TOMORROW’S MARKETS
Global Trends and Their Implications for Business

World Resources Institute
United Nations Environment Programme
World Business Council for Sustainable Development
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CREDITS

WRI Authors: Don S. Doering, Amy Cassara, Christian Layke, J. Anand Kangarlanath, Carmen Revenga, Dan Turstad, Wendy Vanasseet

WRI Contributors: Norbert Henninger, Marissa Irwin, Jonathan Kool, Liz Miss

Project Director: Don S. Doering

WBCSD Advisors: Claude Fussile; George Carpenter (Procter & Gamble), Bill Wallace (CH2M HILL)

UNEP Advisors: Jacqueline Aloisi-de Larderel, Daniel Pulp, Corris Van der Lucht

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The shadows of environmental degradation, poverty, and lack of economic opportunity lie across the regions of the world that are fertile ground for ethnic conflicts, hatred, and violence. The private sector has a more important role than ever before to develop products and practices and to support policies that protect and restore the environment, that eradicate poverty, and that create a fair and transparent society. The challenge of the future is to choose a course that satisfies the market requirements for growth, maintains the natural balance that sustains our economies, and meets the needs and rights of global communities awakening to new dreams of health, prosperity, and peace. Tomorrow’s Markets is a call for action and a sign of opportunity for the tremendous creative and innovative capacity of the business community.

Many cases can be made for sustainable development; yet, being a business council, we have worked to define the business case for sustainable development. The business case is an entrepreneurial position. It looks at how business can be more competitive by being more sustainability-driven. It covers themes such as eco-efficient, the role of global and capital markets, corporate social responsibility, transparency, innovation and technology, sound environmental management, and new partnerships, to name a few.

We live in a world of rapid change and our future is uncertain. Business leaders need to identify the fundamental signals that influence their future success and drive their innovation.

The WRI report, produced in partnership with UNEP, looks beyond daily preoccupations and identifies key trends that shape the business agenda. It does this in a concise and lively format.

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What is the relationship between corporate strategy and societal issues such as the environment, poverty, health, population, and international development? Business leaders have a tendency to see “social” concerns as having little relevance to competing. Instead, these fall under the headings of corporate citizenship or corporate philanthropy, or are left to managers to address as matters of individual conscience.

It is becoming more and more apparent, however, that treating broader social issues and corporate strategy as separate and distinct has long been unwise, never more so than today. Seeing strategy narrowly leads to missed opportunities and bad competitive choices. It can also cause managers to overlook potential competitive advantages.

The same disconnect between social and corporate is also common among leaders in the social sector. There is a tendency to view firms as adversaries — not as allies in advancing social causes. Yet we are learning that the most effective way to address many of the world’s most pressing problems is to mobilize the corporate sector in a context of rules, incentives, and partnerships where both companies and society can benefit.

In modern competition, economic and social policy can and must be integrated. Consider some examples. Controlling pollution and the emission of greenhouse gases is often viewed by firms as a social issue, and resisted as driving up the cost of doing business. Environmentalists, who often believe companies seek to profit from polluting, see their role as advocating regulations to compel companies to install available abatement technology whatever the cost.

Yet virtually all corporate pollution is a sign of economic waste and the unproductive use of resources, and can be addressed with better technology or improved methods. Forcing companies to install abatement technologies is usually the wrong approach; the better approach is product or process innovation. The same is true with the use of energy, the cause of most greenhouse gas emissions.

Innovative corporate practices in the area of the environment, then, will often enhance internal competitiveness. Products that address environmental scarcities will also have enormous market potential. This means that companies should see environmental protection as an opportunity, while environmentalists need to recognize that progress on environmental improvement will be most rapid if they work cooperatively with companies. Governments in developing countries must understand that strategies of environmental degradation lead to continued poverty, not successful economic development.

Not only can corporate and social needs be integrated, but the success of the developing world in improving prosperity is of fundamental strategic importance to almost every company. The world economy is not a zero sum game in which one country’s success comes at the expense of others. There is enormous potential for growth if many countries can improve in productivity and trade with one another. There are huge unsatisfied human needs to be met in the world, and demand will only increase as more nations become more prosperous.

Social and corporate also come together in the controversial areas of globalization. Social activists, not just companies, have a major stake in the openness and fairness of the international trading system. The evidence is compelling. Compared to local companies in developing countries, foreign companies bring higher environmental standards, pay and treat their workers better, and employ safer workplace practices. If social activists have improving these conditions as their true objectives, they will work with international companies rather than oppose them.

The volume provides a fascinating and important foundation of data that will help to highlight and help leaders capitalize on these opportunities. It catalogs the market opportunity in addressing social needs, and the payoff to successful international development. It reveals the competitive advantages and economic benefits of innovations to improve environmental performance and better utilize scarce resources. It highlights the importance of democracy and the role of transparency to achieve such win-win progress.

Both the corporate and the social sectors will need to adopt new mindsets. This book provides an invaluable tool for doing so.

Michael E. Porter is the Bishop William Lawrence University Professor, based at Harvard Business School. A University professorship is the highest professional recognition that can be given to a Harvard faculty member. Professor Porter is a leading authority on competitive strategy and international competitiveness and is the author of 16 books and over 75 articles.
People and Tomorrow’s Markets

SERVING SOCIETY

- Population
  Expanding population in developing regions will create large markets dominated by the young.

- Wealth
  Global wealth is rising but the income gap grows wider.

- Nutrition
  Millions are malnourished amidst an abundance of food.

- Health
  Life expectancy rises, yet preventable disease continues to limit development.

- Education
  Primary education is widespread, but opportunities for learning elude many.

Innovation

MORE VALUE WITH LESS IMPACT

- Consumption
  Rising consumption creates environmental risks and business opportunities for innovation.

- Energy
  Escalating demand for energy propels economic development but threatens Earth’s climate.

- Emissions
  Pollution remains a global challenge.

- Efficiency
  Throughput still grows even as energy and materials efficiency improves.

Natural Capital

PRESERVING THE RESOURCE BASE

- Ecosystems
  The productive capacity of the planet is in decline.

- Agriculture
  Food production is the basis of many economies but threatens the ecosystems upon which it depends.

- Water
  Freshwater is growing scarce amidst competing human needs.
People and Tomorrow’s Markets

Future consumer markets and labor will be concentrated in the fast-growing, emerging markets where small and large enterprises will find profitable opportunities to help meet health, education, and nutrition needs. These markets will favor businesses that partner with government and civil society to serve basic needs, enhance human skills, increase economic capacity, help remedy inequities, and conserve the environment.
We live in a world of continued population growth, even as fertility rates decline worldwide. In 25 years the population is estimated to reach about 8 billion — a third larger than today. Population dynamics are at the root of almost every world trend shaping tomorrow’s markets; population growth affects the environment and the health, nutrition, education, and wealth of the world’s citizens. In the next 20 years, populations will shrink or barely grow in the high-income countries (Gross National Income (GNI) per capita ≥ US$19,266) and most of the world’s citizens will be born in low-(GNI per capita ≤ US$755) and medium-income economies (GNI per capita US$756–9,265). To maximize the potential of low- and medium-income labor and consumer markets will require the development of a skilled work force and products and services tailored to people’s basic needs and to the needs of an expanding middle class (see Wealth). Developing countries will need to nurture their domestic industries to serve their own population and today’s multinational companies will need to develop appropriate strategic, technical, operational, and marketing competencies to operate in these new markets.

Population Growth Creates New Markets

Rapid population expansion in low-income and medium-income countries is contributing large numbers of potential workers and consumers to the world’s economy. The steady population in high-income countries means that few additional workers and consumers are being added in these countries.

Fertility Rates Are Declining

Fertility rates are low in the developed countries and falling rapidly in most developing regions. Nonetheless, demographic momentum — today’s large generation of children reaching their reproductive years — means that world population will keep growing for several more decades before world fertility rates reach the steady state replacement rate of 2.1 children per woman. Fertility is below replacement levels in Europe and North America. In most developing regions, fertility rates are still above replacement, though falling fast, thanks in part to family planning and education (see Education). Africa is the only region of the world in which fertility rates are not expected to fall to replacement level by 2025. In many African countries, fertility rates currently range from five to seven — although deaths from HIV/AIDS will offset some of the resulting population growth.

Changing Age Structures Will Bring Social and Economic Shifts

Young people predominate in the current and projected age structure of the developing world. The working age population in developing countries is projected to rise to 70% by 2020 — an increase that could help fuel developing country economies, but also drive emigration or result in high unemployment (see Labor). In contrast, the low birth rates and high longevity in industrialized countries will lead to a bulge of people aged 50–90 in 2020. These large elderly populations will place demands on national systems of pensions, healthcare, and personal services that will be supported by the productivity of smaller populations of younger people.

Implications for Business

Population dynamics are both a major force shaping the terrain of international markets and are at the root of society’s greatest economic and social challenges. The growing population of young people in developing countries represents major new labor and consumer markets for business, particularly as traditional developed country markets shrink with declining populations and become characterized by an increasing proportion of the elderly. To build developing country markets, large and small national and international enterprises must support stable employment and supply people with products and services that meet basic needs, are affordable, accessible, and are culturally appealing.
The world is getting wealthier and the economies of poor countries are developing, yet within regions and within countries, income disparity is often great and the absolute number of people living in poverty is very high. Low- and middle-income countries often lack the resources to eliminate problems such as rapid population growth, inadequate education, high incidence of malnutrition and poor health, corruption and political instability, and destruction of natural resources. High levels of income inequality limit the poverty-reducing effects of growth and it has been estimated that high inequality countries will need to grow twice as fast as low inequality ones to halve estimated that high inequality countries will need to grow twice as fast as low inequality ones to halve poverty by 2015.\(^1\) To make stability and prosperity a reality will require protecting the resource base and ensuring that people in low-income countries have the opportunities and the freedoms (see Democracy) to raise their living standards and to fully participate in the international community and global marketplace.

### Global wealth is rising but the income gap grows wider.

#### World Map of Gross Domestic Product, 1998

The map above shows gross domestic product in five GDP categories for the world’s countries in 1998. A comparison of this map with the map of projected water scarcity in 2025 (see Water, page 37) and the map of projected urban growth in 2015 (see Urbanization, page 41) hints at the convergence and connection of social, economic, and environmental challenges faced by many countries in Asia, the Middle East, Africa, and South America.

#### The World Is Wealthier...

The graph shows gross domestic product per capita, 1975-1999. World economic output has averaged 2.9% annual growth since 1975. Citizens in the high-income countries saw their incomes grow on average much more rapidly than those in middle- or low-income countries, leading to an even larger worldwide income disparity than there was in 1975 (see Consumption). Since 1975, per capita gross domestic product (GDP) has increased by about 280% in East Asia and the Pacific, 66% in North America, and 23% in Latin America and the Caribbean, while GDP per capita has decreased by 17% in Sub-Saharan Africa (see Democracy).\(^1\)

### Facts

- World economic output more than doubled in the past 25 years, to about US$33 trillion by 1999.\(^1\)
- In the 1990s, household consumption (the market value of all goods and services purchased by households) grew annually at 3.1% in low-income countries, 4.1% in middle-income countries and 2.3% in high-income countries.\(^2\)
- The world is 78% poor (average purchasing power parity income less than US$8,000 annually).\(^3\) The richest 1% of the population receive as much income as the entire bottom 57%; i.e., less than 50 million richest people receive as much income as 2,700 million poor.\(^3\)

#### Inequality Within Countries Also Persists

In addition to the unequal distribution of income among countries, distribution within countries is also unequal. For example, the poorest fifth of Brazilians receive only 3% of the income while the richest fifth have access to more than 60%. The poorest fifth of the United States receive 5% of the national income while the richest 20% receive about 46% of national income.\(^3\)

### Implications for Business

Long-term business growth and fair access to opportunity requires bringing millions of people into the global economy and narrowing the income gap between citizens in high- and low-income countries. The expanding middle- and lower-income consumers represent potential markets, and developing affordable goods and services for those markets can drive innovation, new business models, and business growth. Examples include emerging markets for photo-voltaic generators and renewable energy for small scale applications, fuel efficient stoves, water sanitation and personal hygiene products, mobile communications, and Internet access in low-income country markets. However, the conditions for free markets may be threatened by widening income inequalities and economic failures that foster violent conflict and erode democracies and the rule of law. Enduring worldwide progress — economic as well as social — depends on alleviating poverty.

### Related Trends

| Consumption | 22 |
| Democracy | 50 |
| Urbanization | 40 |
A

lthough world food supplies have grown faster than population, millions of people who might be engaged in learning, commerce, and building a stronger society are malnourished and spend their lives on basic survival. The most widely recognized cause of malnutrition is poverty — lack of the means, land ownership, and knowledge to produce or obtain food. Yet there are other environmental and social factors at work, too, including land scarcity and degradation, water scarcity, drought, and war. Political factors strongly influence the distribution of food and subsidies and trade protection may also hinder the development of resource-efficient agriculture and food distribution. Meeting food needs in poor countries will require new and creative investments in agriculture and food production and distribution. The international business community has and will be called upon to play both a commercial and a humanitarian role in solving the problems of malnourishment.

Millions are malnourished amidst an abundance of food.

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### Facts

- Although individual consumption levels vary enormously, the world produces enough protein to supply everyone with about 75 grams per day.
- In 1998, 791 million of the 826 million undernourished people lived in the developing world.
- Worldwide, about 160 million children under the age of five were malnourished in 1995, a total that is expected to decline only about 15 percent to 135 million by 2020.
- Iron deficiencies in children and adults result in economic losses equal to 1% of GDP in Pakistan, and 2% of GDP in Bangladesh.

In 1998, 791 million of the 826 million undernourished people lived in the developing world.

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### Related Trends

- Agriculture
- Ecosystems
- Health

### Implications for Business

Economies and individuals cannot achieve their potential unless adequate nutrition is met. Food production, transport, and distribution is one of the largest business activities in the global economy but the food system is neither environmentally sustainable nor yet meeting all people’s needs. Eliminating hunger will require major policy changes by national governments and the international community, and private sector investments in the food system. General private sector investment in economic development creates jobs and higher incomes to allow people to purchase food. For the broad array of industries involved directly in the food supply chain, supporting the development of markets in countries with high malnourishment is a critical contribution to worldwide economic growth and opportunity.

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### Is The 30-Year Increase in Grain And Cereal Yields Ending?

Between 1961 and 1990, global cereals production increased 120%. The average yield per hectare rose 90% in developed countries and 120% in developing countries, though yields in developing countries remain about one third lower than in developed regions. However, to meet nutritional needs, production increases are shared by a growing population and yields per capita grew about 60% in developed countries and only about 10% in developing countries from 1961-1990. In Sub-Saharan Africa, per capita cereal production for food, feed, and seed has actually fallen 11% since 1975. African farmers often cannot afford inputs like fertilizers, and many traditional African crops, such as millet and sorghum, have not been the focus of public and private research as have maize and rice (see Agriculture). Since about 1995, cereal production and yields have been relatively stable worldwide, raising concerns that the modern agricultural inputs of fertilizers, irrigation, mechanization, selective breeding, and pesticides have reached their limits to increase production.\(^\text{11}\)

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### Progress In The Fight Against Hunger

Improved technology, higher incomes, and better policies have helped enhance nutrition for many who could not meet their daily nutrition needs (undernourished) and the decline in the number of undernourished is projected to continue in the coming decades. However, where incomes have been stagnant and population growth rapid, as in Sub-Saharan Africa, the actual number of malnourished people has grown. Countries with improved nutritional status also had larger increases in secondary school enrollment of women.\(^\text{1}\) Under-nutrition and food insecurity is also persistent in the Central Asian states of the former Soviet Union due to economic crises.\(^\text{1}\) The disparity in supplies of protein-rich meat and milk products is particularly acute between rich and poor.\(^\text{1}\)

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### Childhood Nutrition Varies By Region

Twenty-eight percent or about 170 million of the world’s children under five years old are severely or moderately undernourished.\(^\text{1}\) Malnourished children are more vulnerable to many childhood diseases, including diarrhea and measles.\(^\text{1}\) Research has found that improved food availability and women’s education is the best approach to reducing child malnutrition (see Education).\(^\text{1}\) Childhood undernourishment and its link to impeded development and a lifetime of health problems has long-term negative effects on the productivity of families and economies (see Health).
**Health**

**Facts**

- World life expectancy rose from 47 years in 1950 to an estimated 66 years in 2000.1
- Cholera, almost eliminated by water treatment in the industrialized countries, is on the rise in poor countries. About 371,000 cases per year were reported in the mid-1990s, up from 100,000 per year in the 1980s.2
- Over 8 million new tuberculosis cases occurred in 2000 causing an estimated 2 million deaths, most aged 15 to 45; 99% of deaths occurred in the developing world.3
- More than 40 million people worldwide are living with the human immunodeficiency virus (HIV). About one third are aged 15 to 24, on the brink of their most productive years as workers and citizens.4
- Tobacco is responsible for one in 10 adult deaths today. The figure is expected to be one in six in 2030 — more than any other cause of death. Seven of ten of these preventable deaths will be in low- and middle-income countries.5

**Life expectancy rises,**

**yet preventable disease continues**

**to limit development.**

**World Life Expectancy Is Rising**

| Life Expectancy by Region, 1995-2000 |
| North America | 78.2 | 80.6 |
| Europe | 74.9 | 79.7 |
| Oceania | 75.7 | 79.1 |
| Central America & Caribbean | 68.4 | 72.5 |
| South America | 67.7 | 72.2 |
| Asia (excl. Middle East) | 64.7 | 68.1 |
| Middle East & N. Africa | 62.2 | 65.6 |
| Sub-Saharan Africa | 46.3 | 51.2 |

The regional variation in how long children can expect to live is still very large as are differences within regions. Children born today in Eastern Africa can expect to live less than 50 years, compared to more than 75 years for their North American counterparts.6

**HIV/AIDS: A Deadly Trend**

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HIV/AIDS has joined the list of the top causes of death worldwide such as diarrhea, tuberculosis, and measles which together claim almost 6 million lives annually.7 The human and economic toll of HIV/AIDS in the most affected regions is staggering. Of the 36.1 million people infected with HIV worldwide in 2000, 25.3 million live in Sub-Saharan Africa and 5.8 million in South and Southeast Asia. The devastation caused by AIDS has been especially severe in Sub-Saharan Africa where nearly 70% of adults and 80% of children with HIV/AIDS live. The southern cone of the African continent has adult prevalence rates of at least 20%.8 Good data is still scarce from most Asian countries, but AIDS deaths are rising rapidly in India, China, and elsewhere: deaths from AIDS among 15-49 year olds in Asia are projected to grow 57% from 2000 to 2005.9

**On Average, We’re Living Longer**

Average life expectancy has increased continuously since the 1950s, rising by about nine years since 1970. However, economic hardship and infectious disease can quickly halt or reverse progress. Life expectancy in Botswana was rising until HIV/AIDS took hold; declines in the Russian Federation are due to the impacts of economic downturns on healthcare, standard of living, and social institutions.10

**World life expectancy rose**

**from 47 years in 1950 to an estimated 66 years in 2000.**

**Disease Takes A Heavy Toll In Developing Countries**

Improved nutrition, sanitation, water treatment, and insect control have virtually eliminated many previously deadly infectious diseases in wealthier countries, and education, medicines, condoms use, and clean needles control the spread of HIV/AIDS. In many developing countries, where disease vectors are more prevalent and where governments cannot afford investments in public health and education, infectious diseases remain major causes of death (see Water).

**Implications for Business**

The health of employees, customers, shareholders, and other stakeholders is a central concern for corporations because health directly affects productivity. The expansion of travel and trade provides new routes for the spread and re-emergence of infectious diseases and can turn seemingly national or regional health crises into global ones. HIV/AIDS has exposed the critical linkage between health and labor productivity and how disease depletes struggling societies of desperately needed know-how and labor in business, government, and education.12 Improving health in the developing world means improving access to healthcare, improving health education and family planning services, providing widespread immunizations and clean water, and creating economic incentives for preventive medicine and sanitation. This is a strategic opportunity for the private corporations in sectors such as pharmaceuticals, health services, water infrastructure, and water sanitation who hold the technical solutions to major public health problems. However business failure to act on an issue of public health that is within its means can itself become a damaging political and public issue.
People and Tomorrow’s Markets
Serving Society

Education helps ensure that people have the skills to be productive workers, informed consumers, responsible citizens, and stakeholders in government and business. An educated population produces and earns more, has lower fertility rates, is more effective in maintaining family health, and has greater choice in life decisions. While primary education is widespread, many children in emerging economies do not have opportunities for advanced learning, and in some regions girls have far less access to secondary education than boys. Within regions and countries with high levels of average school enrollment, there are often significantly under-served populations. The more advanced skills and learning afforded by secondary and tertiary schooling are ever more important as the world economy becomes more knowledge- and service-intensive.

**Primary education is widespread, but opportunities for learning elude many.**

![Image](image_url)

**Facts**

- 113 million children are out of school, 97% of them in less developed regions and 60% of them girls.¹
- One of every five adults — a total of 880 million adults — is functionally illiterate. This is a dramatic improvement over 1970, when one of three was illiterate.²
- Enrollment rates for 6-14 year-olds is 52% lower for the poorest households, than for the richest households in Senegal, 36% lower in Zambia, 49% lower in Pakistan, and 63% lower in Morocco.³
- Much of the economic success of the “Asian tigers” may be due to their governments’ commitment to public funding of primary education as the foundation of development.⁴
- The few developing countries that participated in the Third International Mathematics and Science Study had the lowest scores at Grade 7 in the study; quality of education is as important as enrollment itself.⁵

![Image](image_url)

**Many Are Denied The Chance For Advanced Learning**

In many developing countries and marginalized areas in the developed world, there are still major disparities in academic achievement that result from factors including inadequate teacher training and under-funding of schools and that prevent students from obtaining the knowledge and skills needed to function as productive citizens and workers.⁶ While essentially all children receive secondary schooling in more developed regions, only about 60% of young people in Eastern Asia, Oceania, Latin America, and the Caribbean receive secondary schooling. Southern Asia and Sub-Saharan Africa enrollment rates are just 45% and 25%, respectively. The gender gap in secondary school enrollment is relatively small in East Asia, but significant disparities in access to education remain in South Asia, the Middle East and North Africa, and Sub-Saharan Africa.⁷

![Image](image_url)

**Female Education Helps Catalyze Economic Development**

Girls who receive primary education tend to have lower maternal mortality, fewer children, and healthier families later in life. In Asia, Africa, and Latin America, women with seven or more years of schooling have two to three fewer children than women with three or less years of schooling.⁸ Smaller families lessen the economic burden upon women and release time and resources for parents to provide greater investment into the rearing and education of each child and more opportunities for women to enter the labor force (see Labor).⁹

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**Implications for Business**

Education enables people to get jobs, maintain family health, increase personal income, reduce unwanted pregnancies, protect their rights and civil liberties, and have greater choice in decisions that affect their lives. Countries in which the work force lacks basic skills are at a competitive disadvantage in the global marketplace, particularly as markets change from a production and manufacturing base to a knowledge and service base. Businesses have a direct stake in the educational systems in the communities in which they operate. Additional investment and resources are required to ensure that those entering the labor force have the relevant skills to be productive workers in modern businesses. In order to marshal these investments and resources, new partnerships are needed between public and private sector organizations to ensure that people are educated for relevant and marketable skills.

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**Related Trends**

- Labor: 46
- Communications: 44
- Accountability: 52
The rise in world affluence holds promise for better lives and also comes with significant risks to ecosystems if prevailing patterns of consumption, energy production, and waste persist. The need to reduce consumption and waste creates new opportunities for business to grow while at the same time helping people, economies, and ecosystems through the innovation of less wasteful processes, and life-enhancing goods and services.
Growing income has allowed people to expand their consumption of everything from meat and dairy products, computers, energy and paper to refrigerators, televisions, and automobiles. The greater consumption of food, housing, clean water, and transportation is essential to relieving poverty in many nations. However, the high consumption of the world’s affluent consumers can have a negative impact on ecosystems disproportionate to their numbers. Today’s model of intensive use of raw materials and resources undermines ecosystem function and runs the risk of overwhelming the planet’s capacity to absorb wastes (see Pollution). Meeting the needs and desires of all people while preserving resources requires innovation of new technology and business models. Business can lower the resource intensity of the production of consumer goods, while improving their top and bottom lines and meeting consumer demand with sustainable products and services. Consumers themselves can drive change by favoring companies that produce goods and services that protect, conserve, and renew the environment (see Ecosystems).

Rising consumption creates environmental risk and business opportunities for innovation.

The money spent on household consumption worldwide increased 68% between 1980 and 1998.

Implications for Business

The world population is poised to expand 50% by 2050 and with it will come an extraordinary growth in consumption. In the past, society has met demand by increasing our extraction and harvesting efficiency and by developing substitutes. Never has there been such an opportunity and imperative for innovation that meets the needs of many new consumers without damaging the planet’s natural resource base. Far-sighted companies are perceiving as socially and environmentally responsible. New ideas for themselves and help the environment. Some consumers in the developed world are favoring companies and products they perceive as socially and environmentally responsible. New ideas are emerging to reduce impacts of consumption, such as producing zero emission vehicles, changing annual crops to perennials, creating zero waste textile mills, and utilizing electronic paper and compostable footwear. It is this kind of “radical” or “discontinuous” invention rather than incremental improvement that is the source of significant — not incremental — improvements in competitive position and shareholder value.

Facts

- The money spent on household consumption (all goods and services except real estate) worldwide increased 68% between 1980 and 1998.
- Consumers in high-income countries spent $15.4 trillion of the $19.3 trillion in total private consumption in 1998. Purchases by consumers in low-income nations represented less than 4% of all private consumption.
- Consumption of meat and milk in developing countries will grow between 2.8% and 3.3% per year respectively, from 1993 to 2020.
- Television ownership increased five-fold in the East Asia and Pacific region from 1985-1997.
- 200 million vehicles would be added to the global fleet if car ownership in China, India, and Indonesia were the same as the world average of 90 per 1,000; roughly double the number of automobiles today in the United States.
- Paper consumption is rising fastest in the developing world, but the average American still consumes about 17 times more paper per year than the average citizen of the developing world.

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How Do We Make Material Consumption Sustainable?

Passenger Car Ownership, Selected Countries, 1990-1996

More Wealth, More Protein

Consumers in developing countries quickly add more protein to their diets as their incomes rise; per capita meat consumption has exploded in the fast expanding economies of China and Brazil. Meat consumption nearly tripled in Brazil and grew 13-fold in China since 1961, though consumption in both countries is still well below that in North America and Western Europe. Protein-rich diets of meat and fish, however, demand large areas of land to produce animal feed, add pollution to waterways, can erode grazing lands, and lead to over-fishing (see Agriculture).

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Since the Industrial Revolution, development and economic expansion have been tied to increased energy use. The link remains strong today — energy use is rising worldwide. Fossil fuels dominate the world’s energy supply, yet the resulting greenhouse gas emissions are driving temperature changes and escalating the risks of climate change. Climate models predict that floods, droughts, and severe storms are likely to become both more frequent and more severe, costing lives, agricultural harvests, and economic progress. The challenge for the energy sector is to supply electricity and services more efficiently and with less environmental impact. This challenge is especially great in the emerging economies, where energy needs are growing but disposable income and access to power grids are low. Currently, about two billion people live off the electrical generation and power grid. In 2050, foresight suggests energy needs will have grown to two billion people living off the electrical generation and power grid.

Energy Use Is Increasing Rapidly

World energy production rose 42% between 1980 and 2000 and will grow 150-230% by 2050.

Escalating demand for energy propels economic development but threatens Earth’s climate.

Facts

- Biomass contributes approximately 15% of energy supply worldwide and accounts for one fifth to one third of energy consumption in developing countries.
- The 1990s were the warmest decade and 1998 the warmest year on record.
- Wind turbines now generate over 17,000 megawatts (MW) of electricity in more than 30 countries, making wind power the world’s fastest growing source of energy.
- Worldwide shipments of photovoltaic cells grew six-fold from 48 MW in 1990 to 288 MW in 2000; module prices (US$ per Watt) declined from US$30 to less than US$5 from 1975 to 1995 and have remained constant as the market has grown 30% per year in recent years.

World energy production rose from 6,600 to 9,352 Mtoe (million tonnes of oil equivalent) — a 42% increase — between 1980 and 2000. Fossil fuels (oil, coal, and gas) account for almost all the growth and growth would have been even higher if not for energy efficiency gains made by some countries, such as China and the United States (see Efficiency). Across three economic growth and technological improvement scenarios, projected energy consumption increases between 1.5-2.3 times between 2000 and 2050. The projected energy consumption vary by region, with particularly high rates of growth in the large emerging economies (see Mobility).

A Warming World

Burning fossil fuels causes air pollutants such as sulfur and nitrogen oxides, ozone, mercury, particulate matter, and carbon dioxide (see Pollution). Unlike many pollutants that are short-lived in the atmosphere, greenhouse gases such as CO₂ accumulate in the atmosphere. The CO₂ concentration in the atmosphere is now nearly 370 parts per million and rising fast, up from a pre-industrial level of 288 ppm. Scientists have confirmed that global warming is occurring and is human-induced — largely the result of greenhouse gas emissions from burning fossil fuels and deforestation.

Implications for Business

Energy use meets a basic human need, but the environmental impacts of rising energy production and consumption are introducing considerable uncertainty to industries — from oil and gas to reinsurance and agriculture. These uncertainties result from the costs and benefits of climate change mitigation markets as well as from the impacts of climate change. The price of fossil fuels may rise as the market internalizes environmental externalities. In response, proactive businesses are conducting inventories of their operations to reduce energy intensity and greenhouse gas emissions. Some major multinational companies have made voluntary commitments to reduce greenhouse gas emissions and to support markets for trading carbon emission allowances and reduction credits. These commitments are driving new markets in alternative energies, energy conservation services, and energy efficient technologies.
Pollution remains a global challenge.

Waste and pollution including emissions from fossil fuel use, persistent chemical contaminants, and waste products of economic activities are, for the most part, increasing. Evidence from developed countries and the limited data from developing countries reveal a growing waste stream of rising emissions and pollution despite successes that demonstrate the cost-effectiveness of pollution avoidance and reduction measures for certain pollutants (see Energy). Climate change, acid deposition, species extinction, public health problems, and coastal dead zones all point to waste accumulating at rates beyond Earth’s absorptive capacity. Today’s economies act as a linear system: materials and energy are taken from the natural environment, put to a brief useful life, and then become waste in the atmosphere, on land, or in water.

**Transport And Industry Accounts For A Large Percentage Of Air Pollutants**

Pollution and waste are caused by all sectors of society but transportation (see Mobility) and the industrial and energy sectors play a large role in producing — and therefore can play a large role in avoiding — some forms of pollution. Fossil fuels power our economies; 50-90% of the mass of industrialized-country outputs into the environment goes up into the atmosphere (see Consumption).

**High Levels Of Pollution Endanger Human Health**

In the early 1990s, 400 million tons of hazardous waste were produced annually, about 75% of this from OECD countries, mainly from chemical production, energy production, mining, pulp and paper industry, and leather industries.

- Pollution abatement and control expenditures in the United States ranged from 1.7-1.8% of GDP from the mid-1970s to the mid-1990s and totaled US$122 billion in 1994.
- Estimates are that 2-4% percent of the total burden of disease in OECD countries is a result of environmental degradation — mainly from urban air quality problems, and chemicals in the environment.
- Environment-related health costs in OECD countries is estimated to be between US$50-$130 billion.

**The CFC Success Story**

Concerted efforts to reduce industrial pollution have been successful when backed by industry and governments such as in the cases of SO\(_2\) and chlorofluorocarbons (CFCs). The production of CFCs was reduced dramatically by most countries between 1986-1996. Efforts to repeat this success with persistent organic pollutants (POPs) — associated with acute environmental toxicity, human reproductive disorders, birth defects, and cancer — are underway.

**Implications for Business**

Polluting emissions of most types are rising worldwide and improvements in the developed world may be overshadowed by the waste from industrialization and consumption in the developing world. Waste and emissions represent lost value, business costs, and a threat to present and future human generations and to ecosystem health. Harmonization of business operations to a single high standard, international regulations, legal mechanisms for accountability, and civil society action are likely to further inflate the costs of waste management and to raise the risk of pollution-related financial and reputational liabilities. Innovation to avoid waste, use renewable resources, and develop industrial models in which wastes are captured and treated as an input into other processes can reduce costs and increase revenues. Examples of approaches that can reduce emissions and waste are renewable energy sources, transition from fossil fuel-based materials to raw materials from renewable and biodegradable sources, and industrial complexes that re-use waste heat, materials, and water.

**Emissions**

Environment-related health costs in OECD countries are estimated to be between 2-6% percent of the total GNP. Air pollution, mostly from burning fossil fuels, causes an estimated 500,000 deaths each year and an estimated four to five million new cases of chronic bronchitis. The economic burden of this pollution is estimated at 0.5-2.5% of world GNP, about $150-$750 billion per year.

**Climate**

Trends in pollution and emissions, such as sulfur oxide (SO\(_x\)) emissions, often show two opposite directions in the developed vs. developing worlds. SO\(_x\) pollution in many Western European nations has dropped by 75% or more since 1980, and decreased by about one quarter in the United States. Asia’s sulfur emissions (excluding the former Soviet Republics) are expected to rise from 18 to 48 million tonnes between 1990 and 2020 (see Energy). Acid rain, from SO\(_x\) and other acidifying emissions from fossil fuels, can severely impact agriculture and natural habitats.
Economic growth at both the company and national economy level has historically been linked to increased resource use and waste production, but many businesses and economies have recently demonstrated that improving efficiency can break this link. Greater efficiency is achieved via process improvements, waste and product recycling, less material-intensive product designs, remanufacturing, and other approaches, delivering benefits for competitiveness and the bottom line. Despite efficiency gains and unlinking economic growth from total material use, waste production is still rising across the globe. Developing nations tend to use less material and generate less waste per capita than more developed countries, yet employ materials less efficiently and, like developed countries, are increasing their total material use. Policy changes, economic gains from improved efficiency, consumer preference for eco-friendly products, and advocacy are all driving improvements in the efficiency of businesses and economies. Continued movement toward an efficient and sustainable economy will require a cyclical production model in which materials previously discarded as waste are captured and used as resources.

**Facts**
- The United States recycles about 65% of its steel.¹
- In 2000, European primary aluminum production was 3.8 million tonnes and recycled aluminum production was 2.25 million tonnes.²
- Paper recycling into paper and fiber products has risen over the past three decades to about 40% of total paper production worldwide.³
- In 1999, Brazil recycled 5.8 billion aluminum cans accounting for 73% of national can production and supporting a US$55 million industry.⁴

**Throughput still grows even as energy and materials efficiency improves.**

**Implications for Business**

The last decade of growth in many countries has proven that value can rise while material and energy throughput decreases. But while overall industrial efficiency is improving, total materials throughput and waste generation continue to grow. Efficiency enhances competitiveness and reduces environmental liability. As efficiency is sought by businesses and imposed by regulations on both production and consumption, competitive advantage will accrue to those who serve the market demand for efficient products. Improving efficiency promises continued returns for industry: the transfer of eco-efficient technologies and practices to growing economies is both a growth market in itself and a means to earn license-to-operate profit. The European paper industry shrank water usage by 50% to 80% per unit of production (see Waters).⁵

**Related Trends**

- Energy 24
- Water 36
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**Paper recycling into paper and fiber products has risen over the past three decades to about 40% of total paper production worldwide.**

**Industry Can Spearhead Efficiency Gains**

Industrial energy efficiency is improving in many countries around the world. The amount of energy needed to support the production of a given level of GDP is falling. The median energy intensity of 17 industries has dropped by 27% in the last three decades. Efficiency gains over the life-cycle of product manufacturing are made from capturing end-of-life materials and converting them into new products. Improved energy performance reduces energy costs, environmental impacts, and operational costs. Other benefits include improved productivity, reduced employee turnover, and improved customer satisfaction. More efficient products create additional economic value for consumers and businesses. improved energy performance (IEP) reduces energy costs, environmental impacts, and operational costs. More efficient products create additional economic value for consumers and businesses. Efficiency gains can be achieved through process improvements, waste and material recycling, less material-intensive product designs, remanufacturing, and other approaches, delivering benefits for competitiveness and the bottom line. Despite efficiency gains andunlinking economic growth from total material use, waste production is still rising across the globe. Developing nations tend to use less material and generate less waste per capita than more developed countries, yet employ materials less efficiently and, like developed countries, are increasing their total material use. Policy changes, economic gains from improved efficiency, consumer preference for eco-friendly products, and advocacy are all driving improvements in the efficiency of businesses and economies. Continued movement toward an efficient and sustainable economy will require a cyclical production model in which materials previously discarded as waste are captured and used as resources.


Part of the observed decline in the waste intensity of economic activity is due to capturing materials for reuse. Recycling of paper has kept pace or grown faster than paper production in the developed and developing worlds. The 40% of total worldwide paper production recovered for recycling into fiber-based products includes both consumer and production process wastes.⁶ Efficiency gains over the life-cycle of product manufacturing are made from capturing waste materials and heat for reuse, sale, or trade. Consumer demand, activism, and regulations drive markets for energy efficient products. Light bulbs, washing machines, air conditioners, refrigerators, and other household appliances are being improved to provide the same services while using less energy. For example, reduced price, improved performance, electricity costs, and environmental awareness have propelled an almost 10-fold increase in the worldwide sales of compact fluorescent lamps (CFLs) in the last decade.⁷ Other trends are less positive, such as the large investments in the development and marketing of sport utility vehicles in the United States and other countries (see Consumption).
Natural Capital

The world economy depends on a base of natural resources — our “natural capital” — that is showing signs of severe degradation. Without improved environmental performance, future business operations will be exposed to risks of rising prices for water, materials, and for waste disposal. Those businesses that reduce the environmental impacts of their operations, goods, and services will win competitive advantages.

Protecting the long-term license-to-operate in existing and new markets depends on business strategies that preserve and renew natural habitats and critical environmental resources.
## Ecosystems

### Coral Reef Destruction Undermines Coastal Economies

<table>
<thead>
<tr>
<th>Total Area (Square Kilometers)</th>
<th>LOW</th>
<th>MEDIUM</th>
<th>HIGH</th>
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</thead>
<tbody>
<tr>
<td>120,000</td>
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<tr>
<td>20,000</td>
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</tbody>
</table>

Coral reefs provide places for aesthetic enjoyment and recreation, and process our wastes. They provide jobs and income to the hundreds of millions of people who live in coastal communities. In some cases, the destruction of reefs is forcing people to live and work in polluted waters that may make their health precarious. 

Approximately 150,000 square kilometers of coral reefs worldwide are at risk from high levels of risk of degradation. The threats from high levels of risk of degradation include over-exploitation, pollution, and sedimentation from human settlement, deforestation, industry, and agriculture. Approximately 10% of these reefs are at high risk of destruction, and the rate of destruction is growing. 

### Are Fleets Exploiting Marine Resources Past The Point Of Recovery?

<table>
<thead>
<tr>
<th>Global Catch (Million Metric Tons)</th>
<th>NORTHWEST PACIFIC</th>
<th>NORTH ATLANTIC</th>
<th>EASTERN PACIFIC</th>
<th>WESTERN PACIFIC</th>
</tr>
</thead>
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<td>2.0</td>
<td>2.5</td>
</tr>
<tr>
<td>1990</td>
<td>1.7</td>
<td>0.6</td>
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<tr>
<td>1980</td>
<td>1.8</td>
<td>0.7</td>
<td>2.4</td>
<td>2.8</td>
</tr>
</tbody>
</table>

### Facts

- Nearly 26,000 plant species — about 10% of all known plant species — are under threat of extinction. More than 1,100 mammals and 1,200 birds, 700 freshwater fish, and hundreds of reptiles and amphibians are also threatened with extinction. 
- Invasive species are a worldwide problem, e.g., non-native trees in South Africa’s Western Cape use more water than native species and threaten to cut Cape Town’s water supply by about one third in the next century. 
- The United States has lost an estimated 53% of its wetlands. Current repair of the natural functions of the Florida Everglades to restore habitat, water provision, and flood control is estimated to cost US$7.8 billion. 
- In 1997, the global market for natural-product derived pharmaceuticals was estimated at US$75-$120 billion. 
- Human-induced evolution (acquisition of resistance) in some major pests and pathogens approaches a US$50 billion cost to the United States economy and probably exceeds US$100 billion.

### Forest Loss Impacts Clean Water, Biodiversity, And Climate

Between 1990 and 2000, Africa and South America — the regions of some of the world’s largest surviving tropical forests — lost 8% and 4% of their total forests, respectively. The world lost a net average of 2% of its forests during that decade. These percentages represent huge areas: 16.1 million hectares of forest were lost per year to deforestation and conversion to plantations between the 1990s, 94% of this in the tropics. Forests act as water reservoirs and filters, provide home and livelihood for human populations, and play an important stabilizing role for Earth’s climate (see Freshwater). Approximately 35-40% of Earth’s carbon is stored in forests, and land use change (principally deforestation) releases roughly 20% of all annual carbon emissions.

### Implications for Business

The private sector has an interest — and an economic opportunity — in managing the natural capital portfolio wisely. Many of the goods and services supplied by ecosystems cannot be replaced at any reasonable price. There is a growing interest in treating ecosystem goods and services as “free” common goods, but as assets with a market value in order to provide incentive for their conservation. Economies are developing for the goods and services that ecosystems supply through creation of new property rights, markets for CO2 emissions credits, markets for sustainable agriculture products, water pricing schemes, and other incentive systems. As these markets emerge, competitive advantage will go to businesses that can reduce environmental impacts, embody environmental performance in consumer products, innovate services that protect and renew the environment, and that reduce the costs and liabilities associated with ecosystem damage.

### The productive capacity of the planet is in decline.

The decline in the productive capacity of the planet is caused by the deterioration of the planet’s natural ecosystems, which are the foundation of human society. Ecosystem services such as grasslands, forests, coral reefs, and rivers provide food, water, air, biodiversity, climate stability, and other essential benefits. The loss of these services is a major threat to human well-being and economic prosperity. 

### Ecosystem Stewardship Creates New Market Opportunities

Regulatory pressures, social activism, and consumer preferences are driving producers and retailers to offer a range of products — timber, coffee, fruits, and vegetables, wine and others — that are certified as produced in an environmentally and socially responsible manner (see Freshwater). About 2% of forests worldwide are certified as managed for sustainable yield and for provision of wildlife habitat, clean water, biodiversity, and other ecological services. While the percentage of the total markets filled by certified products is now small, growth rates are very high.

### Nearly 26,000 plant species, more than 1,100 mammals and 1,200 birds, 700 freshwater fish, and hundreds of reptiles and amphibians are threatened with extinction.

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how we choose to produce food may determine the future of grasslands, forests, marine ecosystems, and other ecosystems. Keeping pace with population growth and alleviating existing malnutrition over the next decades will require greater food production with less environmental impact (see Nutrition). There are many warnings that the agricultural system is under stress. Soil erosion, reductions in rates of cereal yield gains, flushing fish stocks, and contamination of waterways are widespread problems. Land clearing for agricultural production to support grain and animal protein demand has degraded or destroyed forests and grasslands. The world harvest of grains, livestock, and fish employs more water, labor, and land than any other human activity, making ecologically effective food production one of the primary goals of both economic and human development.

**Facts**

- About 30% of the potential area of temperate, subtropical, and tropical forests and about 40% of temperate grasslands (grasslands, savannas, and shrublands) have been converted to agriculture.
- Cropland and managed pastures cover approximately 28% of planetary land surface, of which 31% is crops and 69% is pasture.
- In 1997, food production was valued at about US$1.3 trillion per year and employed about 1.3 billion people.
- Dams built for irrigation and energy generation fragment rivers and destroy wetland and aquatic habitats. There were 5,750 large dams (>15 meters high) in 1950; today there are over 45,000.
- World consumption of meat has more than tripled in the past four decades, outpacing population growth and exceeding 225 million metric tons per year; 37% of all grain consumption is for animal feed.

Food production is the basis of many economies but threatens the ecosystems upon which it depends.

**Sustainable Agriculture Depends On Soil Quality**

Agriculture is a primary source of employment and income for many developing countries and generates over one third of GDP in many low-income countries. Agricultural crops can be very valuable, particularly in densely settled areas in China, Southeast Asia, and Europe, but also in parts of Africa and South America where export crops are grown. Half or more of the labor force in East, South, and Southeast Asia, and Sub-Saharan Africa is directly involved in agriculture (see Labor).

Healthy soils are vital to high levels of agricultural value but large areas of productive land have been degraded by human mismanagement and climatic effects. Degradation of agricultural land (such as erosion, salinization, water-logging, nutrient depletion, acidification, and pollution) endangers food production and livelihoods. Worldwide, more than 40% of agricultural land is moderately degraded, 9% is strongly degraded and degradation has reduced worldwide crop productivity by approximately 13%.

**Reliance On Inputs Is Rising**

Nitrogen fertilizers and irrigation are being used more and more to raise and maintain crop yields as farmers gain access to advanced production inputs (see Freshwater). This is particularly apparent in the fast growth and high rates of fertilizer use in China. Stagnant yields in Africa are partly due to the many African farmers who do not have access to or cannot afford effective irrigation and fertilizer. However, water drainage from high application rates of nitrogen fertilizers can lead to dead zones in rivers, lakes, and coasts.

**Farmed Fish Becomes Big Business**

Rising demand and declining productivity of marine and freshwater ecosystems have driven the modernization and fast growth of aquaculture (see Ecosystems). Farmed fish and shellfish production has grown in volume more than tenfold since 1970, rising from 3.5 million to 42.8 million metric tons and in value from US$12 billion in 1984 to US$53.5 billion in 1999. Aquaculture solves some problems of over-fishing but can create high environmental costs in coastal land use, water pollution, and use of ocean-caught fish in fish feeds.

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**Implications for Business**

The success of the past half century at meeting world food needs has been matched by the continued degradation of the productive capacity of natural systems. The concept of sustainability has been described as living off of the interest of natural capital without harming the principal. The greatest threats to ecosystems are the conversion of land and water habitats for agricultural uses or their destruction by over-harvesting; how we produce human food, animal feed, and fiber will largely determine the preservation of biodiversity and ecosystems. The private sector plays an important role by supporting agricultural research, transferring knowledge, products, and agricultural practices with which farmers can conserve and protect resources such as water, soil, and plant and animal species. New approaches — from organic farming, to fish-farming, to genetic engineering — are transforming how we produce and conceive of food and also impact our capacity to protect and restore vital natural resources.
Water availability is arguably the world’s most pressing resource issue. Water is essential for all living things, has shaped human societies for millennia, and is the basis of business activities such as cooling, food processing, chemical synthesis, and irrigation. Growing water scarcity and alarming declines in aquatic biodiversity are evidence that water policies and practices in most parts of the world are failing to protect life’s most vital resource. Population growth, industrialization, urbanization, agricultural intensification, and water-intensive lifestyles are placing great stress on freshwater systems, with both water use and pollution driving the scarcity of usable water. Surface water quality has improved in most developed countries during the past 20 years, though nitrate and pesticide contamination remain persistent problems. Data on water quality in other regions of the world are sparse, but water quality appears to be compromised in almost all regions and continues to decline in areas with intense agricultural development and rapid urbanization. Surface water quality has improved in most developed countries during the past 20 years, though nitrate and pesticide contamination remain persistent problems. Data on water quality in other regions of the world are sparse, but water quality appears to be compromised in almost all regions and continues to decline in areas with intense agricultural development and rapid urbanization.

**Facts**

- Over the past century, world water withdrawals increased almost twice as fast as population growth.¹
- More than 20% of the world’s 10,000 recorded freshwater fish species have become extinct, threatened, or endangered in recent decades.² Factors contributing to freshwater fish extinction include habitat alterations (71%), non-native species (84%), overfishing (29%), and pollution (26%).³
- In 66% of the European cities with more than 100,000 people, groundwater is being used at a faster rate than it can be replenished.⁴ Cities that have experienced aquifer drops between 10 to 50 meters include Mexico City, Bangkok, Manila, Beijing, Madras and Shanghai.⁵
- Water pricing is a clear trend in developed countries; 17 of 18 OECD countries surveyed showed annual increases in household water prices in the 1990s.⁶

**Implications for Business**

The pressures on freshwater supplies portend rising water costs and an urgent need to improve water-use efficiency. Short water supplies will make it difficult for water-intensive businesses to site their activities in arid regions and will increase water-related costs everywhere. Raising prices for water usage can send signals to consumers that conservation is good for the environment as well as to investors to attract funding for essential water infrastructure. True cost recovery for water is made difficult by subsidies that include public investment in irrigation projects, water infrastructure. True cost recovery for water is made difficult by subsidies that include public investment in irrigation projects, water pricing, urban and industrial infrastructure, and uncompensated environmental damage from water over-use and pollution. Increases in industrial water efficiency as well as private sector involvement in water management hold promise; reduction of water use, closed-loop systems, and elimination of water discharges can lower water costs, energy costs for pumping and cooling, and wastewater treatment costs. Water scarcity may create a new arena for business differentiation — those with water-efficient processes or products may have greater operational flexibility and more competitive cost structures in a water-stressed world.
We live in a world of rapid change and a growing density of human and technological networks. People are concentrating in cities with greater access to information and transportation networks. Information and knowledge propagate at light speed and people and goods move around the globe as never before. In this integrated world, businesses have a crucial stake in economic development, healthy cities, efficient and accessible mobility, and in expanding the pool of educated workers and consumers.
Urban growth concentrates business opportunities and societal challenges.

**Facts**
- By 2050, more than 50% of all people will live in urban areas. In developing countries, the proportion of urban dwellers will rise from less than 20% in 1950 to more than 40% in 2010.¹
- Of the world's fastest growing cities with population greater than 750,000, 2% are located in high-income countries, 40% are in middle-income countries, and 60% are in low-income countries. Asia is home to 60% of these cities, Africa to 25%, and Latin America to 15%.²
- The current addition of 60 million new urban citizens a year is the equivalent of adding another Paris, Beijing, or Cairo every other month.³
- The health consequences of urban air pollution are high; each year, suspended particulate matter accounting for 460,000 premature deaths, and SO₂ for 370,000 premature deaths.⁴
- Developing-nation cities often lack adequate solid waste disposal; in Northern African cities, 20-80% of solid waste is disposed of by open dumping.⁵
- Projections of municipal solid waste in Asia predict a rise from 2.7 million cubic meters per day in 1999 to 5.2 million m³ per day in 2025; solid waste management costs Asian cities US$25 billion per year.⁶

**Urban Population by City Size, 1975 - 2015**

<table>
<thead>
<tr>
<th>Year</th>
<th>City Size</th>
<th>Urban Population (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>18 million or more</td>
<td>0.9</td>
</tr>
<tr>
<td>1985</td>
<td>10 to 15 million</td>
<td>1.2</td>
</tr>
<tr>
<td>1995</td>
<td>5 to 10 million</td>
<td>2.7</td>
</tr>
<tr>
<td>2005</td>
<td>2 to 5 million</td>
<td>5.0</td>
</tr>
<tr>
<td>2015</td>
<td>0.5 to 2 million</td>
<td>8.0</td>
</tr>
</tbody>
</table>

**The Birth Of The 20 Million Resident "Megacity"**

Urban growth started long ago in the developed world where about 76% of people now live in urban areas. The proportion of urban dwellers in the developing world is much lower but the growth rate in the past two decades has been very rapid (see World Bank). The fastest urban growth has occurred in many intermediate-size cities with populations of 1 million to 5 million which grew in number by 80% in the last 20 years. These cities are as diverse as Phoenix, United States (2.6 million), Shenzhen, China (1.1 million), and Guatemala City, Guatemala (3.2 million). Many countries direct their resources to their largest urban centers, leaving smaller cities and rural areas neglected in terms of infrastructure and services.

**The World’s Largest Cities**

<table>
<thead>
<tr>
<th>Year</th>
<th>City Size</th>
<th>Population (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>18 million or more</td>
<td>3.0</td>
</tr>
<tr>
<td>2005</td>
<td>10 to 15 million</td>
<td>5.3</td>
</tr>
<tr>
<td>2015</td>
<td>5 to 10 million</td>
<td>10.3</td>
</tr>
</tbody>
</table>

**The World’s Largest Urban Population Centers, Projected to 2035**

The current addition of 60 million new urban citizens a year is the equivalent of adding the urban population of Paris, Beijing, or Cairo every other month.

**Implications for Business**

In the next decade, more than half of the world’s population will live in urban areas. Businesses often benefit from the growth of urban areas with their demand for energy and infrastructure, and their concentration of labor and consumers. The greatest change in urban populations will occur in developing countries which will raise new challenges but also lower the costs of serving the needs of these consumers. Sustaining and capitalizing on these opportunities will require business strategies and public-private partnerships that make cities better places in which to work, to operate a business, and to live. Improved land-use planning, health services, education, and water and sanitation services are urban priorities beyond the capacity of many local governments without private sector partnership.

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³ World Health Organization (WHO), 2011.
⁴ World Bank, 2011.
Humans are increasingly mobile due to growing access to roads, cars, public transport, and airplanes. Still, the majority of people walk or bike to market, work, or school and millions of tons of goods are transported on people’s backs, in cattle carts, and by pushcart. Movement of people and goods is essential to economic and business development. Mobility permits the division of labor, urban growth, trade in raw materials, fast and cheap cargo trade, and the quick transfer of employees. The global flux of people diversifies the workplace and the marketplace and fosters both formal and informal trade, and the quick transfer of employees. The movement of goods worldwide is increasing about 3% per year. Rich countries have approximately 60 times more vehicles per capita than the average low-income country, but vehicle ownership has tripled in low-income countries in the past 20 years. Countries like Cambodia, El Salvador, South Korea, and Thailand more than doubled the road traffic (number of vehicles multiplied by average distance they travel) within their borders between 1990 and 1999 (see Consumption).

**Facts**
- In 1997, 54% of the oil purchased by OECD countries was for transport, with 62% projected in 2020.¹
- With little variation around the world, people spend about an hour a day in transit, although those with higher incomes travel greater distances.²
- Transport of people and goods is responsible for about one fifth of worldwide energy consumption. Two thirds of transport energy demand in OECD countries is from passenger travel.³
- Ocean shipping of cargo has nearly doubled since 1975.⁴
- Mobility of populations and of high-risk individuals such as freight truck drivers is a significant factor in the spread of HIV/AIDS in Southern and Eastern Africa.⁵

**Low Cost Shipping Spurs International Markets**

<table>
<thead>
<tr>
<th>Year</th>
<th>Crude Petroleum &amp; Petroleum Products</th>
<th>Dry Bulk Cargo</th>
<th>General Cargo</th>
<th>Total</th>
<th>Contributed Share of General Cargo</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>15.7</td>
<td>5.0</td>
<td>4.5</td>
<td>25.2</td>
<td>0.0%</td>
</tr>
<tr>
<td>1980</td>
<td>24.7</td>
<td>6.6</td>
<td>6.0</td>
<td>37.3</td>
<td>10.7%</td>
</tr>
<tr>
<td>1995</td>
<td>8.3</td>
<td>7.2</td>
<td>5.6</td>
<td>21.1</td>
<td>30.1%</td>
</tr>
<tr>
<td>1990</td>
<td>12.6</td>
<td>8.5</td>
<td>6.5</td>
<td>27.6</td>
<td>35.1%</td>
</tr>
<tr>
<td>1995</td>
<td>15.0</td>
<td>9.4</td>
<td>8.1</td>
<td>32.5</td>
<td>43.7%</td>
</tr>
</tbody>
</table>

Freight transportation has been rising and consumes about 43% of transportation fuel, yet shipping often adds less than 1% to the cost of an item. Expanded use of containers, larger ocean liners, and lower fuel costs have combined to reduce this cost of shipping and drive a global economy. Freight trade brings value to business and to individuals’ quality of life yet also drives environmental degradation and other social problems. Freight carriers — ocean liners, trucks, airplanes, trains, and barges — contribute to water and air pollution, habitat alteration, and the movement of invasive species, and play a role in increasing urban congestion (see Ecosystems).⁶

**Transport of people and goods** is responsible for about one fifth of worldwide energy consumption.

**Travel Is Growing Everywhere**

<table>
<thead>
<tr>
<th>Year (selected)</th>
<th>Total Road Traffic (billion vehicle-kilometers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>105</td>
</tr>
<tr>
<td>1980</td>
<td>200</td>
</tr>
<tr>
<td>1995</td>
<td>400</td>
</tr>
</tbody>
</table>

Travel by road and air has increased dramatically in recent decades while the share of travel by mass transit has decreased almost everywhere.¹ Passenger air trips have almost tripled in the last 25 years and are expected to triple again in the next 20 years.⁴ The number of motor vehicles worldwide is increasing about 3% per year. Rich countries have approximately 60 times more vehicles per capita than the average low-income country, but vehicle ownership has tripled in low-income countries in the past 20 years. Countries like Cambodia, El Salvador, South Korea, and Thailand more than doubled the road traffic (number of vehicles multiplied by average distance they travel) within their borders between 1990 and 1999 (see Consumption).¹

**Transport Drives Society’s Thirst For Fuel**

<table>
<thead>
<tr>
<th>Year (selected)</th>
<th>World Energy Consumption (billion TOE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>140</td>
</tr>
<tr>
<td>1980</td>
<td>190</td>
</tr>
<tr>
<td>1995</td>
<td>240</td>
</tr>
</tbody>
</table>

Growing mobility has led to dramatic growth in energy use, greenhouse gas emissions, and other forms of pollution (see Emissions). In 1997, international marine shipping used 132 million tons of oil equivalent.¹ One indication of a world-on-the-move is the 80% increase in worldwide energy used for air travel and the nearly 120% rise in global energy for road transportation between 1971-1997. Road travel now represents 80% of total transportation energy use.¹ Most of the rising energy demand for road travel occurred in Eastern Europe, China, and Southeast Asia.¹²

**Implications for Business**

Increased mobility creates a 24-hour international business workday that puts workers on the road and accelerates economic and social change. Transportation also moves knowledge, disease, threats to public safety, and social unrest. Mobility opens market opportunities yet also allows entry of new competitors. Sustainable mobility is a major area of business investment and innovation as companies race to create affordable and efficient alternative fuel vehicles for freight and transit systems. In addition to designing efficient technologies, business plays a role along with the public sector in realizing easy and equal access to mobility. New technologies will only work in concert with changes in the way public institutions address the real costs of mobility-related infrastructure and energy use. Locating business activities near public transport, creating links between existing transport hubs, and providing incentives to employees to use public transit systems help encourage the use and development of energy-efficient public transport.
Access to telecommunications enables economic opportunities.

**Facts**

- More than half the world’s citizens have never used a telephone, 7% have access to a personal computer, and only 4% have access to the Internet.²
- Today, over 400 million people use the Internet, having grown from less than 20 million only 5 years ago. By 2005, there are forecast to be 1 billion Internet users.²
- In 2000 there were 214 countries connected to the Internet — up from 60 in 1993 and just 8 in 1988.²
- Internet use has been expanding in Latin America by more than 30% per year since 1998.³
- Estimates of global electronic commerce in 2000 range considerably, but most estimates are near US$200 billion.⁴
- The lion’s share of e-commerce dollars is the business-to-business sector, which is expected to reach US$1.2 trillion to US$3 trillion by 2003.³
- In the United States, 20 hours of Internet access per month costs about 1% of the average income, compared to 15% in Mexico, 27% in Bangladesh, and 61% in Madagascar.³

**Who Is Using The Web?**

<table>
<thead>
<tr>
<th>Region</th>
<th>Total Number of Internet Users (in Millions), 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>18</td>
</tr>
<tr>
<td>North America</td>
<td>108</td>
</tr>
<tr>
<td>Europe</td>
<td>105</td>
</tr>
<tr>
<td>Asia</td>
<td>118</td>
</tr>
<tr>
<td>Oceania</td>
<td>8</td>
</tr>
<tr>
<td>Africa</td>
<td>5</td>
</tr>
</tbody>
</table>

**Internet Hosts Are Booming Worldwide**

- Worldwide, the number of Internet hosts per 10,000 people — a rough indicator of the “size” of the web — grew 500% from 1996 to 2000. High-income countries completely dominate this indicator, with nearly 1,000 hosts per 10,000 people; middle-income countries have about 13 hosts per 10,000 people, and low-income countries only 0.5.²² There are regional exceptions such as Latin America and the Caribbean where there are now 30 hosts per 10,000 people. In developing regions, however, every connection may serve many members of a single community.

**Implications for Business**

The communications revolution can power the transition from a natural-resource-based economy to a knowledge-based economy. Digital technologies can create gains in transactional efficiency, improved manufacturing controls, alternatives to paper, and energy-efficient logistics and production — helping businesses to become more environmentally sound and providing the means to inform purchases about ecological impacts of products.²² Connectivity can connect the world’s poor to the international economy and to entrepreneurial and educational opportunities. Innovative use of the Internet, combined with software designed for literate users, and low-cost, solar-powered wireless devices, is already increasing incomes in developing countries.²² Emerging communications technologies also help balance power between people, corporations, and nations by enabling businesses, government, and civil society to scrutinize each other and share information. However, the Internet may also create a negative “rebound effect.” Lower costs and successful economic development will increase gross consumption levels and environmental impacts unless there is product and process innovation for sustainable production and consumption.²² Also, if steps are not taken to ensure wide access to digital technologies, the Internet may exacerbate existing inequalities and strengthen monopolies.

**Emergence Of A Wired World**

Though starting from a low base, connectivity via phones, and computers is growing fastest in the developing countries.²² The application of information technologies and telecommunications promises to help emerging economies leapfrog traditional development patterns in favor of high-tech and high-efficiency economic pathways (see Privatization). However, Internet users need to be literate and it will be more difficult to surmount the problem of literacy in regions such as South Asia and Sub-Saharan Africa (see Education).
The global labor force is growing and more women are moving from the informal to the formal labor sector as part of the transition of developing economies from an agricultural base to a manufacturing and service base.  

In developed economies, the working age population will shrink from approximately 740 million to 690 million people between 2000 and 2025 but will increase in developing countries from about 3 billion to 4 billion people.

As economies become service-based, women are a growing part of the formal labor force.

### New Doors Open For Women

- Approximately 50% of women are employed in the formal labor force and comprise one third of all workers. However, women earn about two thirds of what men earn in comparable jobs, and less than one fifth of total wages go to women.
- In 1998, service sector jobs accounted for 64% of all jobs in the OECD countries.
- The OECD estimated in 2000 that in the Information & Communication Technology sector there was a shortage of 850,000 technical staff in the United States and 2 million in Europe.

As economies develop, fewer people are employed in agriculture and more in positions that require advanced skills and training in industry and services; the distribution of economic wealth in the world is strongly correlated with employment by sector. More women are employed in agriculture in the Asian, Pacific, and Sub-Saharan nations, whereas developed and transition economies have more men involved in agricultural production. Worldwide, more men are employed in the industrial sector while women generally find more employment in the service sector.

In the OECD countries, the ratio of women to men in the goods-producing sectors is 0.35:1, in the services sector the ratio is 1:1, and women outnumber men 1.8:1 in social services such as health and education.

### Implications for Business

Increasing the skills of workers—particularly women—is crucial for business success in an integrated and competitive global economy. Labor capacity is not solely a matter of traditional education but is increasingly provided through adult education and worker training within a context of career-long learning and career management. Investing in workers boosts the living standards of households, increases productivity, and creates a broader customer base. Companies will successfully recruit and retain employees in competitive labor markets if they anticipate rising expectations of job quality, maternity benefits, flexible working hours, provision of child-care services, and access to professional training. Trade and the expansion of multinational companies creates an ethnically diverse labor force—an advantage to companies that want employees who can understand the needs of international and diverse markets and who can help companies locate operations where consumer and labor markets are growing.

### In the OECD countries, the ratio of women to men in the goods-producing sectors is 0.35:1.
Roles and Responsibilities

Businesses must meet national rules and standards for commerce, and also international agreements, codes of conduct, and the standards of civil society at home and abroad. The public and many governments will hold businesses accountable to be socially responsible — that they will promote development that meets basic human needs, support democracy, share information, and be open to the scrutiny and input of civil society.

- Democracy
- Accountability
- Privatization
More people live in countries with elected democratic governments than at any other time in history. In many countries, the transition from state-controlled economies to market-based approaches has contributed to stable operating conditions and a common set of rules for international business competition (see "Privatization"). Countries are adopting international instruments of governance, including formal commitments to standards of human rights and environmental protection and gaining membership in the World Trade Organization (WTO). Democracies also benefit from an informed public, non-governmental organizations (NGOs) that are free to organize, and a media unfettered by restrictions of free speech — all conditions that help combat corruption (see "Accountability"). Today the challenge remains — to support democratic efforts to reduce corruption, promote sustainable development, and to increase the transparency of and participation in government processes.

**Democracy spreads, creating improved conditions for market-based economies.**

In 2001, the citizens of 86 countries worldwide could rely on a broad range of political rights and civil liberties; their countries were rated as "Free" in Freedom House's annual survey. The survey is based on political rights and civil liberties enjoyed by citizens, and not solely on political structure. Citizens in 58 "Partly Free" countries live with more limited political rights and civil liberties. Limits on political and civil liberties can be caused by weak rule of law, single-party political dominance, and inter-ethnic or religious violence. Basic political rights and civil liberties are denied people in 48 countries classified as "Not Free."

### Facts

- The number of democratic states in the world has grown from 22 democratic states out of 154 total countries (14.3%) in 1950, to 119 democratic states out of 192 total countries (62%) in 2000.
- The number of countries that have ratified the six major human rights conventions and covenants has grown from 10% to half of all countries between 1990 and 2001.
- The number of countries that have joined the General Agreement on Tariffs and Trade (GATT) and WTO has risen from 85 in 1980 to 134 in 1999.
- Seventy-one percent (71%) of the world's exports now fall under WTO disciplines, with a growing share of exports coming from developing countries.

### Freedom Societies Enjoy Faster Growth

The median per capita GDP is almost seven times higher for the Freest countries than in the lowest category of Not Free countries. Almost all countries with per capita GDP higher than US$15,000 are Free, and most are Free where per capita GDP is between US$5,000 and US$15,000 (see "Wealth"). Countries that are free grow — on average — more quickly as well. Notably, this is true even for the less affluent Free countries of less than US$5,000 per person per year (e.g. Benin, Bolivia, the Dominican Republic, El Salvador, India, and Papua New Guinea). Among countries with GDP per capita less than $5,000, the growth rates of Free, Partly Free, and Not Free countries in 1990-1998 were 3.23%, 1.47% and 1.41% respectively. Countries with high economic growth rates and a Not Free classification, such as China, are uncommon.

### Implications for Business

Democratic societies tend to offer the conditions for secure business operations, investment, and growth. In these societies, stakeholders and shareholders are holding corporations to a single high international standard. Business partnerships with dictatorial governments are scrutinized by an international network of NGOs, which makes the operations of ethical companies in non-democratic countries difficult and jeopardizes companies’ license-to-operate at home and abroad. Companies will face the hard question of whether to operate in non-democratic environments and perhaps support democratic change through their own practices but risk harming their regional or international reputation. Ultimately, trends toward democracy, fair and transparent governance, and the development of global corporate standards are in the best interests of companies as they provide long-term benefits to reputation and operating freedom.
Civil society has a growing influence on government and business affairs. Many non-governmental organizations (NGOs) focus on making business and government activities more transparent to the public and more accountable to laws and to stakeholders who may be neither customers nor shareholders. Global business operations are scrutinized by NGOs that are well-organized, media savvy, active as shareholders, and connected by the Internet (see Communications). Businesses are responding to this public interest by reporting on environmental and social performance, and with innovative products and services that address public concerns about resource use, energy, and the environment. Others are engaging stakeholders in operational decisions and are partnering with NGOs to catalyze corporate change, to improve the bottom line, to protect reputation, and to earn license-to-operate in emerging markets.

The number of NGOs recorded by the Union of International Associations has more than doubled since 1985 and is now over 40,000 organizations working to improve the environment and the social welfare of people. Informal estimates put the number of NGOs at over one million. Fueling growth of these NGOs is more than US$150 billion in annual donations; about 80% of that support is from individual donations and the balance from bequests, foundations, and corporations.


civil society is demanding greater accountability and transparency from government and business.

Access to information through the Internet, expanded public participation in stock markets, and a broader definition of corporate social responsibility have led to increased shareholder activism, pressure for corporate disclosures, and new stock investment strategies. Regulations that allow greater shareholder power and require disclosure are spreading in world equity markets. The Investor Responsibility Research Center has tracked shareholder resolutions in the United States since 1973 on social issues (e.g., diversity, human rights, environment, equal employment, and labor standards) and the number of resolutions that receive the 3% support needed to resubmit the resolution. The average level of support for these shareholder resolutions has risen steadily from 5% in the 1970s to today’s level of about 9%.

Investment based upon social criteria is rising in the United States, United Kingdom, Europe, and Japan. Part of the total invested assets are the public mutual funds that explicitly market themselves for social responsibility screens; the number of funds and their assets under management have grown five-fold in the last decade in the United States. The number of socially screened funds doubled in the 1990s in the United Kingdom and total assets increased ten-fold. The most common investment screens in the United States in 1999 were tobacco (96%), gambling (86%), weapons (81%), alcohol (83%), and the environment (79%). The US$2.34 trillion in all portfolios in 1999 to 230 funds in 2001 that include social criteria is 12% of total managed assets in the United States.

The Corruption Perceptions Index developed by Transparency International is an example of scrutiny by civil society. By surveying expatriate business executives, managers, and other experts, Transparency International ranks countries from 10 (highly clean) to 0 (highly corrupt). OECD countries generally rank high, with Russia a notable exception. Many developing countries such as Indonesia, Kenya, Nigeria, and Pakistan, all rank low with scores below 2.5. Corruption is inconvenient and expensive. Excessive business regulations are associated with higher corruption and are more likely to be found in poorer countries (see Democracy). Such complex procedural systems also deter development of new businesses and competition and contribute to the abuse of power.

Implications for Business

Rising public involvement in government and business affairs is seen in the growth and activism of non-governmental organizations, and in pressures to disclose environmental and social performance to investors. Civil society creates pressures for business to be more open and transparent in the way it deals with the public, government, other businesses, and local communities. International NGOs ensure that corporate activities anywhere in the world are under stakeholder and shareholder scrutiny. Failure to perform responsibly in a distant market or along the supply chain or in the launch of new products and technologies may erode corporate reputation and harm competitive position in core markets and in equity markets. Active engagement with stakeholders and documented good performance can protect license-to-operate, drive product and service innovation, reduce legal liabilities, and improve business strategy.
n the past decade, private sector investment in low- and middle-income countries has been growing quickly and governmental development aid has been on the wane. Governments are looking more and more to privatization as they seek to reform economies, reduce deficits, attract investments, liberalize and expand equity markets, and improve efficiency. When the private sector acquires state-owned enterprises, it often helps financial markets mature when that privatization includes public equity. Though governments still operate most infrastructure in low- and middle-income countries, the number of countries initiating privatization, the number of public projects with private sector participation, as well as the level of private sector investment are growing. Private sector investment may also transfer best practices for labor rights, resource efficiency, and environmental safety to transition and emerging economies.

Private sector investment is increasingly financing economic development.

Foreign direct investment in developing countries has risen from about US$24 billion in 1990 to US$178 billion in 2000 as official development aid declined from about US$55 billion to US$39 billion.

Facts
- In 2000, official overseas development assistance (ODA) to developing countries totaled US$53.1 billion and foreign direct investment (FDI) was $120 billion; developing countries average about one fourth of international foreign direct investment assistance.
- In constant dollars, between 1970 and 1998, net inflows of foreign direct investment grew almost seven times faster than world GDP and four times faster than world exports of goods and services.
- Foreign direct investment in developing countries has risen from about US$24 billion in 1990 to US$178 billion in 2000 as flows of official development aid declined from about US$55 billion to US$39 billion.
- Between 1988 and 1995, revenues from the sale of state-owned enterprises grew from US$2.6 billion to over US$21 billion. Latin America and East Asia generated the largest amounts of revenues at 51% and 21% respectively.
- In 1999, the primary sector (including petroleum, mining, agriculture, and forestry) accounted for US$18.1 billion (61% of the total) privatization revenues in emerging economies - almost entirely by oil and gas sales in Argentina, Brazil, India, Poland, and Russia.

The Capital Bypasses The Poorest Nations

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>South Asia</td>
<td>12.8</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>236.5</td>
</tr>
<tr>
<td>East Asia &amp; Pacific</td>
<td>38.1</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>3.9</td>
</tr>
<tr>
<td>Middle East &amp; North Africa</td>
<td>12.8</td>
</tr>
<tr>
<td>Europe &amp; Central Asia</td>
<td>51.5</td>
</tr>
</tbody>
</table>

Fifteen countries accounted for 83% of private capital flows to developing countries in 1997 and these are all middle-income countries — increased capital flows may have actually widened the income gap among countries. The Middle East and North Africa, Sub-Saharan Africa, and South Asia each received less than 5% of private capital flows and foreign direct investment in the 1990s.

What Sectors Are Privatized?

<table>
<thead>
<tr>
<th>Sector</th>
<th>Privatization 1990-1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufactures</td>
<td>16%</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>24%</td>
</tr>
<tr>
<td>Power</td>
<td>17%</td>
</tr>
<tr>
<td>Transport and other infrastructure</td>
<td>8%</td>
</tr>
<tr>
<td>Primary sector</td>
<td>18%</td>
</tr>
<tr>
<td>Financial services</td>
<td>12%</td>
</tr>
<tr>
<td>Other non-financial services</td>
<td>6%</td>
</tr>
</tbody>
</table>

Government-to-government development assistance declined by nearly one third during the 1990s. Private capital flows (portfolio diversification to include foreign financial assets and private debt) expanded in the early 1990s and has since decreased. Foreign direct investment (investments to acquire a lasting management interest other than as an investor, e.g., capital equity and reinvestment of earnings), however, grew quickly throughout the entire decade. The Asian financial crisis of 1997 caused private flows to fluctuate and the current economic downturn may cause a relative decline, but long term private flows are still more than 80% of the total foreign financial flows.

Privatization has given business a greater say in the developing world’s economic future. Privatization has given business a greater say in the developing world’s economic future. Privatization has given business a greater say in the developing world’s economic future. Privatization has given business a greater say in the developing world’s economic future. Privatization has given business a greater say in the developing world’s economic future. Privatization has given business a greater say in the developing world’s economic future.

Implications for Business
Privatization has given business a greater say in the developing world’s economic future. The private sector has eclipsed but not replaced government as the major financier of development but still does not serve the poorest nations. Privatization focuses more attention upon the behavior of corporations and on the conditions that allow their license to operate. The expectation of the private ownership is to upgrade technologies, practices, and performance. Inconsistent standards among domestic and foreign subsidiaries are becoming increasingly difficult to justify and to maintain. Still, the state retains significant influence over the economic and social well-being of developing countries and private sector enterprises will have to adjust to an emerging partnership between the public and private sectors. Projections of population and economic growth mean that the investment opportunities of the past decade may be just a fraction of the potential future privatization markets.

Related Trends
- Agriculture
- Water
- Education

Latin America And East Asia Attract Business

Investment in Private or Partial-Private Infrastructure Projects in Developing Countries, 1990-1999 (1996 US$15 billion)

Private activity — as measured by investment in infrastructure projects in which the private sector assumed operating risk during the project’s development or operation — multiplied six-fold to over US$100 billion in the 1990s. The vast majority of private investment and projects occurred in Latin America and the Caribbean, or East Asia and the Pacific within two sectors: telecommunications and energy.
TOMORROW’S MARKETS

Global Trends and Their Implications for Business

BUSINESS SUSTAINABILITY

Below are a selection of publications on topics related to how business is responding to global economic, environmental and social trends to create a shareholder and stakeholder value.

General Sustainability


Strategies for Sustainability


Measurement and Reporting


World Resources Institute

The World Resources Institute is an environmental think tank that goes beyond research to create practical ways to protect Earth and improve people's lives. Our mission is to move human society to live in ways that protect Earth's environment for current and future generations. WRI meets global challenges by catalyzing action to:

- Reverse damage to ecosystems. We protect the capacity of ecosystems to sustain life and prosperity.
- Support participation in environmental decisions. We collaborate with partners worldwide to increase people's access to information and influence over decisions about natural resources.
- Avert dangerous climate change. We promote public and private action to ensure a safe climate and sound world economy.
- Increase prosperity while improving the environment. We challenge the private sector to grow by improving environmental and community well-being.

Tomorrow’s Markets was produced by WRI’s Information and Sustainable Enterprise Programs. For more than a decade, the Sustainable Enterprise Programme has harnessed the power of business to create profitable solutions to environment and development challenges. The Information Programme seeks to change decision-making by facilitating the free flow of high quality environmental information for sustainable development.

For more information, please visit the WRI website: http://www.wri.org

United Nations Environment Programme (UNEP)

The mission of the United Nations Environment Programme (UNEP) is to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations. UNEP’s role is to identify and assess environmental issues, work towards developing solutions and provide guidance for their implementation.

The UNEP Division of Technology, Industry and Economics (DTIE) contributes to the UNEP mission by encouraging decision-makers in government, business, and industry to develop and adopt policies, strategies and practices that:

- are cleaner and safer;
- make efficient use of natural resources;
- ensure adequate management of chemicals;
- incorporate environmental costs;
- reduce pollution and risks for humans and the environment.

For more information, please visit the UNEP DTIE website: http://www.uneptie.org

World Business Council for Sustainable Development

The World Business Council for Sustainable Development (WBCSD) is a coalition of 140 international companies united by a shared commitment to sustainable development via the three pillars of economic growth, ecological balance and social progress. Our members are drawn from more than 30 countries and 20 major industrial sectors. We also benefit from a Global Network of 35 national and regional business councils and partner organizations involving some 1000 business leaders globally.

Mission: To provide business leadership as a catalyst for change toward sustainable development, and to promote the role of eco-efficiency, innovation and corporate social responsibility.

Aims: Our objectives and strategic directions, based on this dedication, include:

- Business leadership — to be the leading business advocate on issues connected with sustainable development.
- Policy development — to participate in policy development in order to create a framework that allows business to contribute effectively to sustainable development.
- Best practice — to demonstrate business progress in environmental and resource management and corporate social responsibility and to share leading-edge practices among our members.
- Global outreach — to contribute to a sustainable future for developing nations and nations in transition.

For more information, please visit the WBCSD website: http://www.wbcsd.org