing interests. Because the spatial extent of spillovers varies by problem, appropriate institutions are needed at different levels, from local through national to global.

Getting to socially preferred outcomes requires institutions that can identify who bears the burden of social and environmental neglect and who benefits—and who can balance these diverse interests within society. This perspective helps in understanding why technically sound policy advice (for instance, “eliminate perverse incentives” or “impose charges on environmental damages”) is so seldom taken up.

The emphasis of this Report is not on identifying a specific set of policies or outcomes considered advantageous but on the processes by which such policies and outcomes are selected. Outcomes emerging from strong processes are more robust. In many

cases, and increasingly, institutions respond too late or too poorly—or without the capacity to commit to a course of action. In today’s world the lag between the emergence of a problem and the emergence of institutions that can respond to it is too long. We need to see farther down the road. Why? Because institutions that facilitate and manage national economic growth, and even globalization, are still inadequate, yet where such institutions are in fact emerging, they are developing faster than complementary institutions that might be able to avoid or cope with the deleterious environmental and social consequences of economic change.

