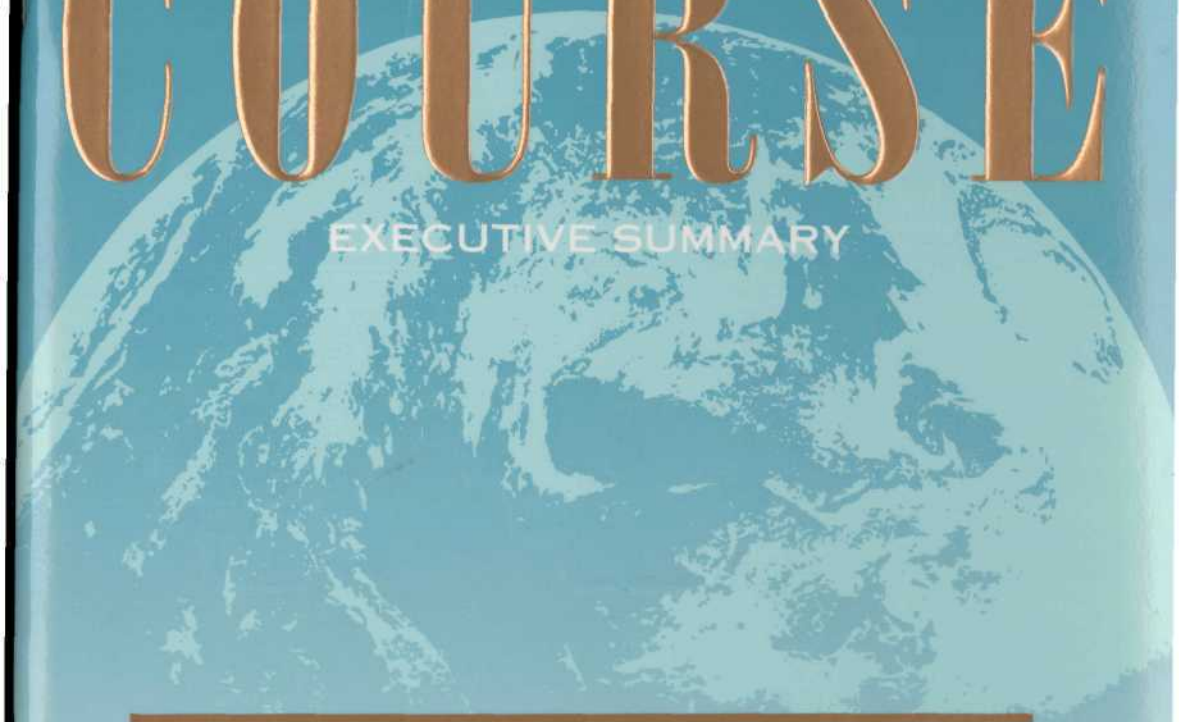
CHANGING COURSE

EXECUTIVE SUMMARY



A GLOBAL BUSINESS PERSPECTIVE ON DEVELOPMENT AND THE ENVIRONMENT

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Executive Summary

This is an executive summary of *Changing Course: A Global Business Perspective on Development and the Environment*, a book written by business leaders on the Business Council for Sustainable Development.

Changing Course is about the steps required of business, and of the governments that set the frameworks for business, to ensure that present needs are met in ways that do not compromise future generations and that make sound business sense.

Chapter 1
The Business of Sustainable Development

Many global trends offer hope as we enter a new millennium. Life expectancy, health care, and education have all improved dramatically in the second half of this century. World food production has stayed well ahead of population growth. No major shortage of raw materials looms in the foreseeable future.

But our world is also under serious threat. Consider this:

- An already crowded planet is likely to have to support twice as many people in the next century.
- Renewable resources are not being given time to renew. We are living more off the planet's capital and less off its interest.
- "Sinks," or systems that can safely absorb wastes, are being overwhelmed. Overuse and misuse of natural resources lead to damaging pollution of our air, water, and land. This could cause changes in climate and air circulation systems.

• Many parts of our environment are degrading fast. Agriculturally fruitful drylands are turning into deserts, forests into poor pastures, and freshwater wetlands into salty, dead soils. Degraded ecosystems lose biological diversity, an irreversible form of destruction.

• Environmental and economic decline are in many places an inseparable part of the same downward spiral. Over a billion people are unable to meet their basic needs.

Clearly action is needed. But scientific uncertainty makes it difficult to know when and how to act. A sensible solution—generally endorsed by most governments and an increasing number of businesses—is to adopt the "precautionary principle." This says that a lack of scientific certainty should not be used as an excuse for postponing measures that prevent major, irreversible environmental degradation.

Toward a Sustainable Future

The evidence of environmental decline makes it plain that we must change our ways to ensure that progress is sustainable, that it meets "the needs of the present without compromising the ability of future generations to meet their own needs."

There are many definitions of sustainable development, but this one captures the essence of the idea. And the concept has been generally adopted by nations and businesses around the world.

Meeting the Business Challenge

Clean and equitable economic growth, which is integral to sustainable development, requires more efficient use of resources; but then, "eco-efficiency" makes good business sense. Proving that such growth is possible is certainly the biggest test for business and industry. It requires open and competitive markets. It also requires a break with conventional wisdom that sidelines environmental and human concerns.

Chapter 2
Pricing the Environment: Markets, Costs, and Instruments

The cornerstone of sustainable development is a system of open, competitive markets in which prices are made to reflect costs of environmental as well as other resources. Open markets are great motivators, because:

- Competition encourages producers to use as few resources as possible if resources are priced properly.
- Producers are encouraged to minimize pollution because it represents wasted resources, particularly if pollution is given a price and producers are made to pay the full cost for its control and the damage it causes.
- Competition is the primary driver for the creation of new technology, which is needed to make production processes more efficient and further reduce pollution.

Yet markets have not efficiently reflected the costs of environmental degradation. These costs are called "externalities," and include, for example, the damage some air pollutants cause to lakes, forests, and human health. There is nothing theoretical about the costs of this damage. But they are spread throughout society and are often external to the operations of the polluters.

The most important correction needed in current markets is to include "externalities" in the cost of doing business. Economists are working to establish the costs of various types of pollution and environmental damage. But the task of internalizing environmental costs must proceed using imperfect, existing knowledge and imperfect, available tools.

As early as 1972, the members of the Organisation for Economic Co-operation and Development agreed to the "Polluter Pays Principle" (PPP), which states that polluters should bear the full costs of any damage caused by the production of goods and services. The implementation of PPP is still imprecise and random, however.

Inducing Change

Three mechanisms can be used to cause business to internalize environmental costs or limit damage to the environment:

- ***Command and control.*** These are government regulations, including performance standards for technologies and products, effluent and emission standards, and so on. Our view is that many regulations have served a purpose and there will continue to be a need for a regulatory framework in all countries.
- ***Self-regulation.*** These are initiatives by corporations or sectors of industry to regulate themselves through, for example, standards, monitoring, and pollution-reduction targets. Self-regulation may prove more cost-effective to society in general than either regulations or economic instruments. This is because business often holds the information on technologies and emissions that government needs if it is to regulate effectively.
- ***Economic instruments.*** These involve intervention by government in the marketplace through mechanisms such as pollution taxes and charges, tradable pollution permits, deposit-refund systems (as with glass bottles), performance bonds, resource-saving credits, differential prices (as with unleaded versus leaded gasoline), special depreciation provisions, and the removal of distorting subsidies and barriers to market activity.

In the past, governments have relied too heavily on the command-and-control approach. We encourage an increased use of self-regulation and effective economic instruments. Both have the advantage over regulations of lower compliance costs. Market instruments have the added advantage of encouraging polluters to change to cleaner technologies and continuously to develop those technologies, because it always pays for them to clean up more.

Getting the Right Mix

We need to achieve an optimal mix of command-and-control regulations, self-regulation, and economic instruments. We believe, and we will be urging governments, that the mix should be influenced by:

- ***Efficiency.*** The choices must be based on which measures work most cost-effectively for society.
- ***Flexibility of response.*** Business needs to be able to choose how to respond to regulation—how to reach the target in the most efficient way.
- ***Confidence in the regulatory environment.*** Business needs to know the nature and probable impact of regulation over significant periods of time so that it can plan its investments accordingly and not make technological investments that will be lost in the face of rapidly changing regulations.
- ***Gradual introduction.*** Regulations should be introduced gradually so that business has time to plan its optimal response. If governments adopt the precautionary principle, they will seek to introduce instruments quickly, but will give business compliance time. If governments fail to act until damage is advanced, there will be no time for gradual introductions. Business, however, must accept that where urgent remedy is required, urgent regulations and enforcement are also necessary.
- ***A level playing field.*** Regulations should affect all comparable enterprises equally, and countries at similar levels of economic development will need to harmonize their policies internationally to avoid trade distortions. Different levels of development between nations must lead to different standards and solutions in order to distribute burdens fairly.
- ***Transparency of compliance.*** It must be possible for each business to be seen to comply with regulations. There must be no free riders or unduly privileged companies.

Chapter 3
Energy and the Marketplace

Energy offers some of the hardest challenges in the search for sustainable development. It is crucial for human progress. Its use gives rise to global, regional, and local pollution. And its price rarely reflects the environmental costs associated with its use.

We cannot return to the low-energy scenario of the past, nor change our energy systems drastically. All countries have built their economies on an industrial infrastructure heavily dependent on fossil fuels, and a rapid change would have politically unacceptable economic impacts, especially in the emerging industries of developing countries.

The time has come for energy prices to reflect environmental costs. We propose a reorientation of national energy plans toward a rational and coherent resource policy with a longer time horizon. The policy is built on three pillars, with business playing a large supporting role throughout. The pillars are increased energy efficiency, a more sustainable mix of energy sources and consumption patterns, and a long-term energy strategy for developing nations.

Increased Energy Efficiency

This will bring quick returns and buy time for long-term actions. Here are some findings from our study on energy efficiency.

• *Electricity generation.* Generally, electricity prices that reflect the replacement cost of new plants would encourage improved efficiency on the demand side and help finance more-efficient power plants. It is on the demand side that energy efficiency improvements can be found at the least cost. Therefore, major efforts should be directed toward developing energy standards and improving efficiency in end products.

• *Commercial and residential use.* Steps must be taken to improve appliance standards and building codes; provide better

information about energy consumption at point of sale; encourage purchasing judgments that are based on the lowest life-cycle cost, rather than lowest first cost; and provide grants and loans for energy-saving installations.

- ***Industry.*** The long life of equipment creates investment horizons of 20–30 years, while more-efficient equipment becomes available yearly. Thus, the lower the energy price, the longer old and inefficient technology remains in use—particularly in energy-intensive industries.
- ***Transportation.*** Major restrictions of transportation volumes do not offer a viable solution. Access to efficient transport is vital for economic development. The goal is to improve efficiencies to minimize material and energy use. Business's task is to create appropriate technologies and systems for efficiency. Governments must create a framework for action. And this should include giving transportation the environmental price tag it deserves. Governments should improve the competitiveness of public transport, and ensure that different modes of transportation are allowed to compete on equal terms and that sufficient funds are available for research on energy efficiency.

More Sustainable Mixes of Energy Sources and Consumption Patterns

These must be constructed in a careful and systematic way, to avoid major damage to economic development.

In the short term, the focus must be on reducing the environmental impacts of fossil fuels and encouraging energy conservation. At the same time, every effort should be made to reduce the risks of operating existing nuclear power plants in Central and Eastern Europe.

In the medium term, we should benefit from the development of clean coal technologies, a balanced nuclear expansion, some form of biomass-based energy, solar energy sources, and further hydropower development.

In the long term, business must cooperate in intensive research efforts that may make fuel cells a widely used energy conversion technology. For developing countries, large-scale commercialization of charcoal and fuels from biomass plantations will be important.

A Long-Term Energy Strategy for Developing Countries

The priorities are to encourage development of indigenous resources, reform energy pricing policies and remove subsidies, cooperate with industrial countries on energy technologies, and develop energy strategies locally to meet local needs.

Making It Happen

Each country must determine its own mix of policy instruments (outlined in chapter 2). The goal should be price-induced conservation by the consumer, and cost-induced innovation by the producers of energy and energy-consuming products.

The most important criterion in the selection of policy instruments must be their cost-effectiveness. A better mix of real energy prices, stricter standards, and better information will help save energy worldwide. Business will play a major role in implementing the new policies, which will only succeed if they are cost-effective, technically realistic, and consistent with agreed global objectives.

Chapter 4
Capital Markets: Financing Sustainable Development

Capital markets will play an important role in the search for sustainable development. Such development requires increased long-term investments that respect environmental criteria and development needs in both industrial and developing countries. Most of the investment will come from capital markets.

As nations begin to internalize environmental costs, the ways in which capital markets value corporations will begin to change. Increasingly, companies that further the cause of sustainable development will be perceived as more valuable in the marketplace.

The emerging capital markets in the developing world are becoming powerful tools for development. Making them more open, efficient, and competitive should be a high priority for business and governments.

Progress toward sustainable development depends on a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs. Capital markets have an important role to play in this process.

The aims of sustainable development will only be served in the capital and banking markets by a significant change in the way the environmental potential of corporations worldwide is assessed for investment or lending purposes.

Internalizing environmental costs would produce more accurate signals for individual investors, bankers, institutional investors, and insurance companies. It is therefore essential that the criteria and values of sustainable development become an integral part of the information process, so that sound investment and lending decisions can be made.

There are clear signs that the financial community is beginning to take environmental issues into account. This is partly because legal changes in the United States and Europe in some circumstances transfer environmental liabilities to others besides those that directly caused the damage. Banks, for example, may in some cases be pursued by the authorities if their borrowers have caused environmental damage but cannot pay for it.

Furthermore, the increased concern over the insurance risks inherent in unsustainable development has made insurance companies more sensitive to the needs of investing in sustainability.

The recent growth of "green" funds, and the support of these investment vehicles from some large pension funds, shows that many investors are becoming more aware of social and environmental issues as important considerations in economic development.

The combination of behavioral and structural change suggests that capital markets may play a large role in redrawing the world economic and environmental map.

Chapter 5
Trade and Sustainable Development

Unless nations trade, they cannot develop. Unless nations develop economically, they cannot protect their environments, clean up environmental damage, or make efficient use of resources.

The ideal of "free trade" is today under attack from two different camps: those who would intervene for the sake of the environment, and those who are motivated to intervene on the basis of theoretical concepts, such as reciprocal trade, negotiated trade, and managed trade.

Free trade has a role to play in the establishment of sustainable development. It would be a great tragedy if the sustained efforts on the part of the General Agreement on Tariffs and Trade (GATT) suffered a reversal.

Internalizing environmental costs and making polluters pay must remain the responsibility of individual governments. Goals such as environmental protection and sound resource management cannot be secured by unilateral trade measures. They can be achieved through the negotiation of international environmental agreements. Carefully drawn, these need not threaten trade or the trading system. If such treaties are not forthcoming, the pressure for trade barriers will mount.

Trade and the Environment

Conflict between trade and environmental issues is increasing. To limit such conflicts, it is important to identify legitimate points of contact between trade and environment, and to distinguish environmental problems that extend beyond national boundaries. Solving these problems requires cooperation among sovereign states.

Restraints on international trade have figured in several recent environmental agreements on such issues as protection of the ozone layer and the transfer of hazardous wastes. Such agreements can and should be made compatible with existing international trade rules. Threats of trade restrictions against countries that do not comply with international environment standards simply covers up the failure of cooperative negotiations. The international trading system is rule-based, not power-based, and it is important to business and governments that it stays that way.

Changing the Rules

The instruments available to GATT to deal with environmental issues are limited, but these should not be allowed to become a loophole to be used by protectionists. Negotiators should consider whether and how GATT's dispute-settlement mechanisms can be used to settle environmental conflicts arising through trade. In addition, the following fundamental principles should be introduced into GATT law:

- ***Transparency.*** Notification requirements are needed so that all environmental regulations with potential trade impacts become internationally unambiguous.
- ***Legitimacy.*** Environmental measures that restrict trade should be legitimate, and thus backed by strong scientific evidence. Where environmental threats are particularly serious or irreversible, GATT should adopt the precautionary principle.

• ***Proportionality.*** Trade-restrictive measures should not go beyond what is absolutely necessary to produce a desired environmental result.

• ***Subsidiarity.*** Every time an environmental goal can be achieved without a measure affecting trade, trade-related measures should be avoided.

Toward Sustainable Development

Increasing market access in both industrial and developing countries is a necessary, though by no means sufficient, condition for development.

But developing nations that rely largely on agricultural exports must take a hard look at their real costs. Poor countries may be exporting a portion of their own "sustainability" if they are producing export crops by overusing soil, water, and forest systems, and thus reducing future productivity.

Industrial nations are introducing increasing numbers of standards, regulations, and economic instruments to internalize environmental costs. If these are not coordinated through international negotiation, they will sometimes constitute nontariff barriers to trade.

Developing countries should be allowed longer phase-in periods, according to their individual states of development.

Chapter 6
Managing Corporate Change

It is an immense challenge for business to advance simultaneously in both economic development and environmental protection, as sustainable development demands. But we are not starting from zero. Business has proved two major points in its successful efforts to revolutionize quality: it is able to manage fundamental changes in both planning and action, and it is able to move in tandem toward objectives that at first appeared to be opposed—in this case, increasing quality while lowering costs.

The tools and processes used in the quality revolution, along with the experience gained and the results produced, provide a foundation on which business leaders can build a sustainable future.

Taking the Lead

In general, during the past 20 years business has tended to be overcautious and conservative in its approach to the environmental challenge.

Society can no longer afford this. It is time for businesses to take the lead; change by business is less painful, more efficient, and cheaper for consumers, for governments, and for businesses themselves. By living up to its responsibilities, business will be able to shape a reasonable and appropriate path toward sustainable development.

The Vision of Sustainable Development

An increasing number of corporate leaders are convinced that it makes good business sense to integrate the principles of sustainable development into their operations, and to make their enterprises "eco-efficient." This means:

- recognizing that there can be no long-term economic growth unless it is environmentally sustainable;
- confirming that products, services, and processes must all contribute to sustainable development;
- maintaining credibility with society, which is necessary to sustain business operations;
- creating open dialogue with stakeholders, thereby identifying problems and opportunities as well as building credibility through their responses;
- providing meaning for employees beyond salaries, which results in the development of capabilities and growth in productivity; and

• maintaining entrepreneurial freedom rather than face regulatory coercion.

Individual leaders can make a difference, but they cannot transform this into a living reality without a critical mass of other committed individuals. When viewed within the context of sustainable development, environmental concerns become not just a cost of doing business, but a potent source of competitive advantage. Enterprises that embrace the concept can effectively realize the advantages in more efficient processes, improvements in productivity, lower compliance costs, and new market opportunities.

Businesses with vision may expect to reap advantages over competitors that lack it. Companies that fail to change will become obsolete.

Mobilizing the Vision Through Stakeholder Partnerships

More than ever before, business is being challenged by a much broader and more diverse group of people who have a stake in corporate actions. Broadly, these "stakeholders" include not only customers, employees, and shareholders, but also suppliers, government, neighbors, the wider community, and public interest groups. Involving these people, with all their differing views and concerns, usually leads to better decisions and more universal support for their implementation.

Prosperous companies in a sustainable world will be those that are better than their competitors at adding value for all their stakeholders, not just for customers and investors.

New Markets, New Management Strategies

Stakeholder involvement is only one aspect of effective corporate leadership in sustainable development. Commitment to a vision must translate into strategies and action plans. This often involves reorganizing, restructuring, and redesigning many processes and detailed systems within a corporation. For example:

• Companies in the "sunset" industries need not face the same fate as the materials they provide, if they can develop environmentally sound substitutes.

• Old constraints can be turned into new opportunities, such as diversifying from power supply into energy conservation.

• New business opportunities can be created by applying corporate assets to a new service, such as environmental protection.

Furthermore, three other trends in evolving management culture can be identified:

• The traditional roles and responsibilities of boards of directors and top management are evolving to integrate the internal and external dimensions of a business, and to provide new vehicles for stakeholder participation.

• Organizational structures are evolving toward broad network designs that are being stimulated by advancing communications and computer technology. These enable new policy messages to be communicated throughout large, decentralized multinational organizations. This helps support the creation of a corporate culture of sustainable development.

• An organizational learning culture is being developed that involves middle management. This culture is based on an appreciation of the need to constantly rethink and be open to relearning the fundamentals of every aspect of business. The ability to tolerate uncertainty, design new strategies, coach, and use statistical tools for managing processes are among the skills required to manage change for sustainable development.

Measuring to Get It Done

A vision and implementation strategy for sustainable development is most useful if the resultant actions can be reported, thereby offering chances for feedback and improvement.

We accept as a baseline the International Chamber of Commerce principle of "compliance and reporting" that is to encourage business to measure environmental performance, to conduct its own regular environmental audits and assessments of compli-

ance, and periodically to provide appropriate information to boards of directors, shareholders, employees, the authorities, and the public.

Chapter 7
The Innovation Process

Business is now far more efficient than it has ever been. But overall waste and pollution emissions from industry in Northern nations continue to increase.

Under pressure from new management attitudes toward extended corporate responsibility, from increasing consumer expectations, and from tighter regulations, companies are recognizing that environmental management now requires the minimization of risks and impacts throughout a product's life cycle, from "cradle to grave." This is leading to the industrial ideal of an economic system based on "reconsumption"—the ability to use and reuse goods in whole or in part over several generations.

Cleaner Processes Through Pollution Prevention

More companies are realizing that the pollution they produce is a sign of inefficiency, and that waste reflects raw materials not sold in final products. A growing number of companies are beginning to adopt the logic of pollution prevention.

This allows companies to start to take control of the process of environmental change in a manner that makes economic and operating sense, rather than seeing their own processes controlled by tightening regulations and expectations.

Environmental considerations must be fully integrated into production processes, affecting the choice of raw materials, operating procedures, technology, and human resources. Pollution prevention means that environmental concerns become, like profitability, a cross-functional issue that everyone promotes. Unfortunately, many small companies—especially in developing coun-

tries—are least able to bear the cost of environmental inefficiency and also least able to mobilize the resources to improve their raw material yields.

Pollution Prevention in Practice

There are four main possibilities of preventing pollution:

- ***Good housekeeping.*** The aim here is to operate machinery and production systems in the most efficient manner. It is a basic task of management.
- ***Materials substitution.*** Replacing a damaging material with a more benign one offers the prospect of completely eliminating a given pollution problem.
- ***Manufacturing modifications.*** Emissions can be reduced considerably by simplifying production technology through lowering the number of process stages.
- ***Resource recovery.*** Emissions can be reduced by keeping the polluting agents within the production system, and then reusing them in the same or other processes. Some industries have already established complex "industrial ecosystems" whereby the waste from one process becomes the feedstock of another.

What Prevents Pollution Prevention

Despite the widespread espousal of pollution prevention, most government funds and regulatory efforts are still geared toward controlling the waste after it has been produced. There are three broad types of obstacles to pollution prevention:

- ***Economic concerns.*** Companies must be convinced that the introduction of a new, cleaner technology will really cut production costs. The logic of pollution prevention—isolating the source of the problem—often challenges existing ways of doing business, and can thus be seen by business as more risky.
- ***Lack of information.*** Practical data about pollution prevention options may be unavailable, while much information that is available stresses end-of-pipe solutions.

• ***Management attitude.*** Many managers believe that environmental protection inevitably costs money, that it is a peripheral issue and a diversion from basic corporate goals. This attitude has been supported by the use of end-of-pipe controls that are unproductive and simply add costs to the business.

For small and medium-sized companies, these obstacles may be even more difficult to overcome.

Cleaner Products Through Life-Cycle Stewardship

As companies become better at preventing pollution and husbanding resources, attention is shifting from problems caused by production to those caused by the product itself.

Corporate environmental responsibility no longer ends at the factory gate. It extends from cradle to grave in a management process called product stewardship. Managing a product life cycle for minimal environmental impacts poses tough conceptual and operational challenges for business. Each step in the life of a product has implications for the environment, often giving rise to a number of issues. Business, research institutes, and governments are working to develop life-cycle analyses or "eco-balances" to evaluate the cradle-to-grave implications of different product options.

Life-cycle analysis implies life-cycle responsibility. A combination of increasing external pressures and growing internal commitment has made some leading companies ensure that their products are made, used, and disposed of in the most environmentally compatible ways.

Retailers, as gatekeepers between manufacturers and consumers, have many opportunities to exert pressure in favor of sustainable development. In addition to picking up the trends that lie behind millions of separate consumer decisions each day, the retailer can also act as an educator, providing data and analysis to help the customer make better-informed choices.

Challenges Ahead

Sustainable development means more than pollution reduction and life-cycle responsibility. In the years ahead, business will be challenged to move toward "zero pollution emissions" from production plants and to redirect product development to meet social needs, including those of the poor.

The goal is to make the manufacture, use, and disposal of products more compatible with sustainable development.

Chapter 8
Technology Cooperation

The requirement for clean, equitable economic growth everywhere, but particularly in the developing world, remains the single greatest problem within the larger challenge of sustainable development. "Technology transfer"—the movement of the technology required for economic development from where it exists to where it is needed—has long been a contentious issue in discussions between industrial and developing countries.

But technology transfer does not adequately capture the nature of the challenge posed by sustainable development. We suggest the term "technology cooperation," which entails a broader range of objectives, is focussed on business development, and emphasizes building up the infrastructure, wealth-generating capacity, and competitiveness of a country. It works best through business-to-business long-term partnerships that ensure that both parties benefit by commitment to the continued success of the project.

The "software" of a technology is as important as the hardware. Software here refers not only to the know-how and the operating and maintenance skills associated with the technology, but also to adaptations appropriate to the cultural context and experience of the receiving organization and the society that is going to use it. Software also includes the communications and other training tools to be provided by the technology's originator.

Technology cooperation for sustainable development is becoming a major focus of business, governments, and multilateral organizations. Such cooperation is complex. It is best seen as an interconnected chain of five links:

- ***Competitive advantage.*** There is a desire to transfer technology that will encourage competitive advantage and environmentally sound development. For example, governments of industrial countries are realizing that it may be cost-effective to protect their own environments by spending money to prevent damaging emissions that arise outside their borders. Multinationals are also recognizing the need to be as clean abroad as at home.
- ***Long-term partnerships.*** Participants want long-term partnerships for technology cooperation, as these are the primary means of international business development. Elements of such partnerships include a long-term commitment to business development; to the training of employees; to adapting, improving, and upgrading technologies; and to introducing new management systems. Key in this context is the adaptation and orientation of technology to the local needs of people and markets in developing countries.
- ***Training.*** The provision of technical and management training is essential for safe, efficient, environmentally sound operations. Basic education determines the skills and attitudes of the work force. Advanced education sets the orientations and attitudes of professionals and managers. Training improves and motivates everyone. Investments by governments in education and training is the most critical factor in developing this capacity.
- ***Innovation.*** Training should produce innovators. Making this link involves integrating personnel from foreign subsidiaries and joint ventures into relevant research and development activities, through training and personnel exchanges inside the company. The purpose is to join the development of technology with technology cooperation.
- ***Sustainability.*** Innovation should be linked to the goal of sustainable development and all the management changes, new products, new processes, and new infrastructure that go with it.

Creating technologies for sustainable development will require

massive efforts and investments over many years. This will be devised within a new conceptual framework that is only now beginning to form. It will amount to another industrial revolution. This long process should begin at once, and multinationals are expected to lead the way.

Chapter 9
Sustainable Management of Renewable Resources: Agriculture and Forestry

Farming and forestry are central to sustainable development because of the large numbers of people working in both areas, the amounts of assets involved, and the extensive, direct impacts both have on renewable resources and the environment.

National and international strategies for the use of such resources must be changed to follow the principles of more open, competitive markets and drastically reduced trade restrictions. There should be more access to key production factors such as credit, land, and know-how. Effective property rights, land tenure, and land-use policies should be encouraged. Improvements should be made in education, research, and management training, particularly in the developing countries.

Business can best contribute to these efforts within the framework of the market economy, with a mix of economic instruments, clear performance-based regulations, and corporate stewardship based on international standards.

Food and Agriculture

It is often assumed that wealthier countries do more damage to the environment than poorer countries, but in the case of agriculture, the opposite may be the case. Understanding the reasons for this is essential to achieving the goal of sustainable farming, which involves feeding a growing population, sustaining farm incomes to keep farmers in business, and protecting the earth's ability to continue providing food.

Sustainable agriculture requires open markets and clear trade rules, endorsement of GATT's efforts to eliminate trade subsidies and barriers that distort free agricultural trade, increased food production on existing farmland rather than the clearing of forests and cultivation of fragile soils, and research to develop "best management practices" tailored to local farming conditions.

Sustainability must be improved in developing countries. We recommend the following initiatives:

- securing property rights and access to credit for poor farmers;
- funding more research and development of new technologies, plants, and inputs best suited to fragile soils, and management practices tailored to poor farms;
- starting extension-agent programs to train farmers—and also more client-oriented programs in which farmers train extension workers about the true nature of their problems;
- encouraging optimal use of fertilizers and crop-protection chemicals where they can be used properly;
- controlling improper agricultural chemical use and ending subsidies that lead to overuse;
- improving the most critical areas of infrastructure that will decrease food spoilage and increase availability; and
- placing restrictions on the farming of fragile soils and forests.

Forestry

About three quarters of the planet's forests are now owned by governments. Government forestry has concentrated on providing raw materials to large industries, often in pursuit of export markets. But governments have rarely been effective at running forestry enterprises.

The growing opportunities and responsibilities for private business in forestry require it to analyze the market conditions and the principles of sustainable use of this renewable resource.

Forests provide many benefits, but in exploiting them, both governments and private business have tended to focus on the

more obvious material values of forest products—usually the timber or the forest soil—to the exclusion of forest ecosystem and social services. This is because forest services have rarely had a market value. As a consequence, developing-country forests have declined by nearly half over this century.

Forest products must be harvested in ways that allow forests to renew their supply, which means retaining their ecosystem processes and social services. Elaborating the principles of sustainable forestry, implementing them, and developing appropriate inventory and accounting techniques will require much more research and development, training, education, and management skills. Increased, systematic international cooperation is needed.

Many characteristics of private business make it suitable for involvement in sustainable forestry. These include the effective control of assets; financial resilience; the ability to use resources efficiently due to market competition; resources for afforestation; access to markets; and access to technology and research capability.

Private forestry enterprises should strive to meet their commercial objectives while benefitting the local society, economy, and ecosystems. Occasionally the provision of social and ecological benefits from forestry can earn income, because demand for them enters the marketplace (such as recreation, water supplies, and land reclamation). But more often maintaining these benefits is a necessary cost.

Governments need to reduce their roles in forestry production, which have proved to be inappropriate, and transform the production forestry sector into a market area promoting sustainable development.

A government's policy framework must include recognizing the economic, social, and ecological values of forests; treating forests as renewable capital rather than stock resources; ensuring business access to the right kind of land for forestry, which entails neither compulsory acquisition of private or communal property (which has adverse social impacts) nor the clearing of natural

forests for plantations (adverse environmental impacts); and providing clear, performance-related regulations of conduct.

Chapter 10
Leadership for Sustainable Development in Developing Countries

The history of development reveals three basic lessons that offer guidance for the future:

- Economic growth is a necessary precondition for improved social equity and for more environmentally sustainable development.
- Deficiencies of natural resources, finance, or human talents are not among the main hindrances to economic development. Misguided domestic policies and patterns of resource allocation have presented more serious obstacles.
- Unless the developing regions are put on a sustainable path, their problems will affect all parts of the world.

Where governments have tried to carry out nation-building largely by themselves, with little reliance on the entrepreneurial skills of their people, the result has at best been wealth for a minority and relative poverty for the majority. Poverty is bad for human beings and it is also bad for business. It is business that turns needs into markets capable of meeting those needs. Business is concerned about mass poverty not because it wants to be charitable, but because business can assist development simply by being more effective.

We know that the search for new paths toward sustainable development must be based on local initiatives and decisions supported by the utmost in international cooperation. Economic progress, social progress, and the sound management of environmental resources must all proceed apace. To strive for the first goal while ignoring the second two destroys the basis of all progress.

The only way forward is to "decouple" economic growth from environmental impact. Progress must be based on individual

nations' own realities and possibilities, but it will also require international cooperation. This introduces the difficulty of "conditionality," which refers to the conditions placed on things such as aid, trade, and debt relief. Conditionality is condemned by most governments in developing countries, yet it is daily reality for business people. Business leaders face conditions from, for example, investors. But these conditions travel both ways, for the investor meets certain conditions too. The substance and form of the conditions are decided by a bargaining process between the two sides.

Thus conditionality—as long as it is agreed to by both sides—might become acceptable in development. A better expression and approach might be "reciprocal commitments."

Obstacles and Opportunities

There are at least six concerns that, from a business perspective, are of particular importance to developing countries.

Population Growth

The world's population increases by 1 million people every four to five days. Of approximately 144 million children born each year, 126 million are born in the developing world.

All successful programs to reduce population growth have included measures to improve standards of living of the poorest and to decrease infant mortality rates, so parents will have the confidence to have fewer children.

Business—given the chance—can help governments by fostering economic growth in a socially and ecologically sound way. Business can also create jobs, provide training, and help absorb as many people as possible into the modern sector of the economy.

Poverty, Migration, and the Environment

Population growth and poverty cause families to move, either to cities or to fragile ecosystems that should not be farmed. Both

types of movement create massive environmental and social problems.

The causes of this damage can be traced to the causes of poverty: all the factors that hinder poor people from developing their talents and their potential. These include closed markets, weak education systems, and the lack of access to property, credit, and know-how.

Many countries must provide more farmers with access to land. Given secure tenure, the right market signals, and the right information, many of the poorest farmers on the poorest lands can produce surpluses for a growing population.

Indebtedness in the Developing World

The combined external debt of the developing world at the end of 1990 was $1.36 trillion. The interest payments on this debt alone account for about a third of total exports of developing countries. These debts have been a major impediment to economic growth, the reduction of poverty, and the improvement of environmental conditions. But there are three hopeful developments:

- ***Improving government.*** It is surprising how quickly a country can begin to solve its debt problems by changing the macroeconomic and political framework to attract foreign and local investment and encourage internal saving.
- ***Swapping debt for nature.*** Here a debtor country exchanges a portion of its external public commercial bank debt for an amount of local currency equivalent to the secondary market value of the paper, plus a premium. The local currency is then used to finance sustainable development projects. These swaps, albeit promising, have had a modest impact on overall debt.
- ***Mutual accountability.*** This concept is encouraging a search for solutions where lender and debtor agree to obligations each must fulfill. This is a new area. But it is clear that a more positive relationship of accountability would give developing nations the opportunity to discuss seriously with their creditors the conditions that are necessary for success—or the defining of new rules.

Ineffective Rules of the Game

Once an atmosphere of trust and confidence has been established, new ways can be found to tackle the issues of growth, debt, and sustainable development.

The recipe for an attractive investment climate is clear: macroeconomic stability; free, open markets; clear property rights; and political stability. Unless these conditions are largely satisfied, sustainable development is simply not possible. This is why the structural adjustment programs developed by the World Bank and the International Monetary Fund, complemented by other institutional reforms, can be helpful.

Small Enterprises

One of the key ways of alleviating poverty in the developing world and spreading entrepreneurial talent is through encouraging the growth of small and medium-sized enterprises. This is because it encourages equity of opportunity in economic development, as many jobs in the developing world are in these enterprises. In addition, such enterprises are flexible, react quickly to needs and demands, and show talent for innovation.

Education and Training

Investments in people are indispensable for sustainable development, sustained growth, and technology cooperation. The public and private sectors could complement one another in developing educational programs.

Options for Business Leadership

Governments create the frameworks in which business can produce the technology, the innovations, and the processes for sustainable development. Business leaders are looking forward to improved conditions as governments begin to deregulate markets, privatize enterprises, and stabilize basic economic conditions.

Business is often seen to be interested only in short-term profits. Yet business leaders, as well as politicians and indeed most people, have good reason to focus on immediate concerns: those who do not enjoy a relatively secure situation in the present are little motivated to care for the longer term future.

Leaders of all types now face new chances to combine their achievement of present success with efforts to safeguard the long-term survival of their societies. Business leaders have special responsibilities and unusual opportunities in the global quest for sustainability. They are called on to contribute their skills and experience to defining the new rules of the economic game. And they are expected to make this happen in the real world, where wealth is created and goods and services are supplied.

The true global business challenge, then, is to benefit from the system while contributing to and improving it. This is the essence of sustainable development.

CASE STUDIES: SUCCESSFUL STEPS TOWARD SUSTAINABLE DEVELOPMENT

As the first 10 chapters of *Changing Course* demonstrate, sustainable development is a business issue that needs to be made a reality in each line function in every company. The second section of our book contains 38 case studies that provide living examples of companies that have successfully met this challenge across a range of different issues. These are listed below.

Chapter 11
Managing Change in Business

New England Electric: Making Energy Conservation Pay
3M: Building on the Success of Pollution Prevention
Du Pont: The CEO as Chief Environmental Officer

Chapter 15
Managing Cleaner Production

Dow Chemical: Making Waste Reduction Pay

Harihar Polyfibers: Promoting Productivity to Prevent Pollution

Holderbank: Making Cement with Less Energy

Ciba-Geigy: Designing a Low-Pollution Dyestuff Plant

ConAgra/Du Pont: Profiting from Recycled Waste

Chapter 16
Managing Cleaner Products

Smith & Hawken: Promoting Products of Sustainable Forestry

Procter & Gamble: Using Life-Cycle Analysis to Cut Solid Waste

Migros: Using Life-Cycle Analysis in Retail Operations

HENKEL: Developing Substitutes for Phosphates in Detergents

Laing: Energy-Efficient Housing

Volkswagen: Recycling the Car

Pick'n Pay: Retailers and Sustainable Development

ENI: Developing a Replacement for Lead in Gasoline

Chapter 17
Managing Sustainable Resource Use

ABB: Introducing Clean Coal at Värtan

Triangle Limited: Energy from Biomass

E.I.D. Parry: Integrated Rural Development

Aracruz Celulose: Sustainable Forestry and Pulp Production

ALCOA: Sustainable Mining in the Jarrah Forest