global issues

An Electronic Journal of the U.S. Department of State • April 2002 Volume 7, Number 1

From the Editors

This journal is about sustainable development, specifically the strategies and responsibilities that the United States government believes are critical if we are to fulfill the hopes for a decent life for the world's poorest people.*

The U.S. government believes that developed nations have a responsibility to provide the people of developing nations with the tools they need to seize the opportunities of the global economy—opportunities that come from international aid, foreign investment, domestic capital, and trade. To use those tools effectively, however, developing nations need to adopt political, legal, and economic policies that make development successful.

Too often vital resources, sometimes made available with the help of other nations, are lost to the developing countries. Roads that should make market access possible for agricultural entrepreneurs are not completed, succumbing to inadequate financial planning or the diversion of funding. An ambitious plan to provide potable water founders when a change of administration alters the political priorities that shape budget decisions.

International development experts, too, must make better use of resources. Projects must be respectful of environmental interests and the realities of the market while not encumbering the developing nations with overwhelming debt.

We can and must do better. This August's World Summit on Sustainable Development offers great promise because so many of the critical actors in the development process are dedicated to working as a world community to address the challenges ahead.

**Sustainable Development, as defined by the World Commission on Environment and Development (the Brundtland Commission), is "the capacity to meet the needs of the present without compromising the ability of future generations to meet their own needs." Development needs are now understood to go beyond economic issues to encompass the full range of social and political issues that define the overall quality of life.*

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global issues
An Electronic Journal of the U.S. Department of State
ejglobal@pd.state.gov

Publisher . . . . Judith S. Siegel
Editor . . . . William Peters
Managing Editor . . . . Jim Fuller
Text Editor . . . . Charlene Porter
Internet Editor . . . . Tim Brown
Associate Editors . . . . Deborah Brown
. . . . Patrick Mendis
. . . . Wayne Hall
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Editor, Global Issues & Communications
Office of International Information Porgrams
IIP/T/GIC
U.S. Department of State
301 4th Street, SW
Washington, D.C. 20547
United States of America.
E-mail: ejglobal@pd.state.gov

FOCUS

A New Compact for Development in the Battle Against World Poverty

By George W. Bush
President of the United States

The president, renewing the U.S. commitment to fight against poverty, calls for a new compact for development defined by greater accountability for rich and poor nations alike. The following are excerpts of remarks made March 22, 2002, at the United Nations Financing and Development Conference in Monterrey, Mexico.

We meet at a moment of new hope and age-old struggle in the battle against world poverty. I'm here today to reaffirm the commitment of the United States to bring hope and opportunity to the world's poorest people, and to call for a new compact for development defined by greater accountability for rich and poor nations alike.

Many here today have devoted their lives to the fight against global poverty, and you know the stakes. We fight against poverty because hope is an answer to terror. We fight against poverty because opportunity is a fundamental right to human dignity. We fight against poverty because faith requires it and conscience demands it. And we fight against poverty with a growing conviction that major progress is within our reach.

Yet this progress will require change. For decades, the success of development aid was measured only in the resources spent, not the results achieved. Yet pouring money into a failed status quo does little to help the poor, and can actually delay the progress of reform. We must accept a higher, more difficult, more promising call. Developed nations have a duty not only to share our wealth, but also to encourage sources that produce wealth: economic freedom, political liberty, the rule of law, and human rights.

The lesson of our time is clear: When nations close their markets and opportunity is hoarded by a privileged few,

no amount—no amount—of development aid is ever enough. When nations respect their people, open their markets, invest in better health and education for their people, then every dollar of aid, every dollar of trade revenue and domestic capital is used more effectively.

We must tie greater aid to political and legal and economic reforms. And by insisting on reform, we do the work of compassion. The United States will lead by example. I have proposed a 50-percent increase in our core development assistance over the next three budget years. Eventually, this will mean a $5,000-million annual increase over current levels.

These new funds will go into a new Millennium Challenge Account, devoted to projects in nations that govern justly, invest in their people, and encourage economic freedom. We will promote development from the bottom up, helping citizens find the tools and training and technologies to seize the opportunities of the global economy.

I've asked Secretary of State Powell and Secretary of Treasury O'Neill to reach out to the world community to develop clear and concrete objective criteria for the Millennium Challenge Account. We'll apply these criteria fairly and rigorously.

And to jump-start this initiative, I'll work with the United States Congress to make resources available over the 12 months for qualifying countries. Many developing nations are already working hard on the road—and they're on the road of reform and bringing benefits to their people. The new Compact for Development will reward these nations and encourage others to follow their example.

The goal of our development aid will be for nations to grow and prosper beyond the need for any aid. When nations adopt reforms, each dollar of aid attracts two dollars of private investments. When aid is linked to good policy, four times as many people are lifted out of poverty compared to old aid practices.

All of us here must focus on real benefits to the poor, instead of debating arbitrary levels of inputs from the rich. We should invest in better health and build on our efforts to fight HIV/AIDS and other diseases, which threaten to undermine whole societies. We should give more of our aid in the form of grants, rather than loans that can never be repaid.

The work of development is much broader than development aid. The vast majority of financing for development comes not from aid, but from trade and domestic capital and foreign investment. Developing countries receive approximately $50,000 million every year in aid. That is compared to foreign investment of almost $200,000 million in annual earnings from exports of $2.4 million million. So, to be serious about fighting poverty, we must be serious about expanding trade.

Trade helped nations as diverse as South Korea and Chile and China to replace despair with opportunity for millions of their citizens. Trade brings new technology, new ideas, and new habits, and trade brings expectations of freedom. And greater access to the markets of wealthy countries has a direct and immediate impact on the economies of developing nations.

As one example, in a single year, the African Growth and Opportunity Act has increased African exports to the United States by more than 1,000 percent, generated nearly $1,000 million in investment, and created thousands of jobs.

Yet we have much more to do. Developing nations need greater access to markets of wealthy nations. And we must bring down the high trade barriers between developing nations themselves. The global trade negotiations launched in Doha confront these challenges.

The success of these negotiations will bring greater prosperity to rich and middle-income and poor nations alike. By one estimate, a new global trade pact could lift 300 million lives out of poverty. When trade advances, there's no question but the fact that poverty retreats.

The task of development is urgent and difficult, yet the way is clear. As we plan and act, we must remember the true source of economic progress is the creativity of human beings. Nations' most vital natural resources are found in the minds and skills and enterprise of their citizens. The greatness of a society is achieved by unleashing the greatness of its people. The poor of the world need resources to meet their needs, and like all people, they deserve institutions that encourage their dreams.

All people deserve governments instituted by their own consent; legal systems that spread opportunity, instead of protecting the narrow interests of a few; and the economic systems that respect their ambition and reward

efforts of the people. Liberty and law and opportunity are the conditions for development, and they are the common hopes of mankind.

The spirit of enterprise is not limited by geography or religion or history. Men and women were made for freedom, and prosperity comes as freedom triumphs. That is why the United States of America is leading the fight for freedom from terror.

We thank our friends and neighbors throughout the world for helping in this great cause. History has called us to a titanic struggle, whose stakes could not be higher because we're fighting for freedom itself. We're pursuing great and worthy goals to make the world safer, and as we do, to make it better. We will challenge the poverty and hopelessness and lack of education and failed governments that too often allow conditions that terrorists can seize and try to turn to their advantage.

Our new approach for development places responsibility on developing nations and on all nations. We must build the institutions of freedom, not subsidize the failures of the past. We must do more than just feel good about what we are doing; we must do good. By taking the side of liberty and good government, we will liberate millions from poverty's prison. We'll help defeat despair and resentment. We'll draw whole nations into an expanding circle of opportunity and enterprise. We'll gain true partners in development and add a hopeful new chapter to the history of our times.

The World Summit on Sustainable Development: Beginning a New Chapter in Sustainable Development History

By Paula J. Dobriansky
Under Secretary of State for Global Affairs

The upcoming World Summit on Sustainable Development in Johannesburg offers an historic opportunity to re-energize the international community's pursuit of sustainable development. Doing this will require working together to ensure that all countries have robust institutions and sound policies, and forging public-private partnerships to achieve concrete results.

In a landmark foreign policy address at the Inter-American Development Bank on March 14, President Bush announced substantial increases in U.S. development assistance programs and confirmed the United States' commitment to a new vision for helping the developing world. He underscored that the "advance of development is a central commitment of American foreign policy. As a nation founded on the dignity and value of every life, America's heart breaks because of the suffering and senseless death we see in our world. We work for prosperity and opportunity because they're right. It's the right thing to do."

The World Summit on Sustainable Development (WSSD) to be held August 26 to September 4 in Johannesburg is an historic opportunity to re-energize and re-focus the international community's pursuit of sustainable development.

The 1992 Rio Conference on Environment and Development and the 10 years since have established much of the framework for our pursuit of sustainable development. Now, to fulfill the promise of the Rio decade—to truly achieve sustainable development—the Johannesburg Summit must usher in a new chapter in which we focus on implementation and concrete results. To do so, we must work together to ensure that all countries have the robust institutions and sound policies that are essential to building a prosperous future for their people and our planet. We must forge partnerships with other governments, with businesses, and with civil society groups that ensure successful on-the-ground implementation.

The Rio Legacy: All Development Must Be Sustainable

The Rio decade has elevated the world's understanding that development must be sustainable, that the three "pillars" of sustainable development—environmental protection, economic development, and social development—must go hand-in-hand. Because each pillar is integrally linked to the others, effective pursuit of sustainable development requires a balanced approach that integrates all three components.

Rio and the post-Rio era have also established a framework for addressing sustainable development. The

Rio Declaration and Agenda 21 provide us with guiding principles and a roadmap for fulfilling those principles. Multilateral environmental agreements that effectively balance the three pillars of sustainable development as well as voluntary mechanisms such as the International Coral Reefs Initiative and the Arctic Council provide avenues for addressing environmental problems. Further, the international development goals in the United Nations Millennium Declaration help to outline a path that fosters economic and social development.

Guiding Principles for the Johannesburg Decade

As we head to Johannesburg, we must now turn our attention from building the framework to implementing sustainable development on the ground.

For all countries—developed and developing—sustainable development must begin at home. Environmental protection, economic development, and social development all depend on a foundation of good governance in which free markets, sound institutions, and the rule of law are the norm. Sustainable development cannot be achieved in an atmosphere where corruption runs deep, private property is unprotected, markets are closed, and private contracts are unenforceable.

In his March 14 address, President Bush stressed the importance of good governance, pledging a $5,000 million increase in development assistance as part of a "new compact for global development." In return for this additional commitment, the United States seeks developing country actions on the reforms and policies that make sustainable development effective and lasting.

Sound economic policies, solid democratic institutions responsive to the needs of the people, and improved infrastructure are the basis for sustained economic growth, poverty eradication, and employment creation. Freedom, peace and security, domestic stability, respect for human rights—including the right to development—the rule of law, gender equality, market-oriented policies, and an overall commitment to just and democratic societies are also essential and mutually reinforcing. Operationally, five of the key elements that are critical to creating an enabling domestic architecture that makes sustainable development possible are: effective institutions; education, science, and technology for decision-making; access to information; stakeholder participation; and access to justice.

Building a solid foundation for sustainable development is a responsibility shared by developed and developing countries. In the United States, we often take these elements for granted, even while we strive to improve our efforts in this arena. Many developing countries, however, recognize the fundamental importance of these issues to sustainable development, but are just beginning to explore how to operationalize them.

Implementation through Partnerships

Another major theme we and other countries bring to the WSSD is a belief that public/private partnerships—involving governments at all levels, as well as NGOs, businesses, and other stakeholders—are critical to achieving sustainable development. Within the United States, concrete action on sustainable development takes place not just at the national level, but at the state and local levels as well. Furthermore, it rarely involves only the government; much more often, it happens in partnerships involving business and civil society.

The World Summit on Sustainable Development should be a launching point for these partnerships. The United States will lead by example, seeking to work in partnership with stakeholders and other governments in key sectors such as the following:

- Health
- Energy
- Water
- Education
- Oceans and Coasts
- Food Security, Sustainable Agriculture, and Rural Development
- Forests

A New Chapter

The World Summit on Sustainable Development is a tremendous opportunity to turn a new corner on sustainable development. President Bush has clearly articulated that the United States will "lead by example." We have a destination. To get there, we need to turn our attention towards implementation. By working together to strengthen the foundation of domestic good governance that is essential to the realization of sustainable development and by forging partnerships that achieve concrete results, we can make Johannesburg a success.

Foreign Assistance Builds a Foundation for Sustainability

By Andrew S. Natsios
Administrator, U.S. Agency for International Development

The U.S. Agency for International Development (USAID), with its mission to support long-term and equitable economic growth, will be among the principal actors carrying out the Bush administration's vision for sustainable development. Administrator Natsios reflects on the changing philosophy in foreign assistance.

The end of the Cold War and the rise of globalization have brought tremendous change to the political and economic dynamics that shape the world. As the U.S. government's principal institution working to fight poverty and end hunger in developing countries, USAID has recognized how these changing global forces also necessitate a new vision for development assistance.

In the Bush administration, we are reconstructing the concepts of foreign assistance, and keeping pace with the momentum of the private sector. We are also informed with the vast experience we've gained from the successes and failures of aid programs over the last 40 years.

We are changing the concept of what foreign assistance should achieve. Foreign assistance is not merely a transferal of money from the North to the South. We are rethinking what foreign assistance is all about, rethinking the purpose of foreign assistance, recognizing that it's not how much you spend in foreign aid—it's how you spend it.

We have learned that transferring large amounts of cash into the treasuries of developing country budgets is not a fail-safe way to achieve long-term economic, social, and democratic sustainability. We have learned that to sustain growth over a long period of time, aid programs must work to attract private sector capital in order to develop economies.

All of the countries that were once poor and have become prosperous in recent decades have done it through private sector growth and official development assistance. Foreign assistance has helped these countries achieve sustained growth to eliminate poverty. They've done it through technology transfer, through institution building, through improved health services, and through policy reform. Successes in these investments have shown us that foreign assistance spending in these areas will create the environment for private sector-led growth.

For this reason, President Bush announced in March 2002 that the United States would create the Millennium Challenge Account to provide additional development assistance to a select number of developing countries that demonstrate a strong commitment toward good governance, the health and education of their people, and sound economic policies that foster enterprise and entrepreneurship. The Millennium Challenge Account will increase the baseline level of official development assistance by $5,000 million over the next three years, amounting to an unprecedented 50 percent increase in official development assistance from the United States.

Technology Transfer

The "green revolution" in Asia is the best example of the stunning progress that can result from technology transfer. Genetically modified wheat, developed in Mexico by an American-led team, increased yields and was widely distributed for planting through India and Pakistan. The success of these crops helped to avert famine in the 1960s, but not through a transfer of official development assistance (ODA). The "green revolution" fundamentally was a technology transfer of improved seed varieties and of new kinds of equipment that allowed smaller farmers to grow more food. It's a movement of fertilizers and different kinds of inputs that helped small farmers increase food production. The "green revolution" was a spectacular success brought about by an alliance between American scientists, U.S.-based foundations, the World Bank, and USAID.

In Africa, technology transfer has helped to create dramatic increases in yields. In Mali's inner delta region, for instance, rice production doubled between 1993 and 2000 as a result of USAID-supported programs that created incentives to invest in better rice varieties and processing technology, improving the management of both agricultural and natural resources. In this administration, we are working to encourage African farmers to make use of the latest agricultural research, which we know can increase productivity.

Institution Building

Since the end of the Cold War, developing countries have made a dramatic movement toward democratic capitalism as the operative model of governance. In making that transition, however, many countries discovered that they did not have the institutional experience to operate all the mechanisms of a democratic system. They had never held free and fair elections with a full ballot of candidates from multiple parties. They were not prepared to run a parliament, not prepared to have journalists and broadcasters looking at the problems of government in a very public way.

USAID and other donor governments have facilitated institution building to help these countries set in place all the mechanisms operating in an open democratic society. We are supporting programs to train people in the management of their new democratic institutions. We are training journalists to understand solid fact-based reporting, and the concepts of fairness and balance. We are training government officials in how to govern in an open way. We are sponsoring democracy programs introducing new approaches to crisis management and conflict analysis to assist opposing parties in resolving their issues peacefully and within the framework that a democratic system provides.

Policy Reform

USAID has also been instrumental in assisting countries to reform their policy environment as they move from the socialist economic model toward a free market model. If a country isn't adhering to macroeconomic policies that will sustain a free market, no amount of foreign assistance is going to lift that nation from poverty to prosperity. Policy reform is an absolute prerequisite for long-term sustainable development.

USAID has been helping countries make the policy adjustments necessary to adopt macroeconomic policies that will attract investment. So we've been providing guidance to nations in how to control inflation, stabilize currencies, and prevent counterfeiting. Through these reforms, countries can create an economic environment where farmers and businesses have incentives to grow and produce because they are assured their profits will be safe. Creation of this economic stability lays the foundation for prosperity and an end to poverty. Over and over again, policy reform has proven itself to be an absolute prerequisite for long-term sustainable development.

Public Services

Policy reforms carry over into the arena of public services as well. Many governments in the developing world have been unable to provide quality public services at a reasonable cost to a large portion of the population.

USAID has helped build institutional capacity of the ministries in these countries to carry out public services. The last 40 years have witnessed dramatic improvements in child mortality, in maternal mortality, and in literacy levels in many countries. As a result of the programs we've supported, institutional capacity has increased, allowing improvement in the delivery of these critical public services.

We've made significant progress through the decades in our recognition of the interrelationship between the successful delivery of these public services and a nation's capacity to overcome poverty and achieve long-term sustainability. Mothers must be healthy if babies are to be healthy. Children must be healthy in order to learn and become educated. Education creates a capable, productive workforce that will lead a nation to prosperity.

President Bush has established an increase in spending for education in the developing world as a top priority. USAID funds devoted to this purpose will increase from $100 million to $170 million in two years.

Leadership

As USAID pursues foreign development assistance on these four tracks, we also remain keenly mindful that strong, capable local leadership is profoundly important in achieving success. Only where national commitment exists can these initiatives take hold and bring results.

Mozambique provides an outstanding example. This East African nation had one of the most brutal civil wars in the last quarter of the 20th century after independence from Portugal. Two to 3 million people died of starvation. Terrible atrocities were committed. A decade of Marxist economic policies had failed to build upon the country's rich agricultural land and mineral resources, leaving Mozambique as one of the poorest countries in the world. Fighting ended in the 1990s, a constitution and a multi-party democracy were adopted, and an international aid effort began. By 2001, Mozambique experienced a 14 percent growth rate in its economy during a one-quarter period.

Leadership is a fundamental element in that progress. Prime Minister Pascoal Manuel Mocumbi is very proud of having created a policy environment where there is widespread investment across the country. Areas that experienced famine during the civil war are now exporting foods as a result of USAID agricultural programs. Dr. Mocumbi is deeply interested in agriculture, and his cabinet members are among the most able ministers I've seen in many developing countries. They created the policy environments and they attracted capital to build on the base they created.

Private Sector

The model for foreign development assistance has evolved at the same time another relevant trend has developed in recent decades. In 1969, 70 percent of all capital flows from the United States to the developing world were in the form of foreign assistance. Now only 20 percent of all capital flows from the United States to the developing world come from official development assistance. Eighty percent of the money now flows from private entities—foundations, nongovernmental organizations (NGOs), universities, and most significantly, private companies. The statistic is the inverse of what it was 30 years ago.

U.S. foreign aid policies must evolve in keeping with that trend. Under an initiative called the Global Development Alliance, these organizations are joining the U.S. government as partners in helping developing nations chart a course toward sustainability. One-third of USAID's budget flows through international and American-based NGOs to the developing world. Another third is distributed through universities, private associations, and locally based NGOs. The final third is spent through the private sector.

With these partners, USAID will build alliances to target specific development objectives, matching our resources with theirs to accomplish those objectives. We've joined with a software company to bring Internet access and computer training to the developing world. In other arrangements, companies are working with USAID to assist governments in creating regulatory policies that will address illegal lumbering and deforestation in ways that will preserve environmental resources while still allowing some opportunity for harvesting resources.

Accountability

The achievements made by foreign aid from the United States and other industrialized nations over the last few decades are impressive. Infant and child death rates in the developing world have been reduced by 50 percent. Health conditions around the world have improved more

in the last 50 years than in all of previous human history. Smallpox has been eradicated; polio nearly so.

To insure a continued domestic commitment to these worthwhile programs, USAID must assure accountability and results from the programs it funds. Our programs oriented toward policy reform must meet specified benchmarks for balancing budgets, achieving macroeconomic norms, and controlling inflation. We work with local governments to reach those goals each year. All of USAID's 71 country programs are assessed by performance indicators, which set targets for signs of achievement such as increasing literacy, reducing child mortality, and increasing immunization rates.

The people of the United States have a profound humanitarian commitment to improve the quality of life in less privileged nations. They also know that aid is most successful when it is no longer needed. The greatest assistance the United States can give to developing nations is the achievement of self-sufficiency and sustainability.

COMMENTARY

Perspectives on Development

In the conversation below, based on oral and written exchanges, three experts share their perspectives on the broad international views of development strategies and outline their expectations for the upcoming World Summit on Sustainable Development to be held August 26 to September 4 in Johannesburg, South Africa. Global Issues editor William Peters assembled the panel and served as moderator.

Dr. Calestous Juma is program director for science, technology and innovation at the Center for International Development at Harvard University's Kennedy School of Government. He recently became chancellor of the University of Guyana.

Professor Simon S.C. Tay is chairman of the Singapore Institute of International Affairs, teaches international law at the National University of Singapore, and is a three-term member of the Singapore Parliament.

Dr. Patrick Mendis is a Diplomacy Fellow of the American Association for the Advancement of Science serving as Special Assistant to the Assistant Secretary of State for Educational and Cultural Affairs. Dr. Mendis has worked previously on development issues with the United Nations, the World Bank, and the Department of State.

The opinions expressed are personal and not meant to reflect the institutions with which the experts are affiliated nor the views of the U.S. government.

Peters: It seems that we continue to define and refine our understanding of what sustainable development means and the models that characterize our approaches. Could you discuss this from your perspective, Professor Tay?

Tay: Your observation is right. We've moved from the initial idea of a take-off phase of development, focused on a major project—sometimes a white elephant—through a kind of overall economic model, and to a kind of structural approach focused on GDP (gross domestic product) per capita. But it is the Human Development Report of the UNDP (United Nations Development Program) and the concept of sustainable development that in an important way has refocused the way we look at development.

The keys to development, too, have come in for much rethinking. Since the Asian economic crisis beginning in 1997, the search has been on for new models and for new engines of growth, beyond capital input and exporting for development. We are now looking at things like innovation, use of technology, the idea of branding and design—and how to tie these up with disparate goods and labor-intensive work, which continue to remain part of the necessity for many developing countries.

Mendis: Can you, Calestous, shed some light on development from your African perspectives?

Juma: I see the focus on technological and institutional innovation. The last decade has been characterized by efforts to stabilize the macroeconomic situation in Africa and to promote democratization.

The next phase should be devoted to looking critically at how to foster economic renewal. This will take two complementary approaches.

First, new policies will need to pay particular attention to the role of technological innovation, especially in promoting productivity in all sectors. This should be driven by the need to participate in the global economy and to meet human needs. Such a strategy will require greater investment in human resource development, especially in scientific and technical education with particular emphasis on the biological sciences.

The second part will involve innovations in institutions that can make it possible for science and technology to play a role in sustainable development. Of particular importance is the role of universities, which will need to become more entrepreneurial in the business, conservation, and social sectors.

Today, these institutions still focus on producing functionaries for the civil service and they lack the dynamism that is needed to enable them to serve as engines for sustainable development. New educational models are badly needed in Africa. A new generation of institutions of higher learning is urgently needed that combines research, training, and utility.

Peters: In the face of this change, do you think that there are people who still hold to the older models of the development process?

Tay: There certainly are. Their view is of a human development that is basically a very United Nations-centered type of global thinking. It is a view that has been very much divested by many of the private sector and public sector constituency.

Juma: For Africa, the old view of the world has a stranglehold on the mindset of policymakers and academics. There are way too few institutions that are devoted to mapping out new directions for the continent. The field of strategic thinking and policy analysis is one of the least developed in Africa. Entrepreneurship is still a craft rather than an art. As a result, there are way too few genuine business schools that train people how to turn ideas into products and services.

Africa needs to start a genuine effort to reinvent institutions, including defining more clearly new roles of the public sector. Government has an important role of creating markets, and the blind downsizing of government has not helped the continent either. It is not the size of government that matters, but its functions and quality. Those concerned with good governance need to complement this with good diplomacy that uses international assistance to create a new leadership culture.

Peters: For many people, sustainable development is about environment, but you are talking about the concept in a different way. Where does the term sustainable development come from? Is it a product of the Rio Earth Summit?

Tay: Well, I suspect we should give credit where it's due. The term had already been used in some circles way before Rio, and even before the Brundtland Report[1] there were people using the term.

But I think the Brundtland Report really put it on the map, and then the 1992 Rio Declaration, and documents associated with the summit really established the term

among the world's governments. But I think that sustainable development remains very much a vision. We're still lacking an exact definition of what we mean by it. And in some ways the definition is still causing problems because of the compromises inherent in defining it.

Basically, there were global meetings before Rio, but I think Rio really was the summit attended by the most leaders. When you bring that many people together, and the amount of publicity attending that meeting—you know, you establish a term, you take it out from the small circle of professors, people who know these things, and bring it into the public sphere. And I think that really established it. But as I said, while the term is established, the actual content of the term remains questioned and debated.

I think it's very contested. Many times when people in Asia and other countries talk about sustainable development, the emphasis is much more on development. I even hear people talk about sustainable growth, or sustained growth—as if it were the same thing. It is not.

I think the idea of development requires us to look beyond the per capita GDP idea, and to really question the whole ambition of development—what it is that they are trying to do. Do they want to make people rich? Put more money in their pockets? Or is that money supposed to be a way to do something else?

And I think in this sense—a modern sense of freedom and development coming together—then you are talking also about how development is supposed to be sustainable. I think what we're trying to do is suggest sort of a virtuous circle—an activism in development that includes the little people, like women, children, the undereducated, the rural poor. And they will interact with the resources of development, which include the natural world, and then they have to work through the institutions of development—the governments, but also the markets, the private sector—all these things. And all this comes around in a sort of virtuous circle. It's uplifting.

Of course, this also means that our vision of sustainable development must include many more countries, continents, and societies in the world, rather than just the OECD (Organization for Economic Cooperation and Development).

Peters: I'm very captured by the term "virtuous circle." What does that mean?

Mendis: It contrasts with the "vicious circle of poverty" in development literature. The phrase "virtuous circle" is meant to improve on "the three pillars of human development" that the UNDP proposed: economic growth, social development, and environmental protection. These pillars are measured by per capita income level in terms of purchasing power parity, life expectancy, and literacy rate as elements of human development indexes.

Peters: So the new concept of sustainable development goes beyond per capita indexes and the calculus of economics?

Tay: Yes. We have to see that sustainable development, sustainability of it all, must be a social idea as well. There must be a more inclusive approach for the beneficiaries of the development process.

Juma: There is a strong case to be made for addressing "growth with equity." The concept of sustainable development as articulated by Brundtland is particularly strong on this. But more work needs to be done to figure out how to make it happen.

I would risk the suggestion that the most important starting point is not redistribution of wealth as such, but to redistribute human capabilities by providing quality education—especially in the technical fields—to a wider section of the population and particularly to women. For example, "women in science and technology" is today largely a cliché that needs to be translated into real programs.

Mendis: I agree. This is not only with women but also with under-represented minority groups as well.

In the history of development, we went from the infrastructure development approach of the Breton Woods institutions in the 1960s to the integrated rural development approach in the 1970s; then in the 1980s, the IMF (International Monetary Fund) and World Bank constructed a different program that led to the opening of economies in developing countries through Structural Adjustment Programs (SAPs). Now we are in the next stage, which began in the early 1990s with the Human Development Report by the UNDP, and which captured the essence of sustainable development with the confluence of the environmental community and UNEP (United Nations Environment Program).

The question is how all this fits into a model of global governance, transparency, openness, and rule of law in a market-driven open economy? Professor Tay, expand on that point-of-view from your own observations in Asia?

Tay: What I'm saying is not only have our concepts changed, but the engines of development and the beneficial actors have changed as well. In the earlier periods, the actors were very much the governments that provided the funds. We now recognize that while governments have a role obviously, the private sector—I don't just mean the big multinationals, but the vibrant private sector including indigenous companies, small and medium-size enterprises, as well as foreign direct investment—is critical in providing resources for development, in giving everyone a stake in society.

Juma: I agree that the private sector is the most effective way of translating knowledge into products and services.

It is critical for governments in Africa and other poor regions of the world to figure out how to create space for the emergence of private enterprises. Universities, for example, should serve as incubators for enterprises. They should nurture new enterprises just like they nurture students. Graduation ceremonies should honor students and enterprises alike.

Business and conservation plans should have the same standing as dissertations. Universities should set loan schemes for students, and professors should continue to advise students in their new business or conservation ventures. Business or conservation ventures should be intertwined with universities to form new institutional ecologies governed by rules about sharing profit, managing conflicts of interest, and promoting beneficial confluences. This is just one example of new ways that we can take advantage of new stakeholders.

Peters: I like that idea of stakeholders, because it obviously looks at them both as resources to be leveraged and as the beneficiaries.

Tay: Yes, stakeholders are beneficiaries. One of the key developments today is this connection to another troubled word: "globalization." Many people argue that globalization is necessarily harmful to development—sustainable development—as well as to the environment.

I don't think that's necessarily the case. I think we can get the right policies and the right execution so that we benefit from globalization. Singapore is an example of how this has been effectively achieved. Openness to the global economy does not necessarily mean the destruction of indigenous society or local environment.

Juma: There is fear of globalization. This is partly because many developing countries are not part of it; certainly this is the case with Africa. One of the reasons they are not part of it is because they have long been dependent on the export of raw materials and not finished goods. Their technological capability is still low and hence they are hardly competitive.

We must find ways to nurture these economies and to foster creativity and innovativeness by giving them a chance in the global market place. It is therefore important that the technology transfer provisions of the World Trade Organization's TRIPS (Trade Related Intellectual Property Rights) Agreement are implemented through the appropriate bilateral and multilateral channels. The more these countries participate in the global economy as exporters of industrial products, the more they will realize the benefits of globalization.

Africa is at a turning point. The old orders are not doing very well but the new have not been born. I see this as a unique opportunity for reinvention; probably the most important opportunity that the continent has had.

It is also an important moment for reeducation among industrialized countries. The hubris that has guided international development policies over the colonial and post-colonial period should give way to new ideas, especially those coming from Africa itself. The diversity of the continent is also an asset that allows for greater experimentation and increased chances of success. We should build on this diversity; not condemn it.

Tay: Yes, I think we can use these terms for people in all the developing regions. We must strongly emphasize the human development aspect, so that our people can have a reason to develop their skill sets to get a better life for themselves, and opportunities and the wherewithal to seize the opportunities for development.

Peters: There's a lot of talk about capacity building when talking about sustainable development. Does capacity building refer to just developing an educated populace? Are we talking about developing skill sets, or is there something that goes beyond that, when we talk about capacity building?

Juma: I use the term capacity building to mean three things: human resources development, organizational development, and institutional innovation. The first one is critical because individuals are a critical part of the system of economic change. But individuals must interact.

This is where the diversity, character, and dynamism of organizations become important. These elements provide the media through which human potential is transformed into goods and services.

Then there is the wider institutional context that includes rules, routines, and procedures. This is where the systems of governance must be strengthened for societies to function effectively.

Ultimately, institutions perform six key functions that are essential for societal evolution: reducing uncertainty by providing information and knowledge; providing incentives for adaptation and improvement; managing conflicts; promoting cooperation; allocating resources; and maintaining continuity.

Institutional dynamism is influenced largely by the interactions between continuity and adaptation. This approach reveals that capacity building is a more complex theme than is usually portrayed. We are in a phase where this term has been vulgarized and reduced to the level of petty activities involving seminars and workshops. And clearly, it is more than just education.

Tay: But the question about education is a critical one. We mustn't assume that everyone is getting the education they need. If you look at some of the schools of developing countries, they are overwhelmed. They don't have the facilities to cope with the vast number of young.

If you look at the quality of education some countries are providing, you may also be quite concerned. There is no money for technical or job-related education, to do a lab, or to do a workshop. Part of capacity building to me is developing a formal education process and making it something that can help a person find a place in the world. Oftentimes you will find very well-educated people who don't have that capacity, that experience, or the particular skills that the market needs or wants.

Mendis: That's true. Well-educated people are forced into choosing between unemployment and leaving their countries—contributing to the brain drain. Or, their hopelessness may translate into them becoming a destructive force as we have seen in some developing countries.

Tay: They become a loss for their country—maybe a temporary loss only, but certainly a loss. If you look at, say, Silicon Valley—if you look at the number of Asians there—and then you wonder, why is it that Asia doesn't have its own Silicon Valley? Why should qualified and educated people have to go to America to find an opportunity? We can make capital of them if we have the right policies. All these factors must come into play for countries to really have the capacity to use their own people.

Juma: This is an important point that reinforces the need to look critically at the kind of education provided by countries and opportunities that the government creates for the effective use of such capabilities.

There are a number of countries where universities place a great emphasis on training people in the social sciences with emphasis on social critique. This is what they do after they graduate. It should not surprise us that some of these countries also remain in constant states of political instability.

But I can think of a different form of critique—inventive activity. Every improvement on an existing product is a form of creative critique. Patents are statements about existing products. Each patent says that the job can be done better in an improved way. This kind of critique is equally destabilizing, but it is creative market instability, which is the essence of growth.

This is the lesson we learned from Schumpeter's[2] logic of creative destruction. Thus, we see that we need innovations in political and economic systems.

Peters: How do you get the right conditions for this kind of dynamic growth? Is that part of the role of government, or does it go beyond that?

Tay: I think that clearly governments—particularly in developing countries—will have to play an important role. They have to figure out what their possible competitive advantages are, what their possible niches are in a globalized world economy.

For these countries, that's a policy that will remain much more important than it has been for, say, the United

States. I hope it doesn't come to picking winners and making cronies out of certain companies, but I think the idea of finding a key sector is important. If you're in southern India, you have a certain strength in information technology in the people—you have the infrastructure. You must think about what you do with that, what you add on to that.

If you are in Shanghai, then what are the strengths you can offer? If you're on mainland China, what are the strengths you can offer?

I think these are all questions that the national and local governments must look at when they think about development and sustainable development.

Juma: I see a lot of possibilities in combining advances in information technology with advances in genomics to create new market niches for developing countries, especially building on their natural resource base. This is an avenue we should certainly explore in Africa. These opportunities exist in industrial, environmental, agricultural, and medical biotechnology.

Mendis: But all of this is going to take money, and for many development experts that means Official Development Assistance (ODA). There's a big debate in the United States on that, whether we want to promote ODA or do we want to help promote trade? What is your view on this?

Tay: I think it's not a question of do we use ODA all the time or do we just rely on trade all the time. It's a more complex issue. In China, for example, you can have a very developed Shanghai, but you may have rural development that very much needs ODA.

I would suggest also that we have to ask ourselves how accurately developed countries understand how much they are giving in ODA. My impression is that Americans think they're giving, I don't know, 5.0 percent of GDP or whatever, but really it is between 0.3 and 0.4 percent.

Juma: I think that ODA should be restructured so that it serves as an incentive for leveraging local resources and change. It should serve as a challenge. In the past, ODA served as a reward for adopting certain positions in the context of the Cold War. This period is over.

We need new models that reward creativity. We need approaches that promote innovative cultures. ODA should help to underwrite local institutional experiments, not a career of misplaced practices. ODA should help local people take risks. It should be used to support innovations, not standard activities.

And above all, ODA should focus on supporting activities that have long time frames. Less funding over longer periods is more useful than more money over shorter time frames.

Tay: There is an important role for ODA, and more is needed. But there has been a lot of shameful waste of ODA—a lot of white elephants, a lot of corruption, and a lot of mismanaged projects—which don't help to make an argument for more ODA.

And we have to look beyond ODA. Governments can give ODA, but what can other people do? There are so many times that companies can do the right thing. Companies can invest well, they can train local populations, they can transfer knowledge, they can help with marketing techniques, and they can help develop local suppliers—all without harming the bottom line and while making a profit. They can observe a development bottom line.

Juma: The issue may not be the magnitude of ODA, but its character, quality, and objectives. This is what we need to focus on.

For Africa, the largest gap in any field lies in the area of institutional innovation. This is where ODA should contribute. Paradoxically, donors have always been reluctant to support institutional development and have remained in favor of project activities. This should change.

Mendis: The choices are not only trade or ODA. Singapore has a high level of science and technology development compared to other neighboring countries. How much importance do you put on intellectual property rights as an incentive for further economic development?

Tay: The way I see it is that Singapore has made a transition. Like many developing countries, in an earlier period we were sort of a pirates' haven. You could get these fake watches off the street, free software when you bought a computer. But I think that, because of the pressure of America as our largest trading partner and because of the development of our own innovation and intellectual property, that has changed quite dramatically.

Peters: So Singapore has a growing stake in the protection of intellectual property rights?

Tay: Yes. One of the challenges of intellectual property is for the countries that have great promise for the future development of their biological resources—some of those African countries that Dr. Juma mentioned. Some intellectual property provisions would allow foreign companies to make an exclusive property out of what would otherwise be a resource for a local company or a communal resource. We don't want to authenticate bio-piracy. I don't think we should be in the position of allowing a foreign company to come in, refine something a bit, put their stamp on it, and say, "Well, it's ours and only ours."

We must respect the rights of the indigenous person or the local community. This is an ongoing debate, especially here in Asia. We did see progress with the agreement of pharmaceutical companies to lower the prices for HIV/AIDS medicine. This seems to me the start of something bigger.

Juma: Let's look at the situation in Africa. I think that these countries badly need intellectual property institutions. But the focus should be on promoting inventive activity, in addition to protecting intellectual property rights. The objectives of the Kenyan Industrial Property Act first adopted in 1989 provide a good example.

Patent offices that seek to promote inventive activity will also help these societies figure out how to make use of technologies that are already in the public domain. This way there will be less political pressure to get stuck on the presumed impacts of the protection of intellectual property rights.

As countries move up the inventive ladder and start to add their own patents, they will start to appreciate the importance of intellectual property protection. But I would caution against using a standard model law for developing countries.

I would go further and say that each country needs separate laws and institutions that promote innovation along the lines of the draft law that is now being discussed in Brazil. Going along this path will also be in line with the results of the 2001 World Trade Organization Ministerial Meeting in Doha in relation to technology transfer.

Peters: The WTO meeting in Doha was hailed by many as an important success. What do you think the chances are that the World Summit on Sustainable Development in Johannesburg will be viewed in a similar favorable light?

Tay: Actually, I'm not sure what the outcome will be. I'm not optimistic about a strong outcome. What I hope is that we will see some commitment on the part of developed countries to re-examine what I would call the real bargains and to offer some genuine technical, financial capacity building and to help developing countries address their own domestic issues, as well as the global issues.

We also need to do simple practical things such as instill greater confluence and coordination between international institutions. Because one of the chief problems is that when we talk about sustainable development of environment, we have broadened the conception—both of the environment for protection as well as the idea of development.

Juma: The WSSD should have three main outcomes. First, there should be a short declaratory statement that confirms the concept of "sustainable development" as a central theme for advancing the goals of the United Nations. This should build on the language already provided in the Millennium Declaration.

Second, there should be a clear decision strengthening "sustainable development governance" in the United Nations. This could include the recognition of the Economic and Social Council as a council for sustainable development, with the Department for Economic and Social Affairs serving as the department for sustainable development. Sustainable development conventions should be directly linked to the department of sustainable development. The various programs and funds of the UN should report to the sustainable development council.

The U.N. Commission on Science and Technology for Development will need to be strengthened, and measures for effective science and technology advice on sustainable development must be provided.

Regional economic commissions should assume the logical role of being regional sustainable development commissions with their own structures that are analogous to the department of sustainable development. They should also produce sustainable development reports.

Finally, the United Nations Deputy Secretary-General should have the responsibility of coordinating with the heads of organizations such as WTO, IMF, and the World Bank.

With these proposals, it would be possible to strengthen sustainable development governance without creating new structures. The structure of these organizations may need additional human resource competence but the United Nations is diverse enough to adapt to new developments without requiring new organizations. This should also bring to a close the futile claim that we need a new World or Global Environment Organization to address environmental issues.

The final set of outcomes should focus on alliances or partnerships for sustainability, and so WSSD should serve as a platform for global sustainability learning. All in all, WSSD should look like a hybrid between the UN General Assembly and the World Economic Forum.

Mendis: There have been some attempts to have a closer coordination between international organizations like UNEP and WTO to try to address the connection between environment, development, and trade—for example, the WTO Committee on Trade and Environment.

Tay: But who's in charge? The WTO refuses, almost blatantly, to talk about sustainable development in a meaningful way. They think they are a trade organization. The IMF, the World Bank—these are the "development organizations." Then we have the organizations that look at the environment.

So, these sets of institutions—not a single government—will need to achieve much more dialogue among them, and those which are considerably weaker, like UNEP and the International Labor Organization (ILO), may need some strengthening in order to have a place at the table where these bigger international issues are.

Peters: Do you think that the role for defining the balance between these organizations lies with the cohort of international actors, or is it the responsibility of countries and actors within countries?

Tay: There must be assistance from the outside, but the actors should be national and local. There is an appropriate role for assistance from both the developed countries and international institutions. Otherwise, we are leaning too much on people who have too little. The resources among the developing countries are not thick. They are thin.

If we want to emphasize with the international organizations the trade, the globalization we are always talking about, then the international organizations must also have the right frameworks to address these initiatives at the national level.

Juma: The talk about cooperation among the various agencies is sometimes misplaced. These organizations need to do more within their own mandates before they can find meaningful avenues for cooperation.

UNEP, for example, has done way too little in helping to develop technical standards and norms that could help to strengthen work in the trade regimes. Its current preoccupation with governance is a poor substitute for the urgent work that needs to be done at the technical level.

Indeed, technical issues such as standards are powerful governance tools. This is partly why markets are self-organizing; they do so through wide networks of standards that guide corporate behavior. This is what many are describing when they refer to the "rules of the game." UNEP needs to do more in this field as do multilateral environmental and sustainable development conventions.

The WTO, on the other hand, needs to do more under its Committee on Trade and Environment.

It is through the strengthened efforts in these bodies that we will find more areas of mutual cooperation and the creation of a more stable and robust international institutional ecology. Global sustainable governance will be strengthened through such self-organization and not through outmoded approaches that emphasize conflict and juxtaposition between trade and environment.

Discussions about "sustainable development" can be futile and frustrating. We must define our areas of action, as we have been doing in this conversation.

I think that the critical turning point is in the Brundtland Report, especially in its emphasis on the revival of growth and the need to rethink its quality and direction. What is particularly important in this case is the emphasis on human ingenuity as expressed in technological and institutional innovation. This is what is most enduring in

the Brundtland Report and what has been lacking in the follow-up to the Rio Conference. This is the legacy that WSSD should build on.

Countries like the United States reward innovation and creativity and lead in the world of science and technology; they are better positioned to contribute significantly to the improvement of the human condition in the developing world.

We are entering what could be called innovation-based development where the United States and other developed nations have a competitive advantage over other nations. Technological and institutional innovation should become the crucible of America's international development policy. There are many other countries that are tilting in this direction and they can benefit from decisive leadership from the United States.

1 The Brundtland Report, also known as "Our Common Future," influenced the world view regarding the urgency of making progress toward economic development that could be sustained without depleting natural resources or harming the environment. An international group of politicians, civil servants, and experts on the environment and development, chaired by Dr. Gro Harlem Brundtland of Norway, defined sustainable development in 1987 as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." This statement became the foundation of development thinking.

2 Joseph Alois Schumpeter, 1883-1950, U.S. economist born in Austria.

The opinions expressed in this article do not necessarily reflect the views or policies of the U.S. government.

Sustainable Development: Lessons Learned and Challenges Ahead

By Frannie A. Léautier
Vice President, World Bank Institute

The World Bank provided more than $17,000 million in loans last year to more than 100 developing countries, with the primary goal of helping to reduce poverty. Believing that knowledge builds capacity, and capacity building leads to growth, security, and empowerment of the poor, much of the bank's work has focused on promoting learning and the sharing of knowledge and experience. The bank's learning approaches include innovations such as global electronic knowledge networks and distance learning to extend the reach of knowledge and learning, which lead to an improved quality of life and a reduction in poverty worldwide.

Sustainable development is central to the World Bank's mission of reducing poverty. Progress has been made on poverty reduction in the last 10 years, and absolute poverty has been reduced by impressive amounts, even as poor populations have grown. During the past generation, life expectancy has increased by 20 years and the number of literate adults has doubled. Nevertheless, nearly 3,000 million people—almost half the world's population—live on less than $2 a day, over 1,500 million people do not have clean drinking water, and in the next 25 years the world's population is expected to increase by an additional 2,000 million people, mostly in poor countries.

The World Bank's poverty reduction mission and sustainable development efforts mean working across traditional sectoral boundaries in environment, agriculture, health, education, energy, water and sanitation, social development, and infrastructure. Our approach to sustainable development means being committed to building long-term collaborative working relationships with partners in the public and private sectors and with civil society to build capacity and help our clients achieve their sustainable development objectives.

The Millennium Development Goals (MDGs) provide a framework for all our poverty reduction and sustainable development efforts. These goals, agreed to by over 150 heads of state and government at the UN Millennium Summit in 2000, provide the measurable targets we need to collectively measure global progress in improving living standards. Our lending program and policy work will directly support achievement of the Millennium Development Goals.

Translating Lessons Learned and Operational Experiences into Policies and Practice

The World Bank uses its lessons of experience in the implementation of poverty reduction and sustainable

development projects and programs to enhance support to developing countries. We have increased the effectiveness of our programs through country assistance programs that are more selective, more participatory, and better coordinated. As one of the world's largest sources of development assistance, the World Bank provided more than $17,000 million in loans last year to more than 100 developing economies, with the primary goal of helping to reduce poverty. It is only through sustainable development that this assistance can be effective.

The World Bank is the world's largest external provider of funds for health and education programs, and for the global fight against HIV/AIDS. Since 1996, we have launched more than 600 anti-corruption programs and governance initiatives in almost 100 client countries. Since 1988, the World Bank has become one of the largest providers of international funds for biodiversity projects, and the current portfolio of our projects with clear environmental objectives is $16,000 million.

The World Bank is addressing global environmental concerns as an implementing agency of the Global Environment Facility (GEF), and works closely with the GEF in supporting projects in biodiversity conservation, as well as projects addressing climate change, the phase-out of ozone depleting substances, and the protection of international waters. Through our cooperation with the Montreal Protocol's Multilateral Fund, we support programs in 20 countries for the phase-out of ozone depleting substances. Mainstreaming the priorities of the Biodiversity Convention, the Framework Convention on Climate Change, and the Convention on Desertification into our regular investment lending is underway.

Poverty Reduction Strategies

Effective poverty reduction strategies and poverty-focused lending are central to achieving development objectives. Many of the lessons learned by countries about poverty reduction and sustainable development are being put into action through the Poverty Reduction Strategy Paper (PRSP) development process. James D. Wolfensohn, president of the World Bank, recently described PRSPs as strategies that need to be "based on broad citizen participation and assent, comprehensive in scope, long-term in perspective, results-oriented in approach, and supported by external partners." (Opening remarks at the International Conference on Poverty Reduction Strategies, January 14, 2002.) This approach to poverty reduction recognizes that development is a comprehensive, holistic, and long-term process, and it is an approach that recognizes the multi-dimensionality of poverty.

Country-owned poverty reduction strategies provide the basis for all World Bank and International Monetary Fund concessional lending as well as debt relief under the Highly Indebted Poor Countries Initiative (HIPC). Eight countries have completed their first PRSPs and over 40 have prepared interim PRSPs. In partnership with the donor community and the International Monetary Fund (IMF), 24 highly indebted poor countries will receive more than $34,000 million in debt service relief.

Learning and Capacity Building

Agenda 21, the core agreement that emerged from the 1992 Rio Earth Summit, emphasizes the importance of capacity building for sustainable development. The World Bank is fully committed to learning and capacity building as essential in the drive for poverty reduction and sustainable development. Much of our work focuses on promoting learning, sharing of knowledge and experiences, and building the capacity of people and institutions.

Our process of learning has meant benefiting from the lessons of our successes and failures as well as from the lessons of others. Knowledge builds capacity, and capacity building leads to growth, security, and empowerment of the poor. We have found that the best way to build capacity is by creating an enabling environment in which local knowledge is allowed to flourish and contribute to global knowledge; where people learn from one another as they also innovate on their own; and where global and local knowledge inform action and influence change. The ability of a society to problem-solve and innovate is key to sustainable development. That is what a process of learning ensures.

The World Bank Institute (WBI) supports the bank's learning and knowledge agenda through capacity building, and by providing learning programs and policy advice that address issues central to poverty reduction and sustainable development. WBI currently delivers nearly 600 learning programs and reaches over 48,000 participants in 150 countries through collaboration with more than 160 partner institutions.

Through these partnerships, which include local institutes, as well as donor countries and the private

sector, the World Bank and partner institutions are using technology to help bring knowledge to the most remote and inaccessible corners of the earth. Our learning approaches often combine face-to-face and distance learning through new and traditional media, including the Internet and videoconferencing.

We are making strides in closing the digital divide, for example, through the development and wide use of global electronic knowledge networks and distance learning initiatives such as the Global Distance Learning Network (GDLN). These kinds of innovations will greatly extend the reach of knowledge and learning for sustainable development to improve the quality of life and to reduce poverty worldwide.

Clients use the knowledge and learning opportunities they get from WBI offerings to make real change in their countries. A public official from Chiapas, Mexico, who followed a learning series in anti-corruption for public officials, implemented a program in his state upon return. The changes he instituted resulted in a 64 percent increase in resources collected in his state.

The World Bank's Participation in WSSD

The World Bank is taking an active role in preparations for the World Summit for Sustainable Development (WSSD) to be held in Johannesburg in August 2002. As Ian Johnson, the bank's vice president of the Environmentally and Socially Sustainable Development (ESSD) Network, said during the most recent WSSD PrepCom: "The World Bank approach to sustainable development has changed considerably since the Rio Earth Summit in 1992. We have sharpened the poverty focus of our work, expanded support for social services, equitable broad-based growth, good governance, and social inclusion, and are integrating gender and environmental considerations into our development efforts."

As we move together toward the Johannesburg Summit, the World Bank:

- Supports the U.N. process and is participating fully in regional and global preparatory meetings in preparation for the summit;
- Supports the poverty reduction focus of the sustainable development agenda;
- Strongly supports the alignment of the summit objectives and the Millennium Development Goals;
- Hopes to see increases in overseas development assistance, domestic resource mobilization, and market access;
- Urges the adoption of "accounting for sustainable development" in national accounts.

The World Bank is preparing a number of contributions to the Johannesburg Summit. The 2002/2003 World Development Report, entitled "Sustainable Development with a Dynamic Economy: Growth, Poverty, Social Cohesion, and the Environment," will help establish an integrated view of sustainable development. We are also carrying out analytical work on a number of key thematic issues, including innovative financing for sustainable development, poverty and environment linkages, "green" accounting, and a stock-taking of our implementation of Agenda 21.

Future Challenges

We face enormous challenges in reducing global poverty and improving the quality of life for people worldwide. We need to continue in our efforts to scale up successful development efforts based on lessons learned. We also need to share knowledge and experiences about what has worked in ways that will have a greater impact on a much larger scale. The nature and magnitude of the challenges will vary depending on the regional, country, and local context.

Much of our impact comes from work carried out at the local level. Partner institutions in client countries play increasingly more important roles in making sure that programs are grounded in the local culture and social conditions. Our working relationships with partners also help to build long-term local capacity.

At the global level, the World Bank will continue to work with governments, civil society, multilateral organizations, and the private sector. As Ian Johnson has said, "In moving forward, we have to aim to increase our impact in terms of outcomes, working on a scale that is commensurate with the development challenge. And to be truly effective, we need to work together."

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Environmental Architect Celebrates Abundance, Green Factories, and the Next Industrial Revolution

Internationally renowned designer William McDonough, who in 1996 was the only individual to receive the Presidential Award for Sustainable Development, believes that everything from cars to urban centers can be designed to never pollute.

The architecture firm, William McDonough & Partners, has designed corporate campuses for Nike Europe and the Gap, Incorporated, and built a factory for furniture manufacturer Herman Miller. At Oberlin College in the state of Ohio, McDonough & Partners created a center for environmental studies that purifies its own water and is designed around the concept that a building could produce more energy than it consumes. In 1999, McDonough entered an agreement with Ford Motor Company to redesign its sprawling, 80-year-old River Rouge manufacturing site in Dearborn, Michigan. The plan calls for an ambitious, first-of-its-kind industrial/environmental restoration that will take 20 years to complete. In 1995, the architect teamed up with German chemist Michael Braungart to create a company, called McDonough Braungart Design Chemistry, that specializes in environmentally safe manufacturing materials, and works with clients such as Nike, Ford, BASF, and BP to engineer what McDonough calls "the next industrial revolution." McDonough was interviewed by Jim Fuller.

Question: Your firms emphasize that growth is possible without polluting the environment. Can you elaborate on that?

McDonough: We want to follow nature's laws, and in that context growth is good. A tree that grows is good. A child that grows is good. And yet humans worry about growth as if it's a negative thing. That's because most things humans are growing right now are presenting problems, such as asphalt. Businesses say we must have growth to maintain commerce. But environmentalists say we have to stop growth because it's destroying the world. That's because growth is not following nature's laws. But what if growth were good? What if a factory that makes textiles also purifies the water and makes oxygen? So the argument is not between growth and no growth. The argument is about what do you want to grow. Do you want sickness or health? Poverty or prosperity? As Michael Braungart points out, with every case of

leukemia we create something like nine jobs. Is that our job-creation program?

For us, it's not a choice of being bad or less bad; we want to just do good things that people and nature delight in. We want to be fabulous at everything—fabulous socially, economically, and ecologically. We're not looking for more stringent government regulations. For us, a regulation is a sign of some kind of design failure. We believe that everything from cars to computers to urban centers can be designed so that they never pollute. We don't want to minimize waste—we want to eliminate the entire concept of waste. Imagine an automotive plant that is 100 percent powered by solar energy, or that even produces excess energy. Imagine factories that require no waste water treatment because they cycle it around and around cleanly. So we're celebrating good growth if we follow nature's laws. That's our fundamental strategy.

Q: How is your philosophy being applied in your plan to transform the Ford Motor Company's aging River Rouge facility into a model of 21st century sustainable manufacturing?

McDonough: The River Rouge plant was the first huge-scale, vertically integrated industrial facility. It was considered state-of-the-art when Henry Ford introduced automated assembly-line technology there in 1927. It was sort of the ground zero of the Industrial Revolution. Iron ore and coal came in at one end and finished cars came out the other. Raw material in, finished products out. At 1,100 acres (440 hectares), it was one of the largest industrial sites of early 20th century America. By the 1980s, much of the complex was obsolete and contaminated, and today it has all the debris of 80 years of production. And you can imagine what the soil looks like.

Although rebuilding the entire site is a 20-year project, the first phase of the redesign plan—constructing a new, state-of-the-art assembly plant—will be completed by 2003. The new factories will be extremely flexible, allowing for inter-changeable platforms so that they can produce different model vehicles and respond to markets much faster. The new buildings will have lots of open space and be full of daylight—not dark as they are now.

But for the longer-term we want to make the plant sustaining. So it all gets back to the landscape. We're going to try to restore the soil and water to health. It's a restorative act, a healthy act. We want a site that makes oxygen. Right now all it makes is contaminated dust particles. So the new Ford assembly plant will have a 450,000-square-foot (135,000-square-meter) "green" roof, known as the "habitat" roof—perhaps the largest "living" roof in the world. Consisting of thin layers of absorbent materials, nutrients, and plants, the roof will absorb rain water, trap airborne particles, and insulate the factory—and the birds will love it too. So instead of rain water hitting a hard surface, the water hits something soft, the water is filtered and purified, and it takes three days to trickle back into the Rouge River. Right now it takes less than 10 minutes to rush back into the river, laden with chemicals and toxic compounds.

The plants also make oxygen, absorb carbon dioxide emissions, and absorb particles to improve the air. So the plants clean the air. And so if a building can act like a tree, imagine an entire city that's like a forest. What would be the quality of the air? What would the temperature be in a city that had gardens all over the roofs instead of black asphalt? It could change the temperature of the city by one or two degrees in the summer and provide cool breezes.

The Ford parking lots are also redesigned to be porous. They are constructed of stones very similar in size so the water is actually absorbed and filters through them. They look like a sponge, but are perfectly flexible and very durable. So the parking lots absorb water—like a giant reservoir—and release it slowly into a constructed wetlands that will surround the manufacturing complex, getting purified all along the way. Storm-water swales and retention ponds will also regulate the water flow.

Q: What will this cost the company?

McDonough: The redesigned facilities will actually save Ford money on its energy, waste, and potential environmental compliance costs. The habitat roof, the porous paving, and the habitat wetlands will cost about $13 million. However, they spare Ford from having to spend up to $48 million to build underground pipes and chemical treatment facilities to meet standards set by the U.S. Environmental Protection Agency (EPA). So Ford might be saving as much as $35 million and getting a beautiful landscape in the bargain.

Q: Will other companies be willing to invest millions for similar long-term, intangible benefits?

McDonough: I think any smart chief executive officer

(CEO) recognizes that the health, safety, and productivity of their employees are the biggest asset on the company's balance sheet. Keeping people happy and productive can make a huge difference. The Herman Miller furniture factory in Holland, Michigan, that we completed in 1995 is full of daylight and fresh air. It won the first annual Good Design is Good Business Award sponsored by Business Week magazine and the American Institute of Architects. Light monitors on the roof channel streams of sunlight onto the factory floor, and artificial wetlands planted around the facility retain and purify storm-water runoff. It also uses less energy than a normal factory because of the daylight. The productivity of the company went up 25 percent after employees moved into the new building. That increase in productivity is worth $60 million more production per year to Herman Miller. The new building cost $15 million, and they're making significantly greater profit on more production with the same number of happy people. Ask any CEO if she or he would accept over 100 percent annual return on an investment. Every year. That's amazing.

We also designed the Gap corporate campus in San Bruno, California. It's a structure topped with an undulating grass roof and full of daylight. The grass roof catches and filters storm water and provides thermal and acoustic insulation. Roof baffles direct sunlight onto interior spaces. It also features the novel use of raised computer floors throughout an entire building. A system of fans moves air under the floors all night long, picking up cool air. The next day, the concrete slabs of the building are cool from the night before and cool the air being delivered to the people. So we cooled the mass of the building down just like an old hacienda. We didn't have to just pump in energy and use electricity for air conditioning. But we created the same effect using half as much equipment at a third of the cost. The Gap project won Pacific Gas & Electric's special award as one of the most energy efficient new office buildings in California. Other buildings receiving awards for low energy use had very little daylight or fresh air. We provided 100 percent fresh air and daylight to every individual in the Gap facility. We delivered a far superior product for the same price; we just deployed our resources differently.

Q: Can your ideas be applied to the developing world?

McDonough: Absolutely. In fact, I'm the co-chair of the China-U.S. Center for Sustainable Development. Ideas for the developing world are the same as here; they involve different technologies for different circumstances. So we're not saying let's bring in our technology, per se, to other cultures. We're simply saying that nature's laws apply to all of us, and we need to find ways to celebrate those laws within the local context.

One of the things we're trying to encourage is micro-solar franchises. We're developing new solar technologies that can be made by the local people in local places. We might offer some young entrepreneurs 500 solar collectors that will make energy. They can use that energy to create a small factory that makes solar collectors. They would be required to give the first collectors they produce to someone else, just as we gave them their first collectors. So there's a multiplier effect. People can make their own solar collectors and start small companies, and then help create new companies that expand quickly. So we're actually working from the ground up.

Q: Can you discuss your idea about changing the way we make things and designing a productive afterlife into materials at the very outset?

McDonough: As long as human activity is so destructive, we all think we have to try to become more efficient, or try to be less bad. But, consider the cherry tree; it is not "efficient". It makes thousands of blossoms just so another tree might germinate. The tree's abundance is useful and safe. After falling to the ground, the blossoms return to the soil and become nutrients for the surrounding environment. Every last particle contributes in some way to the health of a thriving ecosystem. This is why we would prefer to be "effective" instead of efficient. We would like to do the right thing right, not the wrong thing right. "Waste equals food" is the first principle of our next industrial revolution. But human industry, right now, is severely limited because it typically follows a one-way, linear, cradle-to-grave manufacturing line in which things are created and eventually discarded, usually in an incinerator or a landfill. Unlike the waste from nature's work, the waste from human industry is not food at all. In fact, it is often poison.

A few years ago, I teamed up with a German chemist named Michael Braungart, and we created a research firm called McDonough Braungart Design Chemistry. We believe there are two fundamental metabolisms in the world. One is biological, the other technical. So we think things should be designed to either go back to the soil safely or back to industry. And nothing else should be

made. Biological nutrients, for example, should be designed to return to the organic cycle—to be literally consumed by microorganisms and other creatures in the soil. Most packaging, which makes up about 50 percent of the volume of our solid waste, should be composed of biological nutrients—materials that can be tossed onto the ground to biodegrade. There is no need for things like shampoo bottles, juice containers, and other packaging to last decades, or even centuries, longer than what came inside them.

So we're working with the German chemical company BASF on a new nylon fiber that's actually truly recyclable. After the fiber is woven into products like carpets, it can be returned to the manufacturer to be remade—your carpet can be reincarnated every time you redecorate. We also helped a Swiss company, Rohner Textile, create an upholstery fabric so safe one could literally eat it. The fabric is made of ramie and wool—a mixture of safe, pesticide-free plant and animal fibers. To find safe dyes for the fabric, we considered more than 8,000 chemicals used in the textile industry and eliminated 7,962. The fabric was created using only 38 chemicals. When removed from the frame after a chair's useful life, the fabric and its trimmings will decompose naturally and serve as garden mulch. It was found that the water leaving the Rohner Textile factory after filtering through the cloth during production was as clean as the Swiss drinking water going into the factory.

Q: In light of the upcoming World Summit on Sustainable Development in Johannesburg, South Africa, what do you feel the world can do to advance sustainable development?

McDonough: We need to learn to celebrate the abundance of the world instead of simply bemoaning its limits. There's an abundance of sunshine and water and children. So why don't we celebrate that? And let's find intelligent ways to do that. As long as we only think we're hopelessly overrunning the world, all we worry about are the limits to conventional growth. Forget that. Let's celebrate the growth of good things, like solar energy and healthful food. Let's celebrate human intelligence. From an environmental perspective, it means that we never look at a child being born in India and say, "There's a population problem." Because the second we say something like that, human rights cease to exist. So environmentalists, governments, and business people should not just get up and say, "We have a population problem and we don't have enough resources to go around". They should also get up and say, "How do we love every one of those children?" And that's not the only question we need to ask, because if we begin to honor nature's laws we also want to honor women as equal partners. And as we have seen in case after case, when women are honored in society—when women are treated equally to men and have an equal opportunity for education—populations level off, and the population issue becomes something we can all live with.

Jim Fuller is the managing editor of Global Issues and frequently writes about environmental issues.

The opinions expressed in this article do not necessarily reflect the views or policies of the U.S. government.

Conserving Biological Diversity, Fostering Sustainability in Mesoamerica

By Elsa Chang
Director, Mesoamerican Biological Corridor Project, World Resources Institute

An ambitious project to create economic and environmental sustainability is being planned in Central America. National governments of the region, international organizations, nongovernmental organizations, and the U.S. Agency for International Development are all contributing to the plan. This article is based on a comprehensive study of the pursuit of that goal — "Defining Common Ground for the Mesoamerican Biological Corridor" by Ms. Chang and associates Kenton Miller and Nels Johnson.

For millions of years, Mesoamerica has served as the Western Hemisphere's continental bridge, linking North and South America. Plants and animals have migrated through this isthmus over the millennia, resulting in enormous biodiversity throughout the many distinct ecosystems that exist in this diverse landscape.

Coral reefs, grasslands, lowland rainforests, mountain forests, and pine savannas are only a few of the ecoregions that biogeographers identify in the Mesoamerican region, encompassing the five southern states of Mexico and the Central American countries of Belize, Costa Rica, Guatemala, El Salvador, Honduras, Nicaragua, and Panama. Tiny Belize alone is home to more than 150 species of mammals, 540 species of birds, and 152 species of amphibians and reptiles. In Panama, 929 species of birds have been identified, more than are found in Canada and the United States combined.

These lands are also home to human populations that have known more than their share of misery. Civil conflict in the region in recent decades has brought human suffering and material and infrastructure destruction, exacerbating long-standing problems of social inequality, economic underdevelopment, and environmental decline. Currently almost half the population remains below the poverty line, and many lack access to basic healthcare, education, and clean water. Rapid population growth and economic dependence on agriculture have resulted in an unsustainable exploitation of natural resources, widespread water pollution, soil erosion, and deforestation.

Only 10 percent of the region's primary forests remain, the bulk of which have been converted into farms or replaced with tree plantations. About 60 percent of the region's 700 existing and proposed protected areas are not more than 10,000 hectares, too small for animal species to sustain their populations in the face of environmental change.

The scale and speed of habitat loss and fragmentation in one of the world's biologically richest areas has led some conservationists to consider Mesoamerica a biodiversity "hotspot." Governments of the region, donor nations, and domestic and international conservation groups are responding to these trends with a variety of initiatives and an integrated regional approach.

Most notable and ambitious is the Mesoamerican Biological Corridor (MBC), a region-wide initiative intended to conserve biological and ecosystem diversity in a manner that fosters sustainable social and economic development. The vision for the MBC is to link protected areas through "corridors" of natural and restored habitats stretching from southern Mexico to Panama, incorporating a holistic approach to the relationship between wild and human-impacted land.

At a summit in 1997, the regional heads-of-state publicly endorsed the MBC, making a commitment to the development of a land-use planning system that would improve the lives of Central Americans while maintaining biodiversity and ecosystem services. The aims of the MBC are to (a) protect key biodiversity sites; (b) connect these sites with corridors managed in such a way as to enable the movement and dispersal of animals and plants; and (c) promote forms of social and economic development in and around these areas that conserve biodiversity while being socially equitable and culturally sensitive.

The Central American Commission on Environment and Development (Comision Centroamericana de Ambiente y Desarrollo or CCAD) is responsible for coordinating regional planning and implementation of the MBC. This regional body was created in 1989 as regional presidents signed the Charter Agreement for the Protection of the Environment, and embodies a unified vision for regional environmental cooperation.

The heart of the MBC initiative is a proposed scheme that would establish four categories for land-use, with each addressing a different need:

- Core zones are protected areas, where wild habitats and biodiversity are maintained. Mesoamerica has a large number of protected areas already in place that will function as the MBC's core zones, but many of them would have to be increased in size if an ecological region is to be properly protected.

- Buffer zones are the areas surrounding the core zones, functioning to mitigate disturbances to the core zones from adjacent locales of human use and vice versa. These zones would create a physical space between protected areas that contain wildland and adjacent areas with farms, harvested forests, and other human uses.

- Corridor zones would provide land or water pathways that link the core zones with one another, allowing plants and animals to disperse, migrate, and adapt to the pressures of changing climate and habitat conditions.

- Multiple use zones would distinguish between the wildlands and the areas devoted to agriculture, managed forestry, and human settlement. These zones might be applied more widely to encourage diversity in land-use practices, recognizing that biodiversity is best maintained with a mosaic of croplands, forests, and wetlands.

With funding and support from a variety of governments, international organizations, and nongovernmental organizations (NGOs), CCAD is working to develop operational plans and a comprehensive strategy to coordinate and mobilize action for the MBC. The supporting organizations are independently pursuing a variety of projects relevant to the long-term goals of the MBC. For instance, the Nature Conservancy, the World Wildlife Fund, and the U.S.-based University of Rhode Island are focusing on conservation and management of the Mesoamerican Barrier Reef system, with funding from the U.S. Agency for International Development (USAID). In Costa Rica, the national MBC office is coordinating efforts by NGOs to establish biological corridors that will connect indigenous reserves, protected areas, wetlands, and coastal zones.

In the range of worldwide activity to achieve greater sustainability, the MBC is particularly significant because of the scope and complexity of its goals and the array of institutions and social actors it involves. Those characteristics imbue the MBC with great promise, but also present major challenges that will have to be addressed if the initiative is to have a positive impact on the region.

Significant questions remain among the many people of the region who hold a stake in the future of the MBC. The project has grown to encompass concerns of

economic sustainability and social equity because early proposals focused solely on biodiversity preservation, worrying many indigenous groups who feared expropriation of their ancestral lands and the expansion of protected areas onto their territory. As goals broaden to address these concerns, however, conservationists have become concerned that the MBC is taking on social and economic problems that it cannot aspire to solve, thus creating the possibility of unrealistic expectations, a cascade of disappointment, and an erosion of support.

The success of the MBC will depend on development of a shared regional vision of its goals and functions—a vision that recognizes the divergent needs at stake, and identifies the common interest all regional actors share in achieving ecological and socioeconomic sustainability. The ability to build trust and confidence among various stakeholders of the MBC will determine its fate.

A three-year review of the progress of the initiative conducted by this author and an array of other stakeholders finds that much remains to be done before a shared vision of the MBC goals is achieved. Public awareness, local support, and public and private agency involvement remain limited. Among those who are focused on the initiative, rural and urban residents, and other involved groups frequently have different opinions from the agencies involved in implementation. An attitude of mistrust and skepticism prevails because of a lack of clarity about the purposes and plans, and because of limited public access to information.

Our analysis finds that the fate of the Mesoamerican Biological Corridor depends on the willingness of governments, civil society, and the private sector to be more participatory and accountable. It will also depend on the ability to resolve existing conflicts over property rights and land tenure, and a devolution of decision-making from central government agencies back to local groups. Because of its vast geographic range and the involvement of so many stakeholders, building the corridor will require a "bottom-up" approach. Local residents must be granted roles in planning and management of the various zones of the corridor to win their support and acceptance of this ambitious regional undertaking.

The MBC now stands at a critical threshold between concept and reality. Its vision will not be realized unless most of the region's people understand the MBC's purpose and commit to its goals and objectives.

The World Resources Institute (http://www.wri.org/wri) is an environmental research and analysis organization that also works to create practical ways to protect the Earth and improve people's lives.

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Natural Wonder

By Cyril T. Zaneski
Correspondent, National Journal News Services

Longtime enemies have come together to save Florida's Everglades, the world's greatest wetlands.

Floridians spent most of the 20th century shriveling up the Everglades, the shallow grassy river that cuts a wide swath through much of the southern half of their peninsula. The goal was to turn those marshy prairies into high, dry real estate, the richest farmland in the world

And with help from the U.S. Army Corps of Engineers and American taxpayers, they achieved a stunning success. The Corps' mid-century drainage project, an engineering marvel, managed to dry up half the Everglades for farming and suburban development. But the project inadvertently left the remaining wetlands in lousy shape. They can no longer support the tropical flora and fauna that made South Florida a biological jewel. By some estimates, 95 percent or more of the populations of brightly plumed wading birds that once made homes in the Everglades and 68 types of plants and animals in the region are now listed among the nation's endangered and threatened species. A few, like the Cape Sable seaside sparrow and the Florida panther, are teetering on the brink of extinction. But what grabbed the attention of the farmers and developers who form the backbone of the region's economy is this: The Everglades wetlands are no longer capable of soaking up superabundant summer rains for later delivery to a booming human population and thirsty crops of vegetables and sugar cane.

So Floridians turned again to their old federal partners and found them willing to help with a different mission. Working side-by-side and splitting costs along the way, federal and state officials crafted plans for the world's largest ecological rescue mission, which will also serve as an urban and agricultural water project. The Everglades restoration is expected to cost $7,800 million over 36 years and then about $180 million a year to maintain. Under a landmark deal approved overwhelmingly two years ago by Congress and the Florida Legislature, the partners will divide project costs equally forever.

Politicians, ecologists, and engineers all around the world are keeping an eye on what happens in South Florida. It is, first, the world's most ambitious ecosystem restoration, an attempt to deal in a holistic way with environmental problems of an entire landscape of 46,800 square kilometers. Second, the project is a test of how federal, state, tribal, and local governments can work together and with multiple competing interests in the private sector. There are more than two dozen government entities involved in the Everglades project. They are following a broad restoration plan agreed upon by a coalition of competing South Florida interests—tourism promoters, environmentalists, limestone mining companies, business leaders, the sugar industry, farmers, and urban utilities.

Tipping Canoe

"The Everglades project is like a canoe," observes Terrence "Rock" Salt, a retired Army Corps colonel who now serves as executive director of the South Florida Ecosystem Restoration Task Force, the intergovernmental group coordinating the project. "You get one guy standing up, and everybody goes over."

South Florida's canoe always seems on the verge of a spill. Interest groups and government agencies have sued each other, battled in ugly election campaigns, and regularly exchanged harsh words in public about the Everglades campaign over the years. The current cleanup effort got shoved forward by a lawsuit. In 1988, a brash-acting U.S. attorney named Dexter Lehtinen filed suit against the state of Florida for allowing polluted water to flow into the Everglades from farmland. The legal war cost federal and state taxpayers $7 million in legal fees and spawned another 39 related lawsuits before the state cried "uncle" and agreed to launch a cleanup in 1991.

But that was hardly the end of the battle. "It's hard to go a week in South Florida without somebody throwing a grenade," says one federal official involved in the Everglades restoration. The Miccosukee Indians, whose reservation is inside Everglades National Park, have fought the National Park Service in federal court and in Congress over the tribe's plans to expand its housing. The Miccosukees, environmentalists, the Army Corps, and the state are embroiled in a complicated triple lawsuit in federal court over management of water in the habitat of the Cape Sable seaside sparrow.

The loudest and nastiest fight took place in 1996, when environmentalists and the sugar industry waged a $38 million battle over a referendum on a proposed penny-a-pound tax on Florida sugar to help fund the Everglades cleanup. Sugar won the bitter fight—the most expensive in the state's history. It was impossible in the summer and fall of 1996 for anyone in Florida to watch a half hour of television without seeing three or four advertisements on the sugar tax campaign. "There's an awful lot of scar tissue around this issue," says Bob Dawson, a former top official in the Corps who now works as a Washington lobbyist on the Everglades project for South Florida agricultural interests, the sugar industry, and urban utilities. "It's very difficult to get people to trust each other."

Yet somehow, the Everglades project stayed afloat. The warring parties managed to agree on enough to persuade Congress that the restoration would not dissolve into a series of lawsuits. "You've got to give credit to all those people who put down their machetes and reached across the table to shake hands with their enemies," says J. Allison DeFoor, former environmental policy adviser to Florida Governor Jeb Bush. "By the time we got to Washington, we had everybody from Big Sugar to the enviros holding hands and singing 'Kumbaya'—sometimes through gritted teeth."

In South Florida, the actual day-to-day work of planning the restoration has been smoother than many expected because the two lead agencies, the Corps of Engineers and the South Florida Water Management District, have been working together a half century. The district is a massive engineering agency with more than 1,700 employees who manage water supplies and operate a flood control system built by the Corps for 16 counties from Orlando in central Florida to Key West. Though the Corps has worked closely with the district in the past, the Everglades project marks the first time that the agency has opened up its planning to the public. Traditionally, the Corps designed major projects behind closed doors and held token public hearings after the work had been completed. The Everglades project, by contrast, was drawn up in full public view on the Internet. Between 1996 and 1999, the Corps posted proposed plans on a Web site devoted to the restoration, accepted comments from the public and cooperating groups of scientists and engineers, and then revised its plan based on the comments.

"What you're seeing in South Florida is a true bottom-up effort," Salt says. "Government—in this case, the Corps is really taking its cues from a process driven by the public."

Water, Water Everywhere

The public is going to have to stay involved. Though the restoration has been authorized, it will unfold over nearly four decades in a series of 68 engineering projects. The ultimate goal is to restore about 1 million hectares of wetlands, but it also aims to provide water for farms and the human population. The Corps and the water district each will have about 150 employees working on the restoration. They'll keep 15 to 20 projects going at a time, while a special interagency oversight group tries to make sure that the work of individual project teams conforms to the overall restoration goals, says Stuart Applebaum, the chief of ecosystem restoration for the Corps' Jacksonville District.

"This is like going to the moon in the 1960s," Applebaum says. "While this project is not as complex as the space program in its heyday, the restoration technically presents just as big a challenge. Nobody has ever done anything like this before."

If the idea of spending $7,800 million on the restoration sounds stunning, consider this: The project authorized in the fall of 2000 is only part of a still larger ecological restoration and pollution cleanup that stretches beyond the Everglades itself. In all, the effort to restore South Florida's environment is expected to cost $14,800 million, with the federal government's share reaching $6,500 million and the rest coming from state and local sources. Along with the Everglades endeavor, the South Florida restoration includes many other projects. The biggest are a state plan to cleanse water flowing into the Everglades from farmland, which will probably cost more than $1,000 million, and the $414 million restoration of the Kissimmee River, which snakes along 64 kilometers between Orlando and Lake Okeechobee. The Kissimmee restoration is actually an undoing of a Corps project that turned the river into a straight ditch between 1962 and 1971, causing severe water pollution problems and destroying about 14,000 hectares of wetlands.

The goals of the Everglades restoration flow from the work of business leaders, tourism promoters, environmentalists, and farmers on the 49-member Governor's Commission for a Sustainable South Florida. Appointed by the late Democratic Governor Lawton Chiles, the commission members worked from 1995 to 1999 to reach consensus on 14 major reports outlining restoration goals.

This consensus did not come easily. An environmentalist referred to one of the sugar industry representatives as a "corporate felon," recalls Richard Pettigrew, a former state senator and House speaker who chaired the commission. "At first, many of these longtime foes were afraid to break up into committees to identify issues we should deal with," Pettigrew says. "Nobody wanted to give up anything. The utility rep from Palm Beach County, for example, didn't want to talk about any solution that didn't guarantee him free, unlimited access to water."

Pettigrew allowed feuding commission members to pick their committees. He also made sure each meeting included a social gathering in the evening where members could bond over drinks. "Eventually, we began to understand the real problems that people had, rather than just the rhetoric," Pettigrew says. "And we stayed out of that sugar tax fight, even though some people were killing each other over it."

The commission managed by the fall of 1996 to complete a report outlining restoration goals. These goals made their way into the federal Water Resources Development Act of 1996 and set the stage for the restoration. The report, like all those adopted by the commission between 1994 and 1999, was passed by a unanimous vote.

The key to the commission's success and to calming the combatants concerned about access to water was this: A restoration of the Everglades would be more than an environmental project, it would also increase the water supply for everyone.

Water is the major issue in South Florida, even though it is one of the wettest places in the country. The region gets about 152 centermetrs of rain a year. Most of the water, however, falls during summer thunderstorms and quickly drains into coastal estuaries through a network of more than 1,600 kilometers of canals built by the Corps and the state over the last 100 years. The restoration project's major goal is to stop that rapid loss of water by capturing most of it in hundreds of deep wells and a network of new reservoirs that will be built on farmland and abandoned limestone mining pits at the edge of the Everglades. The Corps calls the concept "enlarging the pie."

"We fashioned a win-win situation," Pettigrew says. The sugar industry reluctantly agreed to sell at least 20,000 hectares of farmland to the government for reservoirs in return for the assurance that farmers would have water in

the long-term. Without such a deal, the farmers feared, the growing urban areas and their growing power at the ballot box eventually would start beating agriculture in political battles and suck dry existing water supplies. Environmentalists, meanwhile, agreed to share water because the ultimate loser in a future water war would be the Everglades.

The bottom line, Pettigrew says: "We never wavered in our central goal: To make sure the Everglades was restored—and restored to the highest possible level."

Restudy, Then Restore

The restoration plan is largely fashioned after a state plan drawn up in the early 1980s under former Democratic Florida governor and now U.S. Senator Bob Graham. The old state "Save Our Everglades" program got a new head of steam in 1993 when Interior Secretary Bruce Babbitt took an interest in getting the Clinton administration involved. By June of that year, the federal task force—with officials from about a half dozen agencies involved—was holding its first meeting.

For what was to become a momentous undertaking, the restoration effort was at first known humbly as "the restudy." The name reflected the fact that the project was actually a rethinking of the Central and Southern Florida Project, a massive drainage project that the Corps designed in 1947 and began building after Congress authorized its construction in 1948. The project expanded and improved a network of drainage ditches begun by the state early in the century and added many more. The Corps laced South Florida with about 1,600 kilometers of canals and cut the heart of the Everglades with levees that turned the grassy riverbed into three major reservoirs and a 280,000-hectare agricultural area.

The Army Corps' work is an engineering marvel that achieved its goals of opening up vast tracts of land for farming and development. But the project did severe damage to the environment. The number of wading birds dropped dramatically. Everglades National Park, dedicated in 1947 to preserve the region's biological wealth of plants and animals, was degraded as drainage projects beyond the park's boundaries dried up its marshes to the peril of its flora and fauna. Florida Bay suffered devastating algal blooms that smothered its marine life.

And the region's human population—which has boomed from 500,000 when the Corps designed the system to more than 6 million today—began to suffer, too. Residents have frequent water shortages and intrusions of salty seawater into depleted freshwater aquifers, the sole source of the region's drinking water. Devastating wildfires have burned longer and hotter in the dried-out edges of the Everglades, polluting the air over cities and suburbs near the coast.

Fashioning the restoration as a restudy enabled the Corps to tap into a fat federal purse for general construction. If it had begun as a restoration study, it would have been forced to draw from the Corps' thread-bare "general investigations" account. Salt, who headed the Corps' Jacksonville District from 1991 to 1994, and his successor, the now-retired Col. Terry Rice, "pushed the envelope" to get restoration efforts going, Rice says. It was Salt who oversaw the start of the Kissimmee project and came up with a broad plan for extending the restoration effort into the larger Everglades. Rice, who served from 1994 to 1997, challenged the Governor's Commission for a Sustainable South Florida to ask for a full restoration. "Give me a plan and we will implement it," he recalls telling them. The commission members, accustomed to working with the slow-moving Corps bureaucracy of old, found that hard to believe.

Rice understood why commission members were skeptical at first. They were accustomed to being told what couldn't be done, and so was the Corps. "A lot of times, I think we let lawyers run our agencies, and that's a mistake," says Rice, now a professor at Florida International University and a consultant to the Miccosukee Tribe. "I would tell my lawyer: This is what I want to do. Tell me if it's illegal or not."

The commission accepted Rice's challenge. They gave him a set of goals, which were then written into the 1996 Water Resources Development Act to guide restoration planning. The bill expanded the South Florida Ecosystem Restoration Task Force to include state, local, and tribal representatives and authorized it to coordinate the project.

Conflicting Voices

Created in 1993 by an executive order, the task force originally included only representatives of five federal agencies. State and local governments initially were excluded because the 1972 Federal Advisory Committee Act prohibited such cooperation. That barrier was lifted

in 1995, when Congress eliminated some of the law's restrictions as part of the Unfunded Mandates Reform Act. The 14-member task force now coordinates the efforts of 13 federal and seven Florida agencies, two Indian tribes, 16 counties, and dozens of cities and towns.

In practice, however, the task force has little control over the agencies whose efforts it is supposed to coordinate. The agencies receive their authority—and their funding—from the legislative bodies that oversee them, Salt notes. So the task force must try to build consensus while leaving untouched the individual responsibilities of its members. "While it was framed as a partnership, each side has its own way of doing business," Salt says. "The state never contemplated giving up any sovereign rights in this process .... They're not doing it the way the feds do it, but that's a good thing, not a bad thing."

But state officials have grumbled openly about federal oversight of the project. One sore point is that the General Accounting Office has repeatedly criticized the task force for failing to operate more like a federal agency and to develop strategic plans for buying land. Task force proponents say such criticism would only make sense if the organization had control over its member agencies' budgets.

"There is a perception that the task force is a governing body, a shadow government," says Ernie Barnett, Florida's director of Ecosystem Planning and Coordination and the chairman of the task force's intergovernmental working group. "Somehow, the people in Washington got the idea that the task force has some oversight over Florida's land-acquisition process."

The task force also has been unable to settle disputes among federal agencies. "Too often, federal agencies have conflicting voices and visions," Barnett says. "When you have a state-federal partnership, you have to speak with one state voice and reflect a single vision. It's easy for us, because the governor settles disputes. But when there are federal disputes, that's when the wheels come off."

The effort to save the Cape Sable seaside sparrow is such an example. The National Park Service and the Fish and Wildlife Service have been involved in a dispute with the Army Corps for years over water management practices that federal biologists say have pushed the sparrow to the brink of extinction. Three lawsuits have been filed in the matter, which is now before a federal judge in Miami. "The sparrow will make it only because God is helping," Barnett says. "The weather has cooperated. The agencies have not."

The task force works best when there are well-defined state and federal roles, Barnett says. It has done best in carrying out state and federal mandates. For example, Barnett says, it did well in setting priorities for spending $275 million set aside by Congress in 1996 for restoration efforts.

At times, the working relationships formed by members of the task force enable them to cut through red tape. For example, the task force enabled the U.S. Environmental Protection Agency and the Florida Department of Environmental Protection to strike a compromise on regulations that will save taxpayers hundreds of millions of dollars in upcoming tests of the use of deep wells for storing water for the restoration project, Salt says. "Normally, the task of working through state and federal regulatory frameworks is too daunting," Salt says. "But because we had this task force, we were able to work together and come up with a way to help."

Despite all of its complications, the restoration project has probably put Florida in a better position than most states for tackling monster issues, says Dawson, a former top administrator in the Army Corps who lobbies in Washington on behalf of South Florida utilities and agriculture. "The key is that they've developed a balancing act and it's going to be a real safety net for South Florida," Dawson says. "The mechanism they've developed for sharing water is the kind of mechanism that might have helped people in California with their power crisis. But they just rolled the dice there on (a possible) power shortage and the environment is going to get hurt."

Dawson says the South Florida model of building consensus will be copied elsewhere. "I think it's going to be a harbinger of things to come in other parts of the country. The emphasis is on ecosystem restoration that is tied to vital interests of all the players," he says. "If people don't learn to cooperate, it's not going to work."

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An Electronic Journal of the U.S. Department of State • April 2002 Volume 7, Number 1