

THE WORLDWATCH INSTITUTE

Special 20th Anniversary Edition

STATE OF THE WORLD

2003

Chris Bright Christopher Flavin Gary Gardner Mia MacDonald
Anne Platt McGinn Danielle Nierenberg Payal Sampat Janet Sawin
Molly O'Meara Sheehan Linda Starke Howard Youth

STATE OF THE WORLD 2003

A Worldwatch Institute Report on
Progress Toward a Sustainable Society

Gary Gardner, Project Director
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Anne Platt McGinn
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To begin with, many chapter authors were assisted by a willing and able group of colleagues. The 2002 research interns—Elizabeth Bast, Cheng Chang, Megan Crimmins, Arunima Dhar, Vanessa Larson, Uta Saoshiro, and Dave Taylor—brought new ideas and enthusiasm to the book. While Dave was diligently retrieving data on mining for Chapter 6, Elizabeth was busy collecting data and information for Chapter 7. Arunima channeled her energies into ferreting out obscure statistics and verifying sources for Chapter 3. Staff researcher Radhika Sarin contributed data and analysis for Chapters 1 and 3, research associate Brian Halweil provided instrumental editorial comments and input on structure for Chapter 3, and staff researcher Erik Assadourian collected material for and provided valuable feedback on Chapter 8. Research librarian Lori Brown helped out in numerous ways, from tracking down articles, journals, and books to keeping researchers up to date on the latest information in their fields.

The initial research and writing were fol-

lowed by a grueling day-long internal review process in which current Worldwatch staff and alumni gave chapter authors detailed feedback. Also receiving chapter comments this year were former Worldwatcher Howard Youth, now a Madrid-based writer on birds and other conservation topics, and Mia MacDonald, a New York-based consultant who works on issues of gender, environment, and development. To ensure that findings were accurate and explanations succinct, authors were critiqued, complimented, and challenged to strengthen arguments and clarify details. Special thanks go to senior researcher Michael Renner and to Institute alumni John Young and David Roodman for their incisive comments. Magazine editor Ed Ayres helped refine many ideas in Chapter 2 that were presented in an earlier magazine feature article. The director of Worldwatch's Global Governance Project, Hilary French, who is on sabbatical for six months, was sorely missed during the staff review process, but we look forward to her return.

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Through careful edits and polishing of individual chapters, independent editor Linda Starke, more accurately known at the Institute as "the enforcer," made sure authors reached the finish line gracefully. The Institute is fortunate to have on board a new art director, Lyle Rosbotham, whose talent at design brought to life the text, tables, and figures of each chapter. He also designed the stunning new cover. As the final step, the page proofs were sent to Ritch Pope, who created the index.

As the authors' work was ending, that of our communications team was just beginning. Leanne Mitchell, Susan Finkelpearl, and Susanne Martikke, along with senior advisor Dick Bell, worked closely with

researchers to craft their messages for the press and the public. Talea Miller pitched in as communications intern, and Sharon Lapier helped keep the department running, staffing the front desk and tracking the thousands of press clips we receive during the year. Patrick Settle, our IT systems administrator, kept all cyber-activities flowing smoothly. Stephen Conklin joined us in the fall as an intern to help with the Web site.

Thanks are also due to our superb development team. Kevin Parker and Mary Redfern strengthened existing relationships with foundations, while forging ahead into uncharted territory. Adrienne Greenlees focused her energies on expanding the Institute's major donors, with the help of Cyndi Cramer. On the business development side, Elizabeth Nolan tackled our marketing and sales efforts and coordinated activities with all our publishers. Tina Soumela played a jack-of-all-trades role, assisting with research, communications, and business development activities.

Senior editors Tom Prugh and Curtis Runyan kept *World Watch* magazine on schedule amid pressures on authors to meet too many overlapping deadlines. We also want to extend our gratitude and best wishes to several staff members who left Worldwatch during the past year: Janet Abramovitz, Niki Clark, Elizabeth Doherty, Seth Dunn, Jonathan Guzman, David Roodman, and Denise Warden.

A strong administrative staff forms the backbone of the Institute. Suzanne Clift kept Worldwatch President Christopher Flavin on track while also helping researchers organize speaking engagements and travel plans. Director of Finance and Administration Barbara Fallin assured the journey was smooth sailing, and Joseph Gravely kept things moving in the mailroom.

Amy Cherry, Bill Rusin, Andrew Marasia, and Lucinda Bartley are our energetic col-

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On the international front, we would like to thank the many Worldwatch supporters and international publishers who provide advice as well as translation, outreach, and distribution assistance around the globe. *State of the World* is regularly published in more than 20 different languages. Without the dedication of a host of publishers, nongovernmental organizations, and individuals who work to spread the Institute's message, we would not be able to live up to our name.

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The Worldwatch Institute relies on phil-

anthropic funding to provide more than 70 percent of its operating budget. The largest sources of support are the private foundations that have an abiding commitment to an environmentally sustainable and socially just world. This year, we would like to express our special appreciation to The John D. and Catherine T. MacArthur Foundation for providing grants specifically for *State of the World 2003*. We also want to thank the other foundations that have generously supported our work in the past year: The Ford Foundation, the Richard & Rhoda Goldman Fund, The George Gund Foundation, The William and Flora Hewlett Foundation, The Frances Lear Foundation, Steve Leuthold Foundation, Charles Stewart Mott Foundation, the Curtis and Edith Munson Foundation, The David and Lucile Packard Foundation, the NIB Foundation, The Overbrook Foundation, The Shared Earth Foundation, Surdna Foundation, Inc., Turner Foundation, Inc., Wallace Global Fund, Weeden Foundation, and The Winslow Foundation.

Behind every successful nongovernmental organization is a group of leaders who contribute a combination of prudence and foresight to strategic leadership of the organization. The members of Worldwatch's Board of Directors have increased their involvement this past year through their committed participation in strategic planning, organizational development, and fundraising. We are especially indebted to their extraordinary financial leadership this year through the creation of a "Board Matching Gift Challenge" of nearly \$600,000, aimed at inspiring increased individual giving to the Institute.

We are also grateful to the thousands of individual contributors who are members of the Friends of Worldwatch. We have been proud to learn that many of our members are active at the local level in creating sustainable

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communities around the world. Thank you for your support and for your personal efforts to make the world a better place.

Our profound gratitude is extended to Worldwatch Council of Sponsors members—Adam and Rachel Albright, Tom and Cathy Crain, and Robert Wallace and Raisa Scriabine Wallace—who provide annual support of \$50,000 or more to Worldwatch.

Robert Wallace is a shining example of an individual who was dedicated to fostering a better world. This past October, Bob passed away, and Worldwatch lost a longtime friend who was deeply devoted to international sustainable development work. In 1996 Bob, who was President of the Wallace Global Fund, inspired the creation of the Worldwatch Council of Sponsors, which continues to provide core support to the Institute

on an annual basis.

We are proud to have had such a lasting relationship with Bob, and are grateful for the legacy that he and his wife, Raisa, together with his children and the Wallace Global Fund, have left at Worldwatch. We dedicate this twentieth anniversary *State of the World* to Bob Wallace.

Finally, in July 2002 the entire staff of the Institute welcomed the latest additions to the Worldwatch family—Samuel Carlos and Clara Lucia Gardner. When Sally and I traveled to Bolivia to adopt Sam and Clara, we knew that this lively pair was going to change our lives forever. Since we returned, we have discovered they are a daily reminder of why our work here at Worldwatch matters.

Gary Gardner
Project Director

Preface

In late August 2002, several colleagues and I flew from Washington to Johannesburg, South Africa, to participate in the World Summit on Sustainable Development. The journey is a long one, and not only in terms of the seven time zones, 65 degrees of latitude, or the disconcerting seasonal transition—from a damp northern summer to a refreshing southern winter. In moving this far from North to South, we entered a different world.

While *State of the World 2002* focused on the agenda for the Johannesburg World Summit, *State of the World 2003* is informed by our experiences in being there. The Summit showed us much about where the world is politically in dealing with the vast problems related to sustainable development, but it also showed us in a more immediate way how a large part of the world lives—and how deeply people are affected by the intersection of poverty and environmental decline.

The upscale Sandton Convention Center in which the official Johannesburg negotiations took place would nestle easily into the suburbs of Washington, DC, or even Beverly Hills. But that splendor gives a misleading perception of life in South Africa and the rest of the region.

Some of my colleagues saw firsthand the squalor of Johannesburg's urban slums, as Molly O'Meara Sheehan describes in Chapter 7, where life has improved little in the decade since apartheid ended. Payal Sampat, author of Chapter 6, met with mine work-

ers at an abandoned gold mine—gold mining is the reason that Johannesburg exists at all—and was able to see the enormous human and environmental price that was paid to extract the precious metal embedded in the jewelry of millions of people around the world.

From its vast human inequality to the coal soot in its air and the falling water tables beneath its surface, Johannesburg is a living, breathing example of why sustainable development is imperative—and of how far we still must go to achieve it. But South Africa also provides the world with one of the all-time object lessons about the possibility of dramatic change. In his speech opening the Summit, President Mbeki drew on South Africa's precipitous overturning of apartheid as a metaphor for what the world must do to achieve sustainable development.

Other examples of rapid change are more ancient. In Chapter 1 this year, entitled "A History of Our Future," Chris Bright describes a remarkable advance in human tool-making among a group of people in the Middle East some 40,000–50,000 years ago that led to rapid human social evolution—a critical step toward the development of human civilization and everything that followed. The change seems to have occurred relatively quickly. And like many subsequent human innovations, it demonstrates humanity's seemingly limitless potential for change

in response to outside pressures.

Both of these transformations demonstrate that while dramatic transitions are possible, they only set the stage for continuing cultural, economic, and technological evolution that unfolds after a breakthrough is made. Our ancestors did not move directly from fashioning blades from stone to working on personal computers, but this Aurignacian technology, as it is known, does seem to have set the stage for a surge in social evolution, leading in due course to settled agriculture, cities, and the Industrial Revolution. South Africa's experience with change has only begun to unfold, but it shows similar patterns: ending apartheid was a historic first step in addressing South Africa's social, economic, and environmental problems. But it will take decades to overcome the legacy of racial inequality and improve the lives of all South Africans.

From our perch in Johannesburg, looking back on the Earth Summit in Rio a decade earlier, we saw many parallels between the initial euphoria that followed that breakthrough conference and the sense that all things were possible that accompanied the formal ending of apartheid. The Rio agreements provided formal recognition that global trends were not sustainable—and laid out a long-term road map for the creation of a sustainable world—but it did not by itself solve all the problems that stand in the way. Amid predictable diversity of views, the Johannesburg Summit marked the beginning of a shift from agreements in principle to more modest but concrete plans of action that are needed to move the world in a new direction.

The Johannesburg agreements do not have the historic resonance of the Rio treaties, nor do they meet all the tests that we laid out in the last edition of *State of the World*. Indeed, according to most assessments of the official 54-page Plan of Implementation, including

the World Summit Policy Brief written by my colleague Hilary French, the Johannesburg agreement is something between a modest step sideways and a small step backwards. But her analysis of the World Summit also indicates a more profound significance, one with encouraging implications for the future.

One of the first things to be agreed to by World Summit negotiators was that the world still has a long way to go to achieve the substantial ambitions of the historic Rio treaties of 1992. Unlike at the earlier Earth Summit, there were no major treaties up for negotiation in Johannesburg. Instead, the focus was on concrete steps for moving the Rio agenda forward.

Much of the debate in Johannesburg revolved around whether the Plan of Implementation should include new targets and timetables related to sustainable development—complementing and building on the Millennium Development Goals adopted by heads of state in 2000. Despite opposition from the United States, the Johannesburg plan did in the end include several date-specific targets, including halving the proportion of people without access to sanitation by 2015, restoring fisheries to their maximum sustainable yields by 2015, eliminating destructive fishing practices and establishing a representative network of marine protected areas by 2012, reducing biodiversity loss by 2010, and aiming by 2020 to use and produce chemicals in ways that do not harm human health and the environment.

The lack of detail in these commitments and the acrimony that preceded them left many Summit participants pessimistic about the world's ability to move forward on the most important issues facing humanity in the twenty-first century. The severe North-South splits on financial and trade-related issues seemed deeper than ever, and the U.S. government's opposition to virtually any sub-

stantive multilateral commitments led some to wonder whether a half-century of progress in forging a cooperative global community was about to dissolve in chaos.

These well-founded concerns can hardly be dismissed, but they capture only part of what was going on in Johannesburg. The government negotiators who were niggling over the wording and grammar of deliberately ambiguous paragraphs were literally and figuratively surrounded by one of the largest collections of civil society organizations in U.N. history—ranging from environmentalists and farmers to human rights activists, local officials, and labor union representatives.

More than 8,000 nongovernmental participants were officially accredited to the Summit. In addition to participating in the official summit meetings, nongovernmental groups sponsored a broad range of parallel events, such as meetings of parliamentarians, Supreme Court justices, local government officials, and trade unionists. An estimated 20,000 people representing Africa's dispossessed marched from one of Johannesburg's poorest areas to the posh neighborhood where the conference was held to protest what they saw as the meeting's failure to address the concerns of the poor.

The corporate world was also vigorously present in Johannesburg. According to Business Action for Sustainable Development, an estimated 1,000 business representatives participated in the Summit—with 120 of them being CEOs or Board Chairmen. In comparison, there were 104 world leaders in attendance.

The substantial presence of nongovernmental organizations (NGOs) at an official meeting of governments may have pointed to a strategy for accelerating the process of global change. Because of their scale and because of the politics that surround them, governments and international institutions are often influ-

enced by archaic ideologies or beholden to entrenched economic interests. Outside groups with fresh ideas and representing new political pressures are often required to overcome the momentum of the status quo.

The coming together in Johannesburg of NGOs committed to social betterment, environmental progress, and the creation of new economic opportunities represents a powerful force for change. And the fact that a large portion of these groups came from the South is an even more profound indication that the world is changing. In response to the failure of governments to agree on any clear principles regarding access to information, NGOs set up a voluntary code of conduct that nongovernmental groups, international institutions, and even governments can elect to join.

This example of NGOs stepping in to fill a gap left by governments provides guidance for how the world can one day get beyond the sort of impasse that has blocked international progress on many economic, social, and environmental issues in the past decade. In his recent book, *High Noon*, J. F. Rischard argues that the sheer scale and complexity of many problems have reached the point where traditional nation-states and intergovernmental processes can no longer cope with them, let alone get ahead of the avalanche of problems now rushing toward us. Rischard goes on to suggest that traditional hierarchical processes at the international level should be supplemented by what he calls "global issues networks"—voluntary alliances of governments and NGOs working under the auspices of U.N. bodies such as the U.N. Environment Programme or U.N. Development Programme on specific challenges that face the world today.

It is in this area that Johannesburg may have yielded its most significant results. In addition to the official agreements, the Summit produced roughly 280 "partnership ini-

PREFACE

tatives”—agreements among national governments, international institutions, the business community, labor groups, NGOs, and other actors to carry out sustainable development activities. These agreements were a significant departure from earlier approaches, where the emphasis was on accords among nation-states. Examples of the new initiatives include a partnership for cleaner fuels and vehicles announced at the Summit that will involve the United Nations, national governments, NGOs, and the private sector, and a European Union “Water for Life” project that will help provide clean water and sanitation in Africa and Central Asia.

The growing role of developing countries in setting the international agenda was also clearly evident at the Johannesburg Summit. While that fact made North-South gaps more prominent, it also provided a needed focus on the fact that we live in a world where growing inequality is one of the most pronounced and disturbing global trends. To paraphrase U.S. President Lincoln on a similar division a century and a half ago, a world divided against itself cannot be sustained.

South Africa, itself a hybrid of North and South, provides a signal example of a country that is striving to bridge such gaps. But it is also emblematic of one of the biggest advantages our globalized world presents today: diversity. Diversity in South Africa is represented not only by its highly complex racial and cultural mixes but by one of the

world’s great “hotspots” of biodiversity. The Cape Floral Kingdom in the southwest, as described in Chapter 3 of this year’s book, is home to 9,000 plant species. Diversity creates tensions and conflicts, but if those are successfully managed, diversity also spawns innovation and resilience that will ultimately make South Africa a stronger country—and has the potential to make the world sustainable.

It is far too early to know whether the diversity and innovation that marked the Johannesburg World Summit will ultimately fill the gaps left by governments. But as you will see in *State of the World 2003*, it is clear that the world is changing. Slowly, and sometimes chaotically, humanity is responding to stress—and is changing its ways, just as our ancestors did 40,000–50,000 years ago. Daily and powerfully, our fellow *Homo sapiens* remind us that it is far too early to give up on the human race.

Christopher Flavin

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November 2002

State of the World: A Year in Review

The first chapter of *State of the World* this year is about innovation—and we appropriately have an innovation of our own in this edition. As a result of a brainstorming session earlier in the year on how to convey better the many developments and setbacks along the road to sustainable development, we decided to add a timeline called “State of the World: A Year in Review.” This germ of an idea was turned into a fascinating final product by Research Associate Lisa Mastny and Art Director Lyle Rosbotham.

Each year, the timeline will cover significant announcements and reports during the 12 months before *State of the World* goes to press. Assembling such a chronicle of global

events can be a challenge—particularly in today’s accelerated age of information and mis-information. But we have done our best to present an accurate yet engaging mix of both encouraging and sobering signs of planetary change.

Although we made no attempt to be comprehensive, we hope that this timeline will boost your awareness of the connections between specific global events and ideas and the broader, often less tangible, trends that influence and shape our planetary future—from climate change and biodiversity loss to new milestones in global governance and public health. As always, we welcome your feedback on this *State of the World* innovation.

STATE OF THE WORLD: A YEAR IN REVIEW

FORESTS

UN reports that tropical countries lose more than 15 million hectares of forests a year to agriculture, logging, and other threats.

CLIMATE

Report says US carbon emissions jumped 3 percent in 2000 and are up 17 percent from 1990.

FISHERIES

Study says inflated fish catch reports from China—the largest producer—have masked a decade-long decline in the global fish harvest.

WATER

UN warns that the world's reservoirs are losing storage capacity as deforestation causes erosion and sedimentation behind dams.

HEALTH

Study links nearly 2,000 cases of thyroid cancer to the 1986 Chernobyl nuclear accident—the largest group of human cancers associated with a known cause and date.

BIODIVERSITY

Study estimates that 38 million animals are smuggled from Brazil's forests each year for sale on the black market.

CLIMATE

UN says 2001 is expected to be the second warmest year on record since measurements began in 1860.

OCTOBER

NOVEMBER

DECEMBER

2001 STATE OF THE WORLD: A YEAR IN REVIEW

2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30

OZONE LAYER

Scientists say Antarctic ozone hole has not grown significantly over the past three years and could recover fully in 50 years.

GOVERNANCE

Trade ministers from 142 countries meeting in Doha, Qatar, agree to a new round of world trade talks.

FORESTS

Satellite imagery shows Mexico's deforestation rate is nearly twice as high as previously thought—and the second highest in the world.

BIODIVERSITY

116 countries vote for new global treaty giving farmers the right to save, trade, and sell seeds and limiting biotech patents on plant genes.

BIODIVERSITY

Scientists warn that native maize in Mexico has suffered genetic pollution through contact with US bioengineered corn.

FISHERIES

Pathbreaking international agreement on conservation and management of global fish stocks enters into force.

BIODIVERSITY

Study says half of North America's most biodiverse regions are degraded, and 235 mammal, reptile, bird, and amphibian species are now threatened.

CLIMATE

Study finds that the global ice melt rate has more than doubled since 1988 and could raise sea levels by 27 centimeters by 2100.

POPULATION

UN projects that fertility in many developing countries is likely to fall below the replacement level of 2.1 children per woman by mid-century.

ENERGY

Germany sets a goal of meeting at least a quarter of its domestic electricity needs with wind power by 2025.

TOXICS

Report says up to 80 percent of US computers and electronics collected for recycling is sent to Asia, where it threatens worker health and the environment.

CLIMATE

Some 3,250 square kilometers of Antarctica's Larsen B ice shelf collapse as regional temperatures warm.

JANUARY

FEBRUARY

MARCH

2002

Compiled by Lisa Mastny

MINING

The Provincial Board of Mindoro Province in the Philippines votes for a 25-year moratorium on all forms of mining.

FISHERIES

Scientists warn that precision mapping, satellite navigation, and other new fishing methods are decimating global fish populations.

GOVERNANCE

Aiming to reverse a decade-long downward trend, world leaders gathered in Monterrey, Mexico, pledge to boost aid to developing countries.

TOXICS

UK study finds that babies born within 3 kilometers of hazardous waste landfills are 40 percent more likely to have chromosomal defects.

CLIMATE

A week of incessant rain causes the worst flooding in decades in Indonesia, killing at least 84 people and inundating up to one fifth of Jakarta.

URBANIZATION

UN projects that nearly all 2.2 billion people to be added to world population by 2030 will be in urban areas of the developing world.