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Third Quarter, 2002

Global Future



The environment
Maintaining our home

Land and resources

Philippines President Gloria Macapagal-Arroyo

The opportunity of Johannesburg

Jürgen Tritten, German Minister for Environment,

Nature Conservation and Nuclear Safety

Human rights and the environment

Sierra Club Executive Director Carl Pope

The linchpin generation

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Preserving Earth

THE PROBLEM with the environment is that there's not as much of it to go around as there used to be. Well, not as much to pollute at will, anyway.

'At the start of the industrial revolution 200 years ago, no one thought that burning fossil fuels for energy would increase in scale until it destabilised the world climate,' writes scientist and author David Suzuki in this edition. Today, things are different.

A study published in the August issue of the *Journal of Climate* claims that pollution from industrial nations may have been a major factor in the 1970-85 African drought and subsequent famine that left 1.2 million people dead. Researchers say the drought may have been brought on in part by sulphur dioxide particles from power plants and factories in North America, Europe and Asia.

Our only home

Jürgen Trittin, Germany's Environment Minister, outlines in our lead article positive changes that can be set in motion at the upcoming United Nations World Summit on Sustainable Development if we have the courage and the will to do so. World Resources Institute President Jonathan Lash examines ethical issues behind the environmental crisis. Philippines President Gloria Arroyo looks at poverty reduction as a key element in furthering sustainable development. And Sierra Club Executive Director Carl Pope discusses challenges faced by environmentalists in the developing world.

It seems common sense, but we foul our nest at our own peril, and lately we're doing so at an alarming rate of speed. Taking care of planet Earth is in everyone's best interest. Until we find something better, it's our only home. ■

— Randy Miller

The opportunity of Johannesburg

Jürgen Trittin

IN EARLY SEPTEMBER 2002, ten years after the Earth Summit in Rio de Janeiro, heads of state and other leaders will gather in Johannesburg for the World Summit on Sustainable Development.

Ever since Rio, the concept of 'sustainable development' has been acknowledged as the political *leitmotif* for all environmental, economic and social policy. Its implementation, however, has been rather mixed.

Of course, there have been a number of respectable successes in some important areas, such as progress in international negotiations for climate protection, which allows for the Kyoto Protocol to take effect sooner than expected. In Germany, for one, a policy change in nuclear energy has been advanced. However, on a global scale, a genuine turnabout toward truly sustainable development is still pending. In the long run, structural changes and economic growth made possible by globalisation can be maintained only by also taking into consideration the ecological impact. In addition, one must bear in mind that conflicts and crises do not stop at borders, and that sustainable development also requires peace. Peace, however, cannot exist without global justice and equity: between the North and the South, between the generation of today and that of tomorrow, between mankind and the natural environment.

Renewable resources

Two billion people worldwide have no access to a reliable source of ener-

gy. Addressing this need through a truly sustainable development process is one of the great challenges of the coming years. Decentralised energy provision through renewable resources can be a real contribution toward poverty alleviation, especially in rural areas. For this reason, the German government and its partners in the European Union are appealing to the Johannesburg Summit to commission an action-oriented pro-

players, such as civil society or the World Bank.

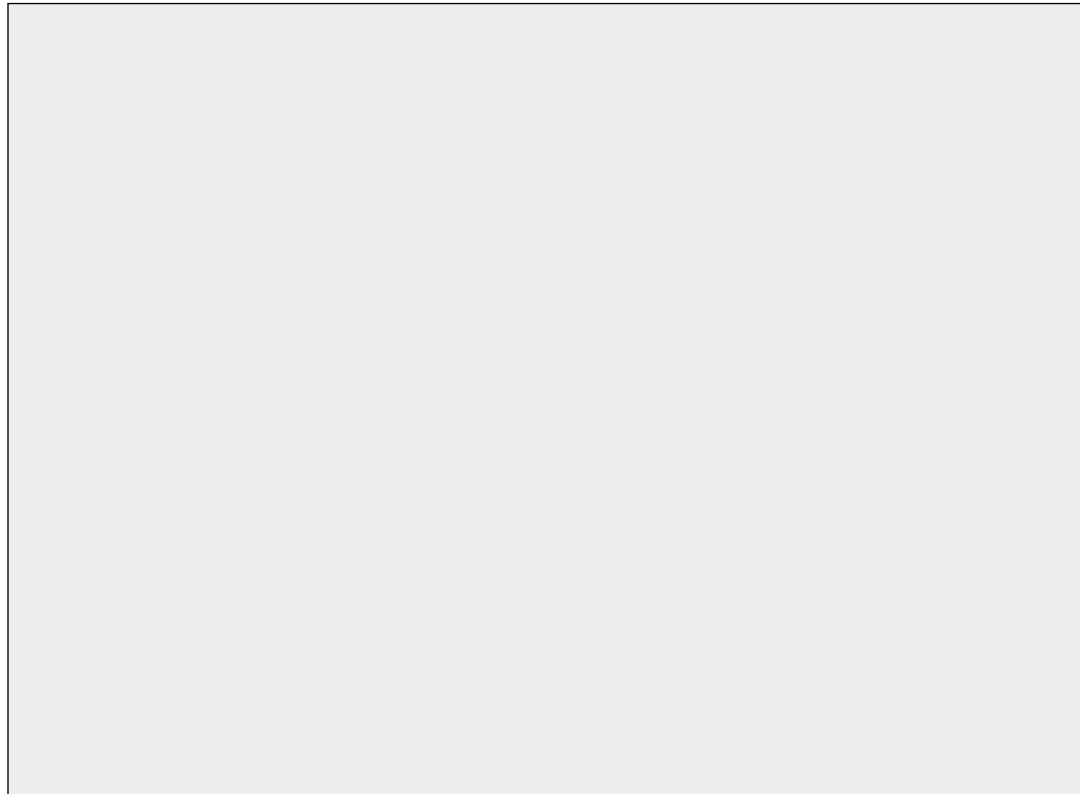
Similar rulings are needed for the problem of water supply, especially access to clean drinking water.

The ever-accelerating process of globalisation urgently calls for a

On a global scale, a genuine turnabout toward truly sustainable development is still pending.

worldwide ecological and social framework in order for globalisation to work for rather than against sustainable development. A single state is

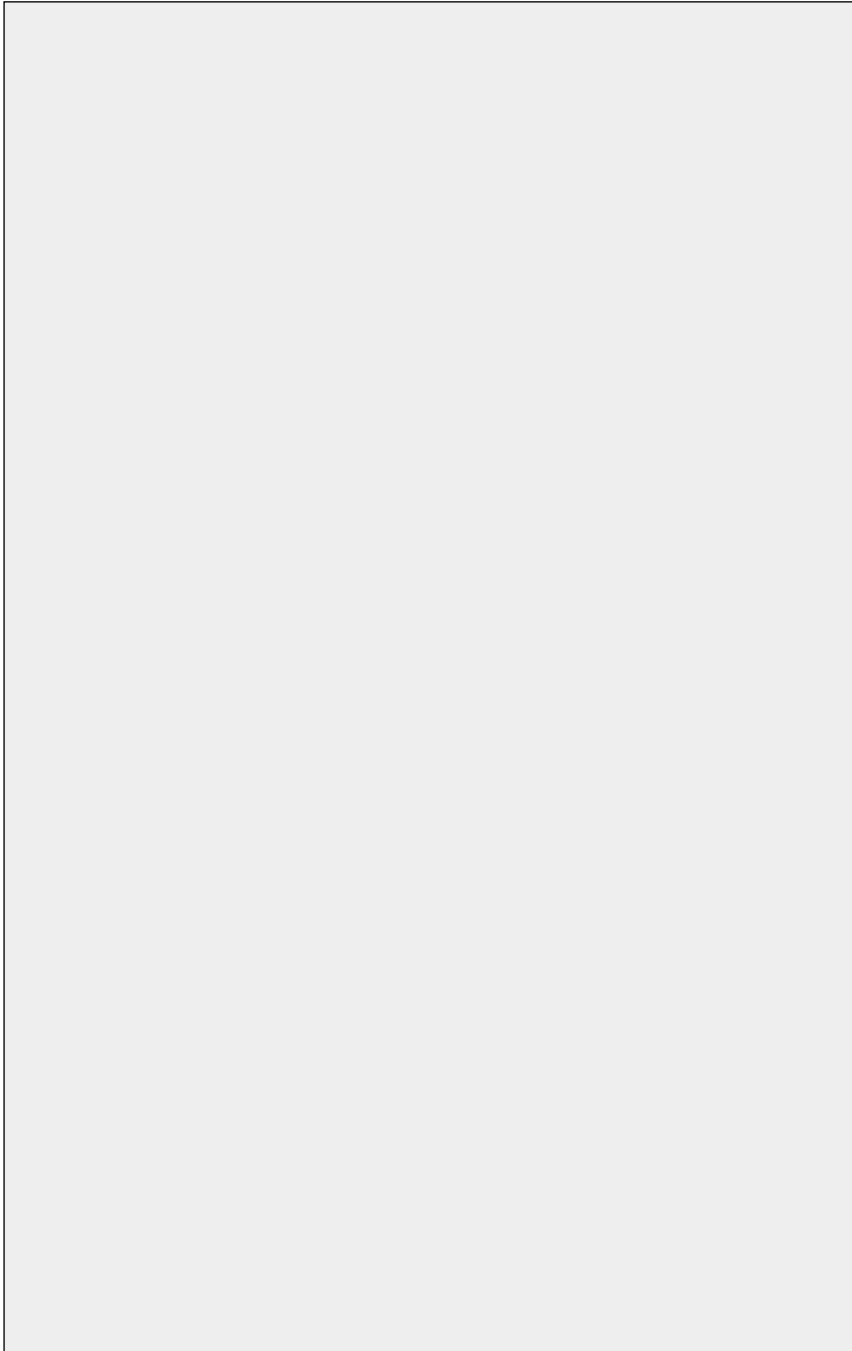
ALEXANDRA WINKLER, (C) REUTERS 2001



German Environment Minister Trittin empties a sack of cans into a recycling container in Berlin.

gramme for a sustainable energy policy. Such a policy, originating in the dissimilar situations in industrialised, newly-industrialised or developing nations—should clearly identify concrete tasks and options for relevant

not in a position to establish such a framework, for in a globalised market economy, offences such as ecological and social 'dumping' cannot be prevented by national legislation alone. Fortunately, the World Trade



Organisation Conference in Doha took this issue a step forward, and we should be building on that. During the next trade round, environmental concerns will be on the agenda for the first time.

New partnerships needed

Not only should international trade policy be challenged, private industry also must live up to its responsibility for an ecologically and

socially acceptable economy. To this end, we need new partnerships and new ways of co-operating with each other. One possible approach could be the process of dialogue by which we are currently engaging the private sector, unions and NGOs to develop basic principles for improving environmental standards in conjunction with private foreign investments. In Johannesburg, we plan to present our experience with this dialogue, thereby

making a contribution to 'best practices' in environmental policy.

In order to draw added attention to issues of environmental protection within an economically dominated globalisation process, Johannesburg must also be the starting point for giving increased prominence to the United Nations Environment Programme (UNEP), which should develop into a more influential World Environment Organisation. If the UN's environmental agency is to effectively combat the world's ecological haz-

Who knows if and when there will be another such opportunity for finding creative and sustainable solutions?

ards, this body will have to be on equal footing with the World Food Programme, the World Health Organisation, the World Trade Organisation and the International Labour Organisation.

For many of the urgent environmental issues on the agenda in Johannesburg, the right decisions for sustainable global development can only be reached if we exert our utmost efforts to mobilise the resolve and determination of all participating states. Who knows if and when there will be another such opportunity for finding creative, bold and sustainable solutions? With this in mind, an international pact—a 'global deal' as it were—must be brokered in Johannesburg. Rather than vanish into thin air as a simple footnote of the Rio conference, the concept of sustainable development should instead become worldwide reality by way of practical, action-oriented decisions at the Johannesburg Summit. ■

Jürgen Trittin is Minister of the Environment for Germany.

Taking care of the Joneses

David Suzuki

DEVELOPMENT, in terms of North/South relations and economic change, is complicated business. It's about politics and economics, society and the environment. But ultimately it's about ethics.

Time and time again, we hear about how we live in a 'global village'. Indeed, radio, satellite television, cell phones and the internet now allow us to communicate with virtually anyone who possesses the same technology, any time, in any part of the world. Many corporations are also truly 'global'. You can buy a Big Mac or a Coke today in places that had never

heard of these luxuries a decade ago.

But globalisation and international development are about much more

Globalisation and international development are about more than just consumer goods or fast food.

than just consumer goods or fast food. They're about recognising that all human beings belong to the same species and share a common history, a

common environment and a need for natural resources. Human beings are now the most ubiquitous mammal species on the planet. Our actions have worldwide consequences—to our environment and to each other. That means people living in rural Africa or New York City, on the islands of Tuvalu or in Canada's far north, are no longer strangers, but neighbours. And neighbours, I was taught, look out for one another.

Wrong side of the tracks

Right now, a huge portion of the world is still living on the wrong side of the tracks. According to the World Bank, 1.3 billion people struggle to survive on US\$1 or less a day, while 3 billion people eke out an existence on US\$2 or less a day. That kind of poverty takes its toll through malnutrition, disease, disaster and unrest. And the

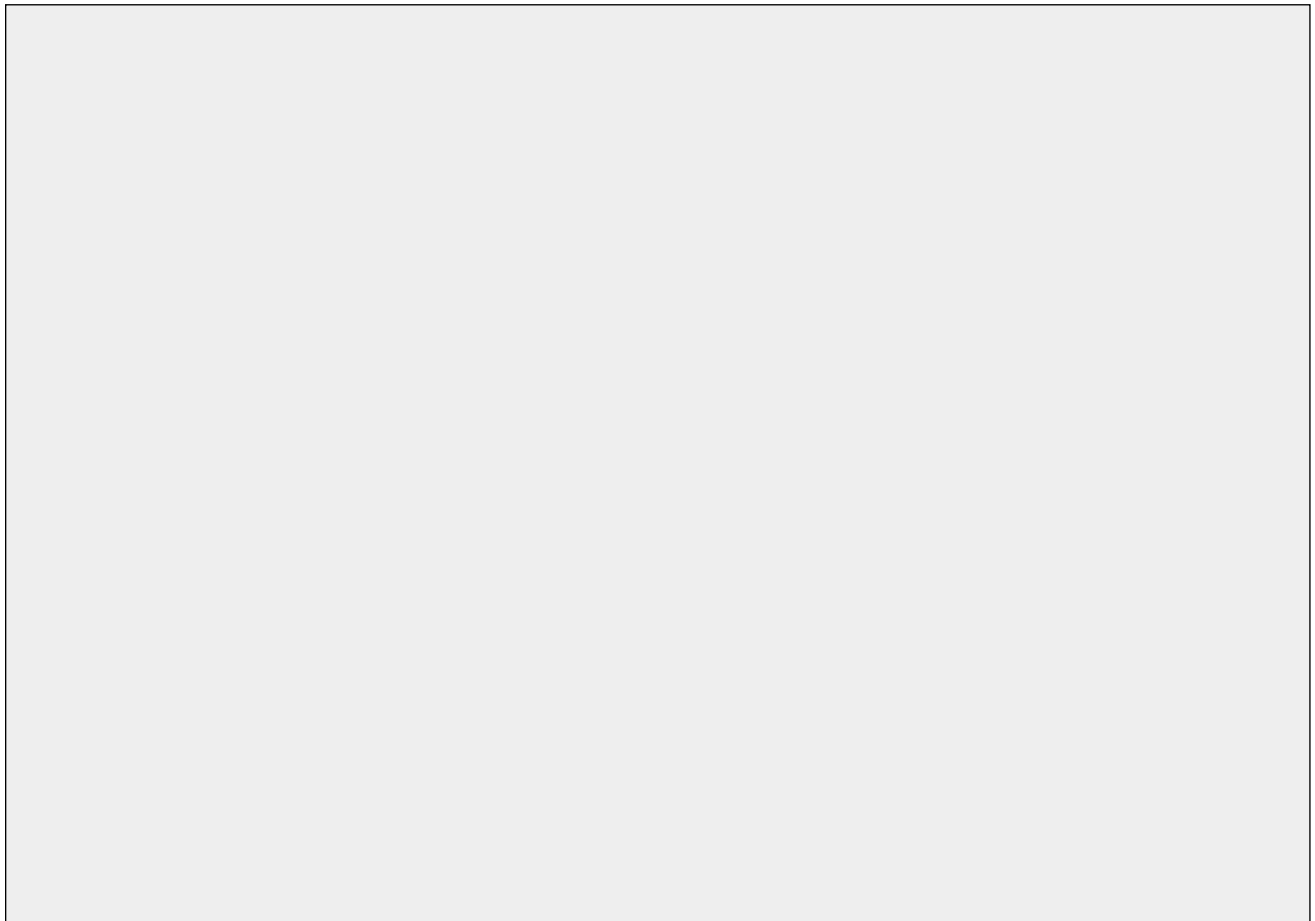


PHOTO BY STR., (C) REUTERS 2000

Right now, a huge portion of the world is still living on the wrong side of the tracks, with some 1.3 billion surviving on less than \$1 a day.

local environment suffers. When poor families are starving, protecting an endangered species is the least of their concerns. Endangered or not, if it's edible, they'll kill it and eat it. If they need more range or farmland for cattle or crops, then they'll cut down and burn pristine rainforests. And we can't blame them.

The result is a feedback loop as environmental degradation contributes to poverty, which contributes to more degradation. It's a particular problem for developing nations whose populations tend to be more connected to the environment through farming, fishing, gathering and herding than those living in the developed world. And it's why improving living standards in the developing world is vital to protecting the global environment.

Paradoxically, while it is the poor who suffer the most from environ-

mental degradation, addressing global environmental problems is a duty of the rich. The best example of this is climate change—a problem caused almost entirely by wealthy nations. At the start of the industrial revolution 200 years ago, no one thought that

In the Antarctic, collapsing ice shelves are cooling the waters and threatening the food chain.

burning fossil fuels for energy would increase in scale until it destabilised the world climate. What a bizarre notion! Back then, resources—especially the atmosphere—seemed virtually limitless. How could burning a little coal change the world?

The problem, of course, is that we

haven't burned just a little, we have burned a lot of fossil fuels, starting with coal, then oil, gasoline and now natural gas. We've gone from consuming the annual energy equivalent of 400 million tonnes of oil two centuries ago to over 30,000 million tonnes today. Nations that got the jump on the industrial revolution greatly benefited from this energy binge. It has enabled us to build extensive infrastructures for public health, transportation, water, sewer and power. And it's vastly improved the length and quality of our lives.

Greenhouse gases

But burning all that fossil fuel has released enormous amounts of greenhouse gases, like carbon dioxide, which trap heat in the lower atmosphere, thereby causing global warming and climate change. And these changes are just beginning to show. In the

increased floods, droughts and other extreme weather events. These new problems will further strain resources that are already overtaxed. Second, developing countries have the misfortune of geography. They just happen to be located in some of the areas that climate scientists say will be most affected by a changing climate—areas like the sub-tropics and tropics, including sub-Saharan Africa and low-lying island states.

Developing nations already bear the brunt of natural disasters. According to the International Red Cross and Red Crescent Societies, 88% of those affected by natural disasters—and two-thirds of the people killed by them over the past decade—live in the world's least developed nations. Such disasters are already on the increase and those societies expect them to become much worse as climate change progresses.

Africa and Asia vulnerable

That is also the opinion of the Intergovernmental Panel on Climate Change (IPCC), a body of climate experts charged by the United Nations to explore climate change issues. According to their most recent report on projected impacts, Africa is 'highly vulnerable' from the effects of a changing climate because of poverty, a reliance on rain-fed agriculture, and susceptibility to droughts and floods. Grain yields are expected to decrease, creating food stress; many local species could become extinct, damaging tourism; and infectious disease vectors could expand, further threatening human health.

Parts of Asia are also highly vulnerable to climate change. Low-lying Bangladesh, for example, could lose 10 to 20% of its land area as sea levels rise. This would greatly increase food insecurity in a country where more than one-third of the people are already malnourished and half do not have access to adequate sanitation. Low-lying island states like Tuvalu could disappear altogether as seas rise, creating the first of potentially

millions of 'environmental refugees'.

Industrialised nations have benefited enormously from two centuries of cheap, unchecked energy consumption. We caused the climate problem. It's our responsibility to fix it. We must help developing nations break the cycle of environmental degradation and poverty, not further entrench it. We can do that by reducing our own pollution and providing the means for developing nations to progress with-

We cannot pretend that the plight of people on the other side of the planet is not our concern.

out becoming chained to polluting fossil fuels. Renewable energies, like wind and solar, can provide clean power to homes in areas that currently meet their energy needs with dirty fuels or simply don't have power at all.

Developed nations have an ethical obligation to reduce our emissions that are causing climate change.

To shirk this responsibility and say that we will simply increase humanitarian aid to affected nations as their water tables shrink and their crops wither is to forever deny their people a chance at the prosperity and good health that we currently enjoy. That is unwise politically and practically, for it will condemn a good portion of the world's people to a continued cycle of poverty, which breeds unrest, contempt and violence. More important, in a globalised world, we cannot pretend that the plight of people on the other side of the planet is not our concern. They are our neighbours. We created the problem. To turn our backs on them now is ethically unconscionable. ■

Scientist and author David Suzuki is president of the David Suzuki Society, based in Canada.

Canadian Arctic, thinning ice is making it harder for some species, like polar bears, to hunt. In the Antarctic, collapsing ice shelves are cooling the waters and threatening the food chain. In the Himalayas, melting glaciers are creating unstable lakes that pose a flood threat and endanger tens of thousands of people. Extreme weather events, another sign of global warming, also appear to be increasing in frequency and intensity.

Wealthy nations, which have benefited the most from cheap fossil fuel energy consumption, will also suffer the least from climate change. Developing countries, even though they have benefited the least from the fossil fuel energy bonanza and contributed the least to global warming, will suffer the most. Why? First, they don't have the money and infrastructures to deal with problems like rising sea levels, expanded disease vectors,

Battling poverty in the Philippines

Her Excellency Gloria Macapagal-Arroyo

THE PHILIPPINES is one with the rest of the United Nations member-states in pursuing the development goals set in September 2000 at the UN Millennium Summit. Our contribution to the global target of reducing by half the proportion of people living in extreme poverty by the year 2015 is the reduction in our own incidence of poverty from 34.2% in 2000 to 25-28% in 2004.

phy of free enterprise appropriate to the 21st century. We recognise that our new fight against poverty is set in the battleground of the new economy, and in order to succeed, we need to tap the opportunities presented by the global market. We believe that this philosophy will create more jobs in sectors that count most to ease the burden of the poor.

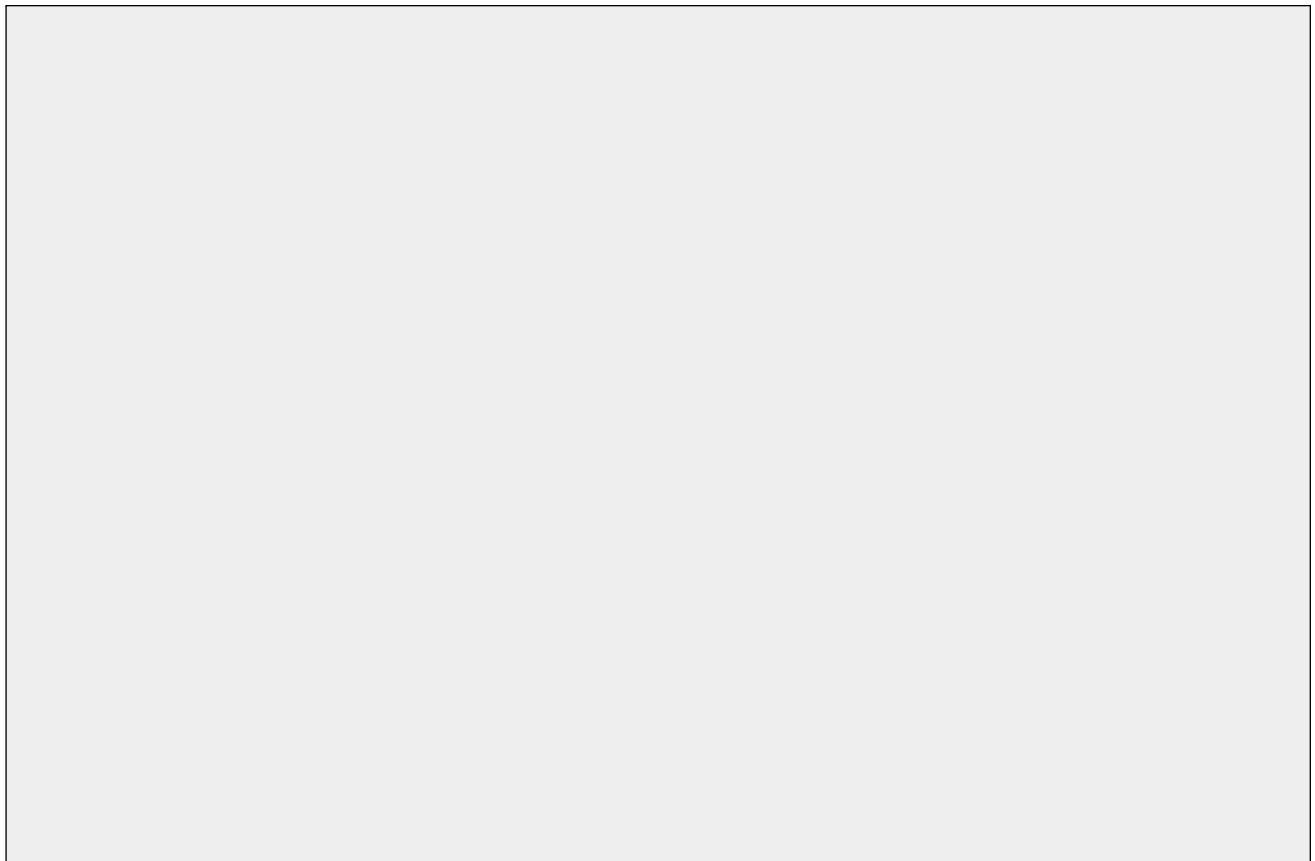
The second component is a mod-

tryside and are dependent on farming and fishing. Our national agenda aims to bring economic development to these areas where development is needed most.

Winning the battle against poverty is the over-riding goal of our government's national development agenda.

The third component is a social bias toward the disadvantaged to balance our economic development. This social bias is anchored in the redistri-

PHOTO BY ERIK DE CASTRO, (C) REUTERS 2002



Philippine President Gloria Macapagal-Arroyo greets fire victims during a visit to Isabela town on Basilan Island in May 2002.

Indeed, winning the battle against poverty is the over-riding goal of our government's national development agenda, which revolves around four main components.

The first is an economic philoso-

ernised agricultural sector founded on social equity. In the Philippines, poverty continues to be mainly a rural phenomenon and is agriculture-based. More than two-thirds of poor households in the country live in the coun-

ty. Our national agenda aims to bring economic development to these areas where development is needed most. The third component is a social bias toward the disadvantaged to balance our economic development. This social bias is anchored in the redistri-

on the fringes of our society.

The fourth component is to raise moral standards in government and society. To ensure that our gains are not dissipated through corruption, we endeavour to create an environment conducive to good governance, which is characterised by a sound moral foundation, a philosophy of transparency, and an ethic of effective implementation.

Redistributive reform

More on the third component: social bias toward the poor and marginalised is at the front line of the battle against poverty. Redistributive reform is our primary framework for improving the level of human development. It shapes the direction of our economic growth over the next several years. Components of this framework include the following:

First, priority is being given to asset reform programmes or the redistribution of physical and resource assets to the poor, especially land and credit. This entails fast-tracking the transfer of farm lands to farmers under our Comprehensive Agrarian Reform Programme; protection of small fisher-folk's rights to aquatic resources; implementation of urban development and housing, especially socialised housing for urban poor groups; quicker validation of ancestral domain claims to indigenous peoples under our Indigenous People's Rights Act; and equal ownership rights for women.

Second, we are working to provide more fully for the financial and institutional requirements of human development services. We have set specific targets for making available basic education, health, shelter, water and electricity for the poor and marginalised sectors.

Third, we are working to increase employment opportunities for the poor over and above what the market would provide, and to strengthen the capacities of marginalised groups to engage in productive activities. Toward this end, the government is providing

funds for the modernisation of agriculture and fisheries in the hope of providing 1 million jobs. We are providing employment opportunities to out-of-school, out-of-work youth, and micro-finance loans to 300,000 new borrowers per year who, after the classic Grameen Bank formula, are mostly women.

Fourth, we are encouraging participation of the poor in governance and institution building, and the inclusion of civil society groups in policy-making at national and local levels. We are working to strengthen the representation of different sectors of Philippine society in national and local governments.

Fifth, we are working to provide social protection and security from violence for the basic sectors, so they can fully exercise their political, social and economic rights and join the

We are working to strengthen the capacities of marginalised groups to engage in productive activities.

mainstream of society.

Social protection includes three components. First, social welfare assistance through regular government programmes that maintain a minimum standard of living among the poor and reduce risks from such threats as violence, illness, disability, old age, unemployment, resettlement and harvest failure. Second, safety nets or bridging mechanisms that mitigate the adverse impact of economic dislocations and shocks, disasters and calamities, and structural adjustments on specific disadvantaged and vulnerable groups. And third, social security to diversify and mitigate the risks among the poor arising from retirement, unemployment, illness and disability.

Enforcement of laws

Security from violence means strengthening the enforcement of our

laws against sexual harassment and rape; legislation against domestic violence; stricter enforcement of the law against illegal demolitions, and the stronger participation of urban poor groups in cases involving relocation, and prohibition of exploitative labour. Through existing government structures, we recognise indigenous cultures and practices, including communal management of resources and traditional health and education practices. Security also means protecting the environment to ensure its long-term sustainability.

In order to implement these thrusts, we have instituted several governance reforms, including strengthening private-sector participation in infrastructure development; developing greater partnerships among governance actors, government, business and civil society in infrastructure and market development; improving the enforcement of anti-corruption laws; and instituting public sector accounting and auditing reforms.

The creation and transformation of institutions to fight poverty are more urgent than ever today. Weak and ineffective institutions—such as problematic poverty-rights laws, biased markets and onerous requirements for setting up business—more often hurt the poor and disadvantaged than the rich. The poverty reduction thrusts of our government, therefore, seek to transform and create new institutions in order to effectively respond to the country's marginalised groups.

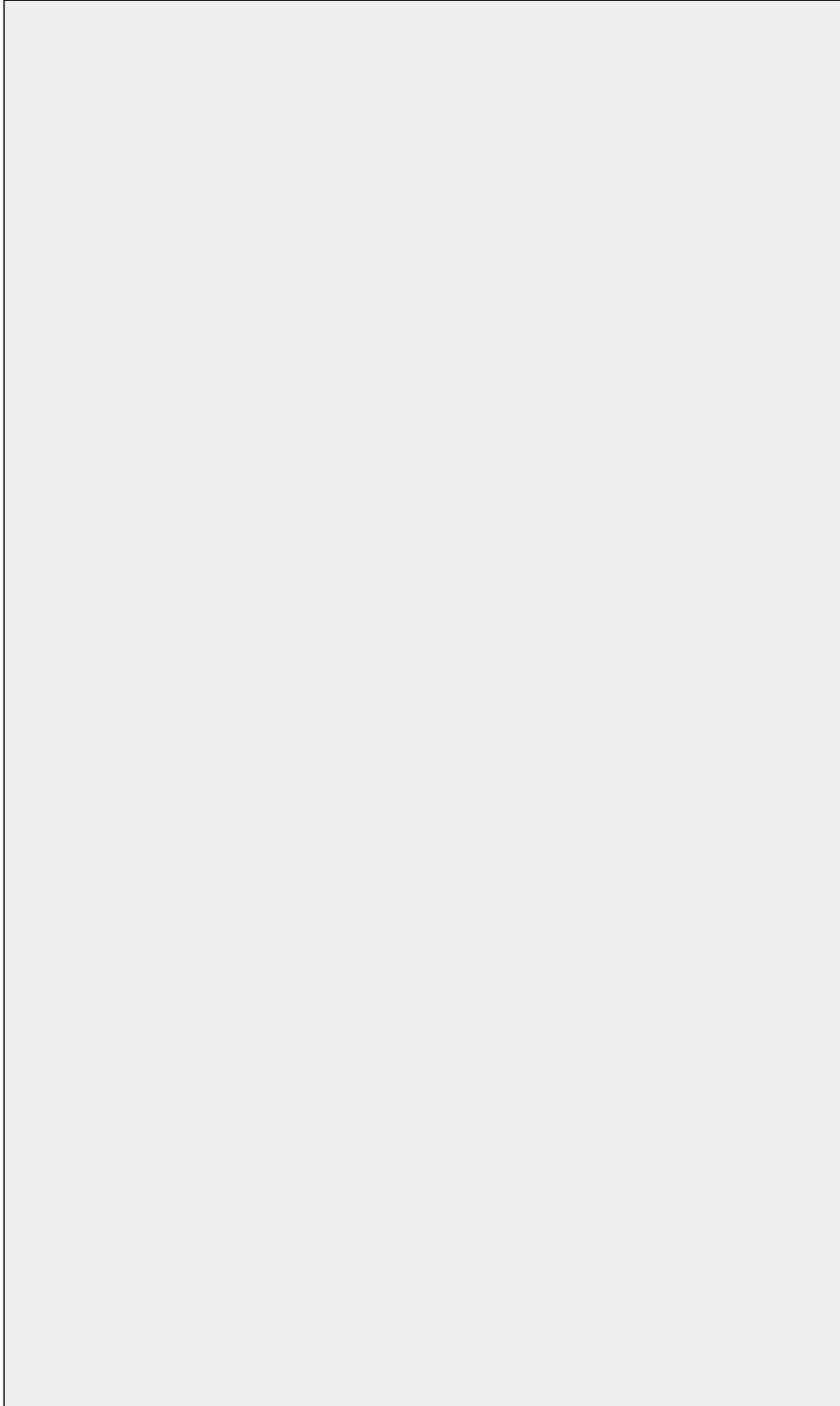
The task of halving poverty by 2015 is formidable, and calls for nations to focus their resources on clear, focused and comprehensive development programmes. It also requires greater mutual assistance, and closer co-operation and solidarity among nations. ■

Her Excellency Gloria Macapagal-Arroyo is President of the Philippines.

The linchpin generation

Jonathan Lash

PHOTO BY HO. (C) REUTERS 2000



A diver points to damaged coral on Australia's Great Barrier Reef, which may be attributable to global warming. Scientists predict coral bleaching will likely increase in the future.

THE GENERATION BORN in the 20th century and living in the 21st confronts profoundly difficult environmental choices with irreversible consequences for the future. Our decisions about ecosystems, extinction and global warming will determine a future our children cannot reshape.

People aspire to leave a cleaner and safer world to their children, but the pressures of poverty, rising population and environmental degradation continue to stymie their dreams. In every respect, human development and human security are closely linked to the productivity of the world's ecosystems. Our future rests squarely on their continued viability.

Our decisions about ecosystems, extinction and global warming will determine a future our children can't reshape.

The most serious environmental problems confronting us are those that affect the greatest number of people, especially the poor in the developing world. The squalid slums in the sprawling cities in the poorest parts of the world are growing explosively, expanding by a million people a week. Within a decade or so, if trends continue, there will be 27 cities in the developing world that will be bigger than New York.

Two major problems

Amid the plethora of problems that this potent mix of environmental degradation, poverty, and population pressure will create, two stick out: the growing fresh water crises and global warming

Our research shows that freshwater ecosystems, which occupy less than one percent of the Earth's surface, are the most imperilled. Much of the degradation of the world's freshwater systems is due to habitat destruction, the construction of dams and canals, introduction of non-native

species, pollution, and over-exploitation. More than 20% of the world's known 10,000 freshwater fish species have become extinct, been threatened, or endangered in recent decades.

While many regions of the world have ample freshwater supplies, four out of every ten people currently live in river basins which are experiencing water scarcity. By 2025, at least 3.5 billion people or nearly 50% of the world's population will face water scarcity. In addition, 29 of the world's river basins—with a projected population of 10 million each by 2025—will experience further scarcity.

The quality of the world's fresh water is already severely degraded, and annually, polluted water is estimated to contribute to the deaths of about 15 million children under five years old. Without necessary investments in clean water, an estimated 1.2 billion people will be condemned to a life of avoidable illness, poverty and premature death.

Market solutions

While most solutions have focused on technologies that provide clean water, market solutions must be better explored, especially as cities and other urban areas rapidly grow. Water prices do not currently reflect the actual cost of the services that freshwater ecosystems provide—such as pollution filters, habitat for wildlife, and food production. Thus, there are few incentives to use water efficiently, nor to manage it in terms of river basins or watershed—not political boundaries.

Global warming is a difficult environmental problem for the public to appreciate—except when viewed as extreme weather events. It is moving slowly in human terms. Yet, the world's leading climate scientists have concluded that human activity is causing global temperatures to rise at a rate faster than any time in the last 10,000 years. Most of the warming has occurred in the last 50 years due to increasing emissions of greenhouse

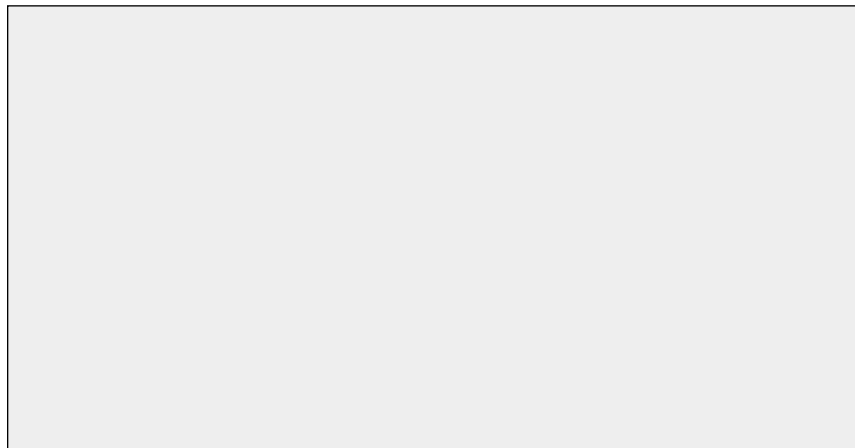


PHOTO BY ANTHONY NJUGUNA. (C) REUTERS 2001

The most serious environmental problems confronting us are those that affect the greatest number of people, especially the poor in the developing world, Lash says.

gases, especially from the burning of oil, coal, gas and wood.

Over the next 100 years, temperatures are predicted to rise by an additional 1.4 to 1.8 degrees Celsius, with sea levels potentially rising by nearly a meter. At first glance, this may not seem significant, but with the large number of people living along coastal areas, the impact will be great. Already, citizens of Tuvalu are emigrating to Australia or New Zealand as rising waters claim their land. People in rich countries may be able to adapt easily to these changes, but not the develop-

No other environmental problem needs a truly worldwide collaborative action than stopping global warming.

ing countries.

Global warming puts unique ecosystems at risk—such as the alpine tundra and the prairie wetlands of North America. Bleaching of coral reefs and damage to mangrove ecosystems will affect food supply and livelihood, especially in the tropics. As temperatures increase, desertification will worsen and agricultural productivity diminishes.

Even if we were to stop emitting greenhouse gases immediately, the effects of global warming will be with

us for at least a century. Many of the changes, particularly in such ecosystems as glaciers, coral reefs and tropical rainforests, will be irreversible.

No other environmental problem needs a truly worldwide collaborative action than stopping global warming. The Kyoto Protocol, while not perfect, is a step in the right direction.

While it is heartening to know that cities like Seattle, northeastern U.S. states and Canadian provinces have pledged to abide by the targets set by the Kyoto Protocol, these are not adequate replacements for countries, acting in concert with other countries, to stop an environmental problem that affects us all.

There are no silver bullets to solve the world's environmental problems, but we have reached the junction where we need to take action to stop our plunge into the irreversibility of environmental degradation. The solutions will not be easy; in fact they could be politically perilous for our leaders and would demand a lot of sacrifice from us. But we have to bite the bullet because our children and grandchildren will not have the luxury of reversing our plunge. ■

Jonathan Lash is President of the World Resources Institute (<http://www.wri.org/wri>), an environmental think tank that goes beyond research to create practical ways to protect the Earth and improve people's lives.

Environmental ethics

Emmanuel Asante

EVER SINCE human beings acquired sedentary lifestyles and began to form permanent settlements about 8,000 to 10,000 years ago, their impact on the environment has been enormous. Sociologists Donald Light, Jr. and Suzanne Keller have observed that 'stationary residence encouraged the development of written language, the calendar, organised scientific inquiry, complex stratification systems, an organised priesthood, institutionalised religion and the state, among many other important social institutions.'

Unprecedented growth in consumption and production levels has led to the environmental crisis that we now face globally and locally. Globally, we are confronted with such environmental concerns as global warming and its effects on the environment, the depletion of the ozone layer and the destruction of the tropical rain forest. Locally, we are confronted with environmental concerns such as air, noise and water pollution, soil degradation, overcrowding and desertification.

Only symptoms

Although urbanisation, over-population and industrialisation have contributed negatively to the environment, these factors ultimately are only symptoms of more basic difficulties. A major cause of the stress on the environment is behavioural, namely, the attitude informed by the mistaken assumption that nature is an inexhaustible, indestructible and free supply source for

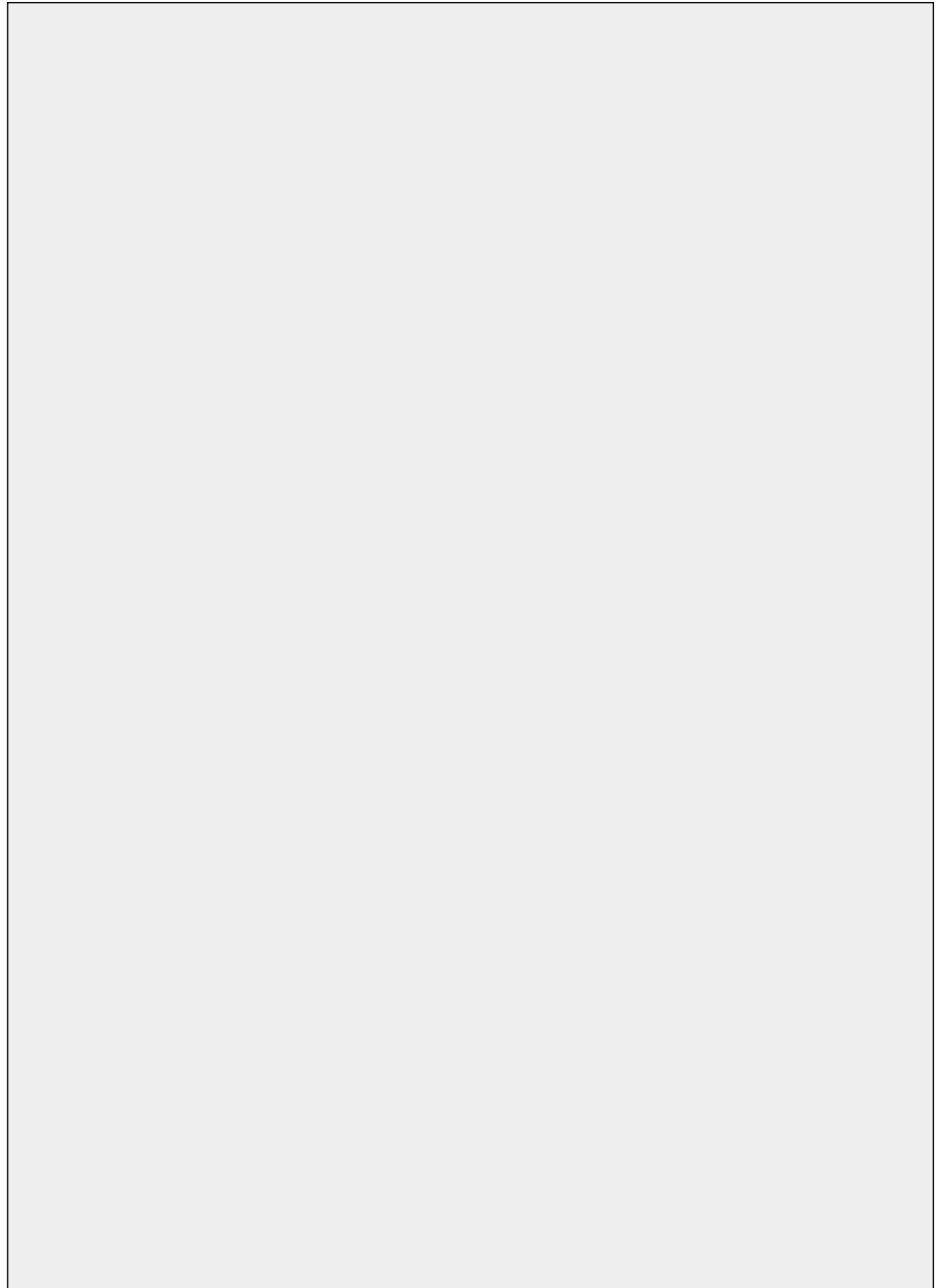
whatever we may desire.

Even though urbanisation, industrialisation and technological advancement have extended our capacity for the destruction of the environment, environmental destruction did not

come suddenly upon us. According to James M. Henslin, 'Our acts of destruction join a continuous line that stretches back into prehistory.'

All of this is to say that anthropocentrism—or egocentrism—is at the heart of the environmental crisis, which is hardly a modern phenomenon. Humans have acquired a certain taste and standard of living. To sustain the standard of living, Henslin says, 'we are poisoning our land, skies, water and food. Our dilemma is how to

PHOTO BY JEAN-PAUL PELISSIER, (C) REUTERS 2001



maintain or even increase our standard of living while not destroying ourselves through the rapacious destruction of the environment.' The question is, must development bring about the destruction of our environment?

None of us is isolated

The environmental crisis confronting us cannot be addressed in an isolated manner. There is a need to see the crisis in global terms. Again, to cite Henslin, 'none of us is isolated. We may not see the connections between ourselves and others, but we are all part of an extensive interdependent system that interrelates humanity, technology and the environment.'

Anthropocentrism is at the heart of the environmental crisis, which is hardly a modern phenomenon.

This means that we cannot approach the environmental crisis through an egocentric approach to environmental ethics. The environmental crisis cannot be addressed via the myths we have created about ourselves and the environment. We assume that, as human beings, we are fundamentally different from all other creatures on Earth, over which we are to exercise control, and that we are masters of our own destiny, and so can choose our developmental goals and do whatever is necessary to achieve them. We assume that the world is vast and provides unlimited resources and opportunities for human beings, who have been destined to rule over nature for their own good.

Egocentric assumptions

The fact is, our attempts to master the environment on the basis of these egocentric assumptions have led to the environmental crisis we face

today. We have succeeded in destroying our environment in our search for unsustainable development. What we need is a sustainable development, which, according to the United Nation's World Commission on Environment and Development, is 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'

The linkage of development to the concerns for the future calls for both a preservationist and a conservationist approach to development. The preservationists, on the one hand, advocate the preservation of natural resources, both because of their own intrinsic value and for the enjoyment of future generations. The conservationists call for efficiency in the management of human resources. They advocate, Miller says, the application of the most modern and efficient 'management techniques to the human care for and use of natural resources.'

Good management needed

Both the preservationist and conservationist approach to environmental stewardship are necessary for sustainable development. Miller observed this when he wrote: 'With increasing populations, accelerated demand for natural resources, and diminishing global supplies of raw materials, the emphasis on good management is increasingly important. At the same time, the preservationist concern for setting aside parklands, maintaining wild and scenic territories, protecting old-growth forests, and limiting destruction of rainforests is more important today than ever before.'

Both the preservationist and conservationist approach lie at the heart of the African's general conception of the human society, which involves the dead, the living and the unborn. Authentic development in Africa cannot be pursued in isolation of both the past and the future. Development should uphold the integrity of the environment, understood both as a

heritage from the past and as a legacy to future generations.

This can happen, Miller says, only if sustainable development is prioritised as we 'change the character and quality of economic growth and develop-

The environmental crisis cannot be addressed via the myths we have created about ourselves and the environment.

ment, to conserve and, if possible, enhance the resource base, to move toward population stabilisation, to reorient science and technology, to integrate responsible, sustainable economic planning into our ongoing environmental assessment and analysis, and to work toward the reformation of the global economic and resource management systems.'

Our attempts to master the environment to enhance our humanity in the context of unbridled development, which thrives on the myth of unlimited resources, could lead to the eventual destruction of humanity. We must adopt both a preservationist and a conservationist approach to development. ■

The Very Reverend Dr. Emmanuel Asante is an author and President of Trinity Theological Seminary in Ghana. He is also Senior Pastor of the Trinity United Church at Legon, Accra.

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Snow today, gone tomorrow

Wilfred Mlay

YOU COULD NEVER SEE much of Kilimanjaro when I was a boy, sent up its slopes to look after the goats near my family home at Hai. The awesome mountain was almost perpetually shrouded in clouds, and most of what you could see was white—more than 12 square kilometres of icy snow, lying in pristine majesty on the earth's equator.

Today, the cloud cover is sparser, and underneath it only a few strips of glistening white snow adorn the blue-brown summit.

A group of American scientists, led by Professor Lonnie Thompson of Ohio State University, exposed our loss to the world in 2001. Nearly three-quarters of the mass of ice on Kilimanjaro has been lost, reducing the area covered to two square kilometres. There's no snow now on Mawenzi Peak. If you want to see the historically famous snows of Kilimanjaro you must go to Kibo Peak, and you may only have a few years left in which to do that.

What you can find at the top of Kilimanjaro is rubbish. There's plenty of litter up there—but then, I'm told that's even true on the top of Everest. It's a bitter parable. A few people mess up our environment, and most of us don't even know what we are losing.

Short-term changes in a glacier mean little, but the longer-term history of Kilimanjaro is part of a growing body of evidence that we are in the middle of serious and perhaps man-made global warming, however much some governments might want to deny it.

Exaggerated weather pattern

Currently, we are struggling with food shortages in Southern Africa. Poor politics and AIDS have contributed, but an exaggerated weather

pattern that led to floods one year and drought the next played a big part. More than a year ago scientists with the Intergovernmental Panel on Climate Change and the UN Environment Programme were predicting decreased rainfall and food stress in southern Africa; environmental pollution by the developed West has left people hungry in the non-industrial South.

Wherever I travel in Africa people assure me that the seasons are changing. These are not old folk with rosy-hued memories of childhood, but life-and-death recollections of farmers who spent their lives exposed to the elements, learning how to interpret the patterns in order to feed their families. Our weather has become less predictable, more extreme; our seasons have lost the punctuality that once made them more reliable than imported calendars.

Africa cannot simply point the finger of blame at the developed world. We are already seeing the devastation of our natural resources and landscapes on a significant scale, and the ultimate responsibility is ours.

Developing nations, anxious to stimulate self-sustaining economies, are embracing mining and heavy industry, hydro-electric schemes and forest clearance, with often inadequate controls on their effects. Where there are governments and laws, uncontrolled avarice may still spoil things. Powerful elites are taking over previously common land at a prodigious rate, and the exploitation of ancient forests for short-term gain is rampant. It is frankly inconceivable to me that Kenya's recent erratic rains and village-swallowing mudslides have not been a consequence of environmental asset stripping there.

The situation is worse where

there are no effective governments or long-lasting conflicts. In most cases, entrepreneurs and the western-based companies who use the hardwood, gems, oil or rare metal ores are not deliberately setting out to destroy the environment. They argue that they are offering a market; it's up to the locals to guard the environment. It's too easy in a chaotic, under-regulated or corruptible environment to cut corners and get away with morally indefensible activities. International companies really should not be ignorant of the effects of their buying policies.

Pressure on governments

When short-term economic gain overrides long-term environmental sustainability, globalisation sounds hollow. There is pressure on the governments of all developing nations to attract investors. In the reasonable desire to remove bureaucratic hurdles, we may also remove a species of frog here or a mangrove swamp there with a sweep of a pen. Revenue and employment are worthy goals, but not at the expense of irreplaceable environmental features. Yet trans-national partners could play an important role in protecting the environment, taking it into account and resisting the easy option of bribing corrupt officials for an unworthy *carte blanche*.

Ethical corporations can take a stand on behalf of justice for the poor and oppressed. For environmental degradation is primarily an issue of justice, almost always an example of powerful nations, politicians and corporate shareholders taking advantage of the weak and voiceless. If rich tourists can't see snow on Kilimanjaro, too bad. But if farmers can't grow crops in the foothills because the streams have all dried up, that's a tragic threat to family livelihoods. ■

Wilfred Mlay is World Vision's Regional Vice President for Africa.

How agroforestry is saving farmland in Zambia

Joe Muwonge

AT A TIME when many farmers in eastern Zambia are facing a serious food deficit, some 12,000 who have taken part in an environmentally friendly agroforestry programme find they not only have enough to eat, they also have some left over to sell. It all has to do with what is being done with the land when crops are not being grown on it.

Improved fallow technologies are enabling resource-poor farmers realise several benefits, chief of which is increased soil fertility, including improved soil organic matter and water-use efficiency, leading to improved maize production and increased household food security. Those who have taken up this technology are able to plant on time and

can grow crops without going into debt. The biomass created helps control weed growth and makes fields easier to till, a significant factor especially where both labour and cost are constrained. *Sesbania sesban* fallows have been recorded to produce 10 to 20 tonnes per hectare of fuel wood after 1-3 years of fallowing. Firewood produced on-farm could ease the workload of women and children who often have to travel long distances to gather it. Other benefits of the system include: reduction of soil erosion (due to improved soil structure, cover, and trees acting as wind breaks), production of forage and browse, production of building materials, and decreased deforestation from firewood harvesting. Maize yield increases following a two-year improved fallow generally

last for two to three years. During the early phase of adoption, some farmers are even able to sell seed.

The farmers involved are taking part in a programme called Zambia's Integrated Agroforestry Project (ZIAP). With involvement from the International Centre for Research in Agroforestry (ICRAF) and the Ministry of Agriculture, the farmers applied a strategy of short-term agroforestry designed to replenish nutrients more rapidly to fallow cropland. Improved fallows build upon tradition-

It all has to do with what is being done with the land when crops are not being grown on it.

al fallow practices by incorporating fast-growing, nitrogen-fixing vines, shrubs and trees into traditional fallows in order to speed up the natural soil regeneration process. While traditional fallows require around eight years—or, sometimes, as many as 20—to replenish nutrients to the soil, improved fallows can restore soil fertility in just two years, depending on the rainfall and the growth of selected tree species.

Drawbacks

The main drawbacks that farmers encounter with the technology include: the need to wait for two years before seeing results; protecting fallow fields from fire during the dry season; protecting fields from free-ranging livestock; susceptibility of some species to insect attacks; lower germination in sandy soils; and nematode build-up (especially in the case of *Sesbania sesban*). To

PHOTO BY GRACE GAVIAO, WORLD VISION ZAMBIA



Author Joe Muwonge examines a healthy ear of corn in one of the assisted fields in Zambia.

counter these, communities have devised local by-laws for fire protection, and for protection against stray livestock. ICRAF has recommended that farmers be given a range of options so that they choose those most appropriate for their situation. The project is also promoting crop rotation and has, in addition, introduced *Lablab purpureus*, a leguminous vine that restores soils to reasonable productivity within one year. In all cases, technical backstopping by ICRAF is a necessary service to ensure no harm is caused to the environment.

Seed supply

On balance, improved fallow sys-

tems are proving their potential in the Dry Miombo Woodlands of eastern Zambia, where the prevailing agricultural problem is nitrogen depletion, and where resource-poor farmers are

One critical challenge is how to engage public policy into scaling up initiatives that have potential.

in need of cost- and labour-saving technologies. Many farmers, including a delegation of traditional chiefs, have visited the project, urging that it be disseminated to their districts. The key

constraint against a quick expansion is the supply of seed, some of which needs to come from sources outside the country. One critical challenge, therefore, is how to engage public policy into scaling up initiatives that have potential. Addressing this issue would lift a heavy burden that resource-poor households must bear in order to survive. Such a step would also be friendly to the environment. ■

Joe Muwonge is World Vision's Associate Director for International Programmes. The author acknowledges the contributions of Cassim Masi and Donald Phiri of the World Vision Zambia Integrated project, which included compilation of 2001/02 maize yield data.

God's Stewards

Don Brandt

LIKE MANY non-governmental organisations, World Vision is committed to sustainable development. With this, there is the recognition that, for development to be 'sustainable', the environment must be, too. Projects designed to increase food productivity have invariably led to means to abate soil erosion and water run-off, increase soil nutrients and grow food supplements. Often, these programmes depended on the introduction of better organic farming and agroforestry systems and techniques. Environmental renewal wasn't the motivating reason for rural projects, but World Vision staff soon recognised that renewing an abused bios could significantly reduce incidences of abject poverty.

World Vision also, however, brings a particular concern to its engagement with the environment that arises from being faith-based. We have a responsibility or a trust for creation that is deep and personal. This is seen

in the biblical book of Genesis, which teaches that God gave humankind the privilege of naming other created species. Naming brings with it a powerful tie between both parties. The garden image in Genesis connotes that humans are caregivers and caretakers of God's creation. Most Christian environmentalists use the term 'steward' to convey the idea that we are part of the environment (the created), while having special responsibilities as worshipful custodians, being 'made in the image of God.' This concept is explored in greater detail in World Vision's new report on Christianity and the environment: *God's Stewards*, available from policy_advocacy@wvi.org.

Order and care

Stewardship means that 'dominion and subjugation' cannot imply humankind's indiscriminate mastery over the rest of creation. This is seen in Genesis 2:6-8 and 15, where humankind is created and placed in God's garden to till and keep it. From these and other verses, the image of dominion conveys order (till) and care (garden keeper). Subdue is the work given to humankind by God to bring order out of chaos. To '...inhabit

the land that God has given is a gift, transforming it into a house where God can be worshipped.' An image emerges that is near to that of steward, guardian or caretaker.

Far from being an anti-environmental religion, Christianity, as seen throughout the Bible, is very pro-life in all its aspects. The primary mistake that some observers make is equating Western civilisation with Christianity. The two are inter-related, of course, but also distinct. The intellectual separation of 'nature' from humankind was made possible by the Enlightenment, which, from a Christian perspective, led to the misleading division of knowledge into academic disciplines. Generally, Christianity in the West uncritically absorbed the neo-platonic body-mind, human nature dualistic mindset of the Enlightenment. Somehow, technology passed from being a steward's tool to better care for the garden to a means of controlling and devastating the environment. The institutional church in the West should be rightly criticised for abusing its prophetic call on behalf of justice of creation. ■

Don Brandt is Senior Researcher for World Vision International.

Human rights and the environment

Carl Pope

SOMETIMES WE AMERICANS don't realise how lucky we are. Sure, we do face certain challenges. For instance, our public lands and National Forests are being sold off to the highest bidder. Congress is about to pass an energy bill that fails to reduce our dependence on oil. And the Bush administration has offered a plan on air pollution that threatens the Clean Air Act and does little to clean up the coal-fired power plants whose soot and smog cause thousands of premature deaths each year. So it's been hard for environmentalists in the United States to look on the bright side lately.

But other activists might envy our problems. We are at least able to conduct our work largely free from the threat of persecution and physical intimidation. For countless men and women around the world who seek to defend the earth—or just to pre-

serve traditional ways of life for their communities—being an environmentalist means risking violence, rape, torture and even murder.

As the world's resources grow scarcer and global competition increases, environmentalists are ever more at risk. Local economic and political interests—often with the complicity of powerful multinational corporations—are willing and able to suppress those who challenge the social, economic and environmental status quo. And that can have a chilling effect on environmental progress.

Joined forces

Sierra Club and Amnesty International USA have joined forces on a campaign to promote public awareness of the link between human rights and the environment. The campaign highlights specific cases of human rights abuses against environ-

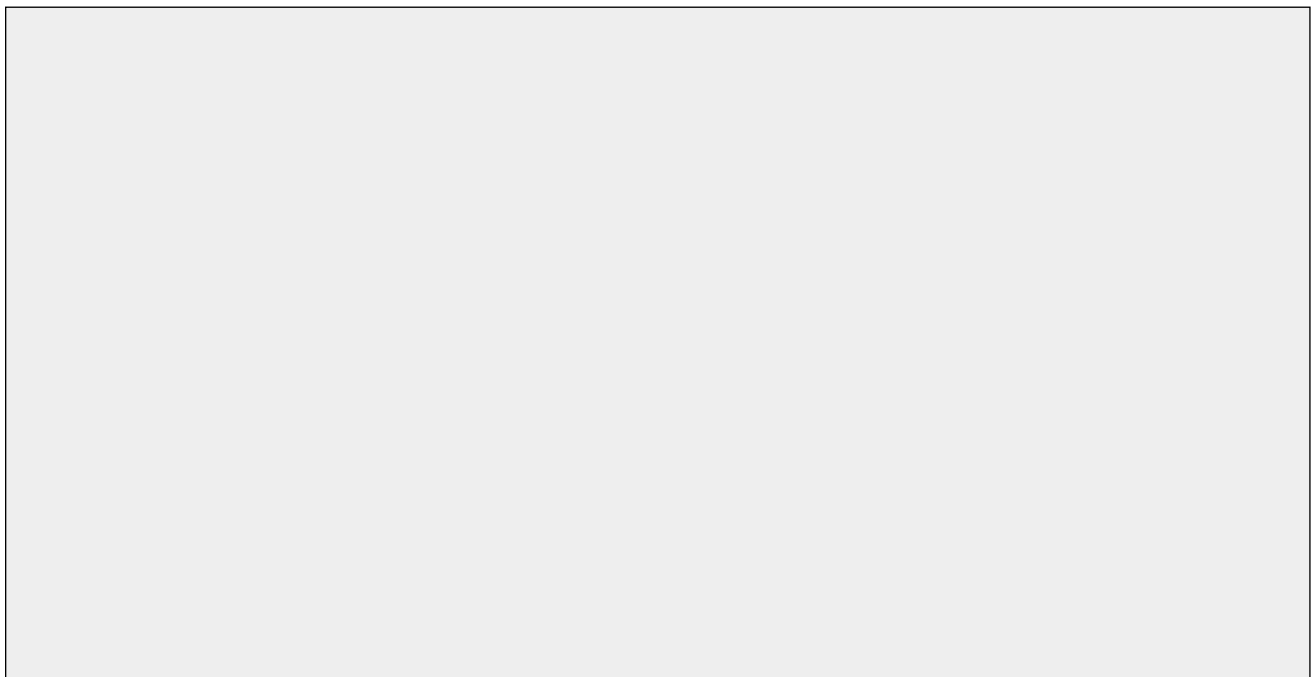
mentalists, and uses these individual cases to tell a wider story. But the phenomenon exists in far more cases than can ever be documented. The problem is also intimately linked to the increase in trade and economic contact between countries. And that means that if we want to do something about it, the United States might be a good place to start.

Aleksandr Nikitin was a Russian

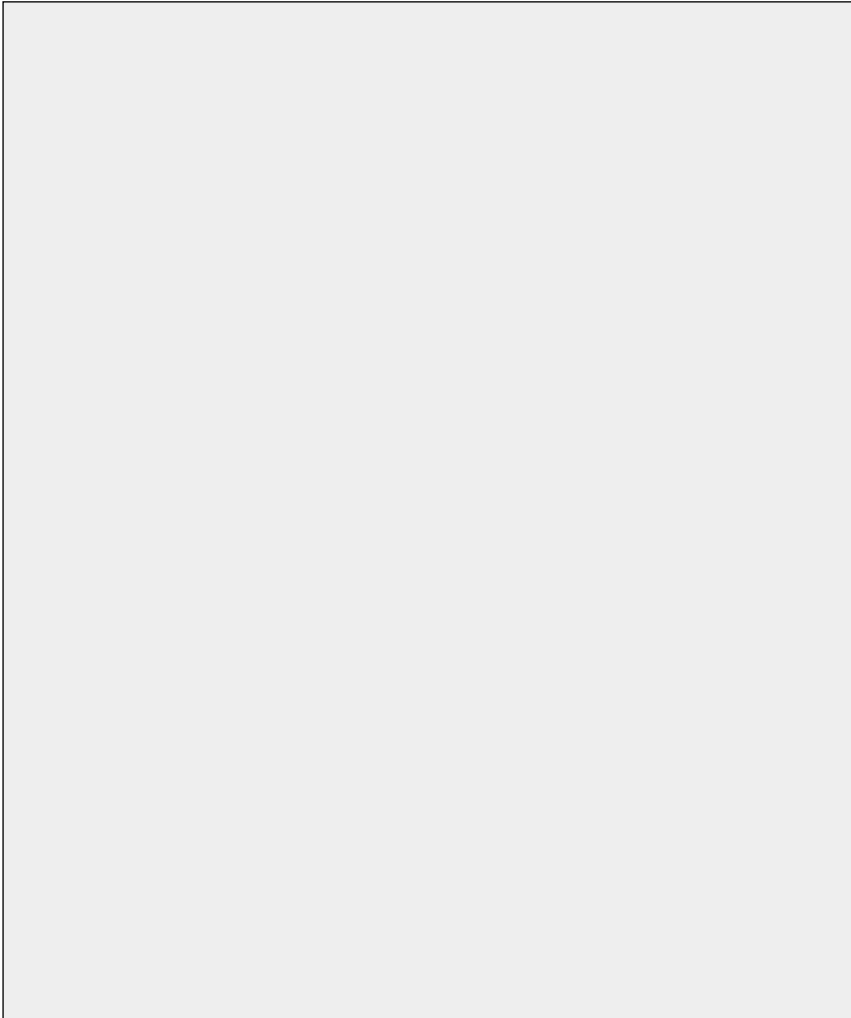
As the world's resources grow scarcer and global competition increases, environmentalists are ever more at risk.

navy captain who got a first-hand view of his country's decaying nuclear submarine fleet, and of the effect it was having on the marine environment of the Arctic Sea. When Nikitin reported his findings, he was arrested by the Russian government and charged with espionage and treason. Although he was ultimately acquitted after years in prison, Russia's crackdown on environmental whistle-blowers did not

PHOTO BY MICHAEL KOOREN, (C) REUTERS 2001



A few of the 50 Dutch environmentalists protesting Esso last July join forces to blockade the entrance of a petrol station near Arnhem.



'Globalisation has spread faster than democracy and environmental protection'

end there. Grigory Pasko, another navy captain, was sentenced to four years in a labour camp for exposing the navy's illegal dumping of nuclear waste into the Sea of Japan.

Sometimes there's no high-profile environmental hero to draw attention to the story, but that doesn't make the problem any less severe. In another country, a government plan to build a massive dam would flood 800 villages and submerge 100,000 hectares of some of its most fertile land. The area includes the habitats of various endangered species, including the pink river dolphin, the clouded leopard, and the golden eagle.

Trail of destruction

Globalisation—which so far has largely meant Western corporations

investing in developing countries—has spread faster than the institutions of democracy, civic participation, and environmental protection, which must accompany it. Too often, this has meant that foreign investment has left

We believe that citizen participation in government decision-making is the key to environmental protection.

a trail of environmental destruction in its wake, and the people affected have lacked the rights and resources to resist it.

The Sierra Club has always believed that citizen participation in

government decision-making is the key to environmental protection, and that may be particularly true in the international arena. The environment depends upon the efforts of ordinary people, especially in parts of the world whose legal and political institutions are under-developed. If these ordinary people are going to be able to take action to protect their environment, they must be assured basic rights of political participation, personal security, and the ability to speak and organise without fear of violent retaliation.

Keeping practices secret

Giving communities the information they need to protect themselves would be a crucial step forward. In the United States, companies are required to disclose information on the amount and type of pollution they emit into the air, water and ground. But when U.S. companies do business overseas—often in countries with far weaker environmental standards—they can keep their practices secret. Sierra Club, Amnesty International, and more than 200 environmental, labour, human rights, indigenous rights and community rights groups, are supporting the International Right to Know (IRTK) initiative, which would compel U.S. companies operating abroad to disclose basic information on their environmental, human rights and labour standards.

As Congress considers granting the Bush administration the authority to sign the United States onto more sweeping global trade agreements, they should also act to increase the amount of information available to communities. Global trade can be a force for good, but only if ordinary citizens are given the tools, the resources, and the rights they need to make sense of it. Only then will those who seek to give the earth a voice be truly empowered to conduct their work in peace and security. ■

Carl Pope is Executive Director of the Sierra Club. For more information on the Sierra Club's Human Rights and the Environment campaign, go to <http://www.sierraclub.org/human-rights>.

The responsibility of business for the environment

Stephen Tindall

THE INTERNATIONAL business community has a tremendous opportunity to do something positive for the environment—particularly in the developing world. With global businesses now representing 51% of the world's wealth (this includes the GDP of global countries), global business has become exceptionally powerful. We in the business community have the opportunity to employ effective business practices to bring about positive change in the environment—or else, in decades to come, face markets that will no longer be able to afford the products and services that our businesses provide.

Already, in round figures, two-thirds of the world's more than 6 billion people have incomes of less than US\$2 a day. With spiralling population growth in developing countries, business has an enormous opportunity to create a business case for creating jobs, improving quality of life and, as a result, improving the environment. I would suggest these three things go hand in hand.

Going backwards

In my 30 years of travelling around the world doing business, it has become increasingly obvious that developing countries in most cases are going backwards, while developed countries continue to profit enormously from the low labour rates and low environmental requirements of developing countries.

In some cases, the production cost of consumer goods in developing coun-

tries is as little as 5% of the final retail price of those products in a developed country. This gives businesses an enormous amount of margin to play with—a margin which, if used wisely,

I have personally come to see first hand what a difference business people who take responsibility can make.

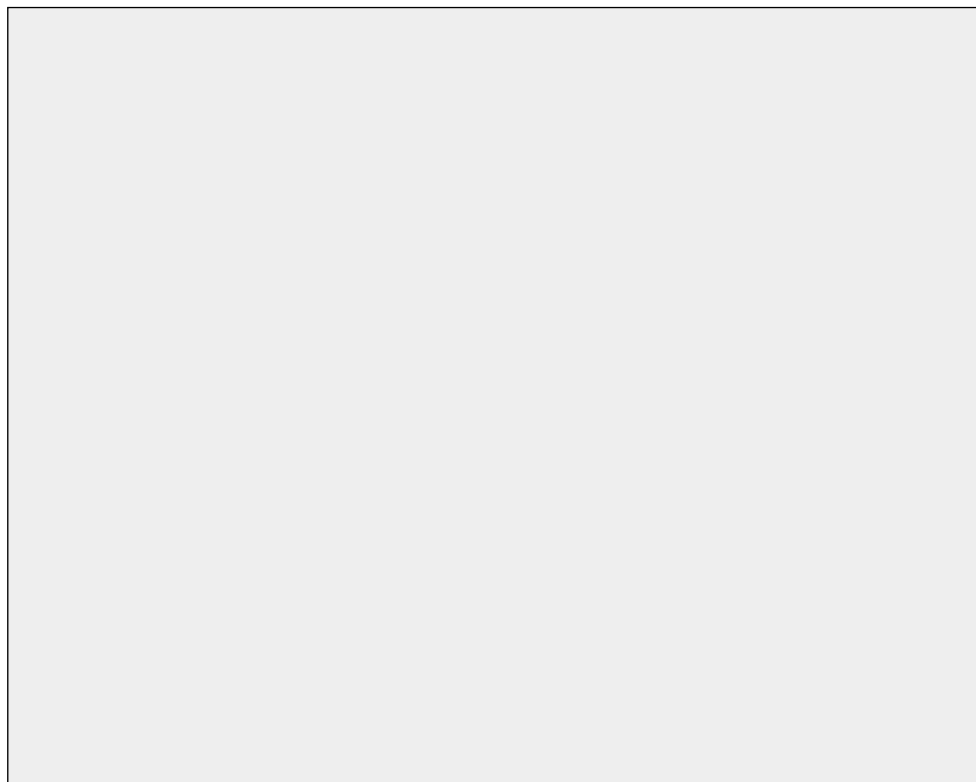
could be used to improve the environment and way of life in the countries where those products originate.

Having set up the Alay Buhay Education Foundation in the Philippines some 16 years ago, I have

personally come to see first hand what a difference business people who take responsibility can make. Our organisation now educates 2,300 children and provides micro-funding schemes for their parents, which enable them to take responsibility for their own children and their environment. Unless we in business do what we can to help citizens in developing countries understand the ramifications of a polluted environment—and help them find solutions to these problems—we can expect in 40 to 50 years to have turned civil society in our own developed countries against us, and probably lost most of our markets.

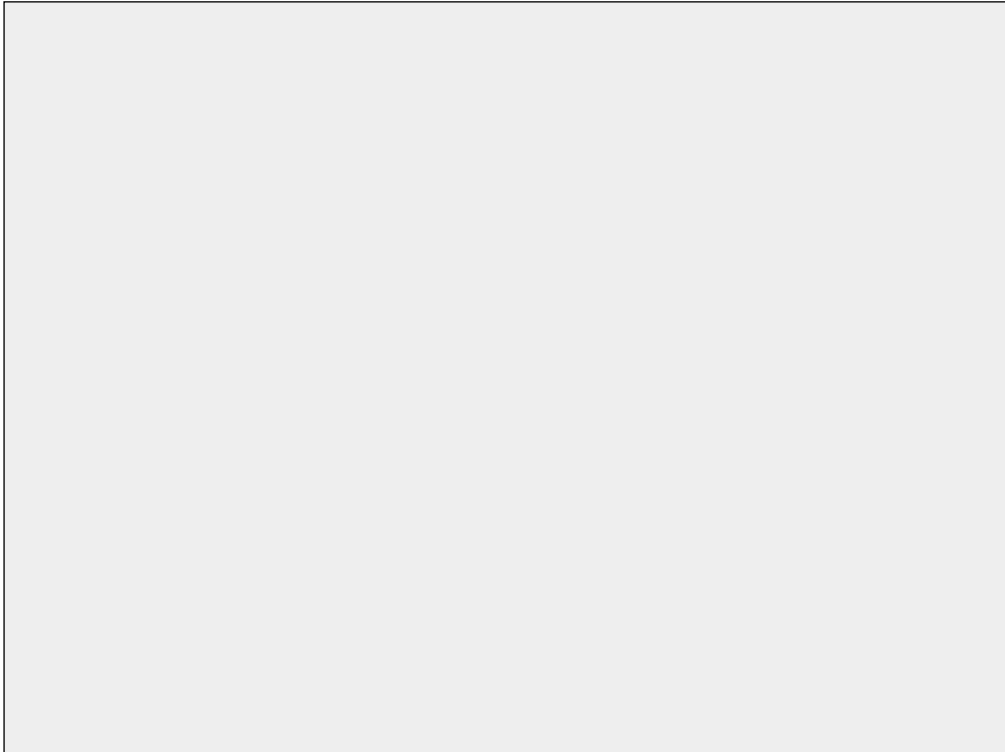
Businesses can help

Businesses can be of enormous help by taking responsibility for the way they affect the environment, directly and indirectly. Often, business abdicates responsibility to the people they purchase their products from. If the person purchasing these products



Developing countries in most cases are going backwards, while developed countries continue to profit enormously from low labour rates and low environmental requirements of developing countries.

PHOTO BY MARIANA BAZZO. (C) REUTERS 2001



took responsibility to effectively include the workers in the developing country's factories as 'their people', then business could have a profound effect on environmental standards both in their own countries and in the developing world.

Scientists already are telling us we must clean up our environment in order to avoid self-destructing in 300 or 400 years. This means reversing the ever-increasing amount of carbon being pumped in to the atmosphere. It means finding close-looped manufacturing techniques that prevent pollution from entering the atmosphere, ground water and rivers. It means purchasing and manufacturing products only from managed, sustainable forests. And it means finding clean production methods in agriculture that enable better quality crops to be grown without the use of chemicals that are harmful to the soil, ground water and atmosphere.

Exporting topsoil

In many countries the largest export is topsoil, which is washed down the rivers and into the sea. Fragile freshwater and marine eco-

systems are dying by the minute, as a result. Deserts are encroaching rapidly on arable land. Businesses, working in partnership with NGOs, civil society and central and local governments, must begin tackling these problems. It has the resources to lead and should do so.

Businesses, working in partnership with NGOs, civil society and governments, must begin tackling these problems.

Some leading manufacturers are discovering that they can make their products on a cyclical basis rather than the traditional take-make-waste approach. This means finding raw materials that are recyclable or naturally renewable. Companies are, therefore, in effect, leasing their products to consumers, who essentially return them at the end of the product's useful life to be renewed, recycled and leased to the next customer.

The biggest contribution that business can make is to rethink and

redesign its processes. With all the scientific advancements in the world today, there is no reason products cannot be re-engineered to fulfil the same function, but in a sustainable way. They can be made from renewable resources and provide the same function at cheaper prices.

Local materials

To cut down on the amount of pollution created by aeroplanes and ships used in transporting their products, global companies need to look for ways to produce their products using local and renewable raw materials from home markets. Years of research have convinced me that businesses will find that by redesigning their processes and their thinking they can become enhancers of the environment. They will also find that, by emulating nature, these processes will be more efficient, less costly and more profitable to their shareholders. Therefore, they create a win-win situation, where both the environment and the people involved in producing the products benefit dramatically, as do shareholders, staff members and consumers.

All it takes is a rethink of how one can do business, and how, by taking this on responsibly, these companies will change the hearts and minds of developed country consumers who will endorse and support them. It seems a preferred alternative to cultivating an anti-globalisation lobby, which, if not taken seriously, could destroy them. ■

Stephen Tindall is a businessman and environmental advocate living in Australia.

Envisioning an eco-economy

Lester R. Brown

WE READ ABOUT the deteriorating relationship between the global economy and the earth's ecosystem in daily news stories on shrinking forests, collapsing fisheries, falling water tables, rising temperatures, melting glaciers, and more destructive storms. Our existing economy is destroying its natural support systems. It cannot take us where we want to go. The challenge is to restructure the economy—to build an eco-economy—so that economic progress can continue.

We can see glimpses of the eco-economy emerging in the wind farms of northern Germany, the solar rooftops of Japan, the reforested mountains of South Korea, and the steel recycling mini-mills of the United States.

Today wind turbines are replacing coal mines in Europe. Denmark, which has banned the construction of coal-fired power plants, gets 15% of its electricity from wind. For Schleswig-Holstein, the northernmost state in Germany, it is 19%. For Spain's northern industrial province of Navarra, it is 22%.

Wind power

In the United States, North Dakota, Kansas, and Texas have enough harnessable wind energy to satisfy national electricity needs. Densely populated Europe has enough off-shore wind energy to meet all its electricity needs. China can double its current electricity generation from wind alone. Wind is a vast energy resource,

one that cannot be depleted.

Advances in technology have lowered the cost of generating electricity from wind from U.S. 38¢ per kilowatt-hour in the early 1980s to under U.S. 4¢ at prime wind sites today—a figure that is competitive with oil, gas, and coal. The low-cost electricity that comes from wind turbines can be used directly or to electrolyse water to produce hydrogen. Hydrogen provides a way of both storing and transporting wind energy. It is also the fuel of choice for the fuel cell engines that every major automobile manufacturer is now working on.

With a modest U.S. 1.7¢ per kilo-

ranchers in the United States, who own most of the wind rights, could one day be supplying not only most of the country's electricity, but also much of the hydrogen—to fuel our automobiles. We now have the technologies needed both to stabilise climate and to declare our independence from Middle Eastern oil.

In addition to new energy industries, recycling industries will replace

We now have the technologies needed to both stabilise climate and declare our independence from Middle Eastern oil.

mining industries. The United States last year produced 58% of its steel from recycled scrap. Steel recycling is concentrated in small, electric arc minimills that are widely distributed around the country, feeding on the local supply of scrap.

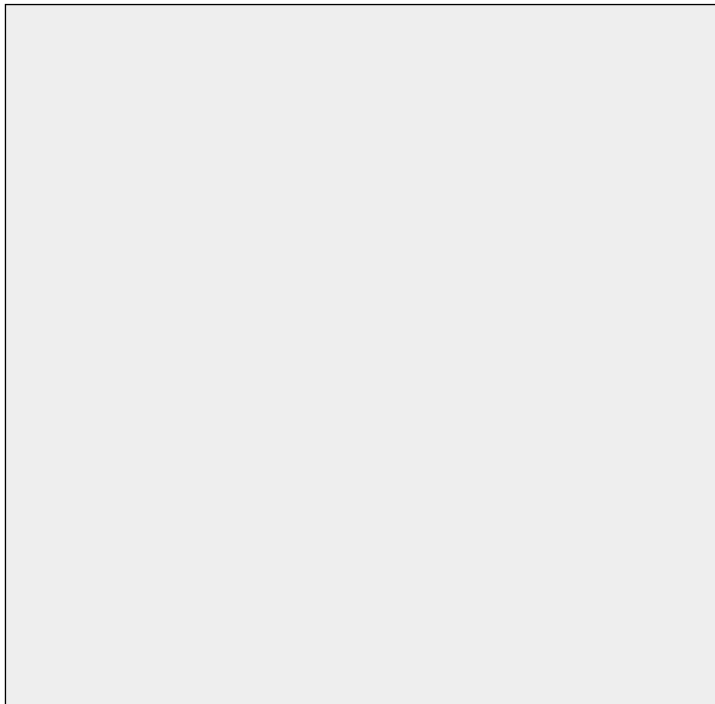
Germany leads the world in paper recycling, with 72 percent of its paper coming from recycled stock. If the entire world were to achieve the German level of recycling, it would reduce the wood used for paper making by nearly one third.

Closing the loop

Today, major corporations are committed to comprehensive recycling, to closing the loop in the materials economy. Others are starting to phase out

their use of fossil fuels. STMicroelectronics in Italy and Interface, a leading manufacturer of industrial carpet in the United States, are both striving for zero carbon emissions. Shell Hydrogen and

PHOTO BY GUANG NIU, (C) REUTERS 2001



watt-hour wind-production tax credit, new wind farms have come on-line in the last few years in Minnesota, Iowa, Kansas, Colorado, Wyoming, Oregon and Washington. We are now looking at a future where farmers and

DaimlerChrysler are working with Iceland to make it the world's first hydrogen-powered economy.

People appear hungry for a vision, for a sense of how we can reverse the environmental deterioration of the earth. More and more people want to get involved. Wherever in the world I give talks, the question I am asked most frequently is, What can I do? People want to do something.

My response is always that we need to make personal changes, involving everything from using bicycles more and cars less to recycling our daily newspapers. But that will not be enough. We have to change the economic system. And that requires restructuring the tax system: reducing income taxes and increasing taxes on environmentally destructive activities, such as carbon emissions, the generation of toxic wastes, and material going to landfills. We have to work to restructure taxes to get prices to include the ecological costs.

Ecological costs

Øystein Dahle, former vice president of Exxon for Norway and the

North Sea, summed it up brilliantly when he said, 'Socialism collapsed because it did not allow prices to reflect the economic costs. Capitalism may collapse because it does not allow prices to reflect the ecological costs.' Our challenge is to restructure the tax system so that market prices tell the ecological truth.

Our challenge is to restructure the tax system so that market prices tell the ecological truth.

Can we move fast enough? We know that social change takes time. In Eastern Europe, it was fully four decades from the imposition of socialism until its demise. Thirty-four years passed between the first U.S. Surgeon General's report on smoking and health and the landmark agreement between the tobacco industry and state governments to reimburse state governments US\$251 billion for smoking-related health care expendi-

tures. Thirty-eight years have passed since biologist Rachel Carson published *Silent Spring*, the wake-up call that gave rise to the modern environmental movement.

Sometimes societies move quickly, especially when the magnitude of the threat is understood and the nature of the response is obvious, such as the U.S. response to the attack on Pearl Harbour. Within one year, the U.S. economy had largely been restructured. In less than four years, the war was over.

There is no middle path. Do we join together to build an economy that is sustainable? Or do we stay with our environmentally unsustainable economy until it declines? It is not a goal that can be compromised. One way or another, the choice will be made by our generation. But it will affect life on earth for all generations to come. ■

Lester R. Brown is Founder and President of the Earth Policy Institute, and Founder and former President of Worldwatch Institute.

Tourism as a tool for sustainable development

Francesco Frangialli

INTERNATIONAL TOURISM has increased greatly over the past few decades. According to World Tourism Organisation statistics, international tourist arrivals world-wide reached 688 million in 2001, a drop of only 1% from the previous year, due to the 11 September attacks. Recovery is already well underway. The industry is expected to regain pre-crisis levels by the third or fourth quarter of this year. A World Tourism Organisation study conducted to examine how the tourism industry is likely to evolve shows that international tourist arrivals are likely to increase at an annual rate of around 4%. They are expected to rise to nearly 1.5 billion by 2020—almost three times the number of arrivals recorded in 1998.

The impact that these hundreds of millions of tourists moving around the globe may cause upon the natural environment and upon the social and cultural fabrics of host communities needs to be anticipated, carefully studied and continuously monitored if tourism is to effectively contribute to sustainable development. This needs to be clearly understood because there are complex and close relationships between tourism and the natural and cultural environments.

Elements that make up the natural and cultural environment are, in fact, the raw materials for this industry. But unlike other economic activities that are intrinsically based on an irreversible modification of nature, the tourism industry should take special care not to deplete these inputs, since such depletion would reduce their capacity to attract tourists.

Reciprocally, environmental disasters or substantial changes to the natural environment, such as intensive and indiscriminate felling of forests, abusive extraction of marine

resources, shipwrecks of oil tankers, and industrial pollution of rivers, can drastically affect the possibility of developing tourism in areas endowed with natural or cultural assets.

Tourism can contribute to the preservation and improvement of natural areas, places of historic and cultural interest, and even urban environments. By giving economic value to the landscape and to archaeological sites, tourism generates income for their conservation and appreciation by people. Similarly, tourism can improve environmental awareness of both visitors and local residents. Adequately conducted eco-tourism and other forms of nature-based tourism are powerful tools for educating the general public about the fragility of ecosystems, endangered species and their conservation, and environmental matters in general.

Year of eco-tourism

The United Nations designated 2002 as the International Year of Eco-tourism, highlighting the rising importance of tourism, for both the environment and economic development.

Indeed, well managed and properly planned, tourism is one of the environment's best friends. It is capable of generating earnings for states—tax revenues, in particular, where they are lacking—and helpful when it comes to preserving and enhancing the natural and cultural resources that serve as the very bedrock of tourism.

If properly oriented in its development and management, the tourism industry can see its negative impacts on the environment reduced and its beneficial effects enhanced. To achieve such an ambitious goal, the World Tourism Organisation has developed and tested a set of indicators of sustainable tourism development that

allow local decision-makers and planners to measure the environmental health of a destination. Similarly, it has developed and disseminated planning techniques and guidelines for the development of tourism at the local level. An Agenda 21 for Travel and Tourism has been produced by the World Tourism Organisation and a conglomerate of private tourism companies as an essential reference, helping governments and private tourism businesses to become more environmentally responsible.

Tourism has become critical for maintaining local agriculture and traditional fishing in many countries, for which it provides new outlets. It permits the survival of traditions and cultural practices that otherwise would face an uncertain future. It offers exceptional opportunities for encounters between peoples who may otherwise know little of each other. Tourism also supports the survival of handicraft production and other employment opportunities, especially in developing countries.

For many developing countries, tourism has become a major source of foreign exchange earnings, especially for women. Tourism is one of the few economic activities that lends itself to small enterprise. As such, tourism helps promote business in remote areas, where tourism attractions are often located, arresting migration to urban areas.

Tourism can contribute to poverty alleviation in all types of societies, provided that strong local community involvement is ensured from the very beginning. It has become one of the most dynamic economic, social and cultural realities of today's world, with close linkages to the natural environment. The chief concern we face now is to ensure that tourism flourishes in a truly sustainable manner, from the environmental, social and economic points of view. ■

Francesco Frangialli is Executive Director of the World Tourism Organisation. For more information, visit their website at www.world-tourism.org.

Investing in partnerships for sustainability

Marian Hobbs

NONE OF US can achieve sustainable development alone. Partnerships are vital. That is why, over the past three years, New Zealand's administration has promoted the concept that government works with the rest of the community. It may be easier to work in one's own silo. In the short term, it is quicker and more efficient—and you can hide mistakes. But it doesn't produce a sustainable environment or economy, or a happy society.

In my own Environment portfolio, developing a strategy to manage waste nationwide is an example of central and local government working together in the design of strategy and targets. To achieve those targets, all the government bodies will have to work closely with those industries involved in the production or disposal of much of our waste.

The New Zealand Waste Strategy is a product of Local Government New Zealand, the umbrella group representing local councils and the Ministry for the Environment. It signals a new relationship between central and local government based on partnership. This kind of collaborative effort must become more common in the future if we are to successfully tackle crosscutting issues.

Everyone has a responsibility

The strategy makes it clear that waste is our problem and everyone has a responsibility to do something about it: the householder, the manufacturer, the retailer, local government and waste collectors. It confronts the linkage between economic growth and environmental degradation, and underlies the need to break this connection. Authorities are also beginning to introduce to their communities measures that reflect the full cost of waste disposal, measures that I am

sure will have a dramatic effect on the amount of waste produced.

I've been working in a similar way with the dairy industry, tackling its environmental issues. To help achieve a durable solution to water quality issues, the Minister of Agriculture and I convened a top-level group from New Zealand's largest dairying group, Fonterra, regional councils, the Ministry for the Environment and the Ministry of Agriculture and Forestry. That group will produce concrete proposals to improve our waterways by the end of this year.

The Growth and Innovation Framework is another government initiative founded on partnerships.

Working in one's own silo may be more efficient, but it doesn't produce a sustainable environment.

Private sector task forces have been created to make sure that the key sectors—selected for their potential for sustainable growth—are developed together, employing the skills on both sides. Those sectors (biotechnology, information and communications technology, and the creative industries) were chosen because of their sustainability, as well as their potential contribution to New Zealand's sustainable growth rate and hence the well-being of New Zealanders.

Our government believes in promoting innovation and enterprise, doing things differently to build economic prosperity, and in being collaborative, compassionate and inclusive. We believe these are values that can enhance social, cultural, economic and environmental health in the 21st cen-

tury. We promote sustainability in everything we do to preserve options for future generations.

As well as being a partner, the government also has a vital leadership role in sustainable development.

Part of that role is in addressing the key sustainable development issues and setting standards for the country. An important example of that is the work underway on transport. It will mean a move away from funding roads to funding land transport and more money for public transport, and promoting walking and cycling. It will put sustainability at the core of strategic transport decisions.

Describing linkages

Leadership is also part of the reason we are close to implementing a sustainable development strategy that will emphasise the importance of partnerships, and will provide, for the first time, a single statement of the government's view of sustainable development, and how it sees itself contributing.

There is also value in simply setting out the connections and describing the linkages as we see them. That action alone can generate new ways of thinking and working together.

Lastly, I want to touch on the international aspects of sustainable development. Partnerships between countries, as well as other groups, are at the core of the work being done to prepare for the upcoming World Summit on Sustainable Development. There are global issues that have to be confronted and addressed. Some of them are environmental, like climate change and the ozone layer. Some are social, like refugees and the worldwide decline in fertility. Others are economic, like trade barriers and the distribution of wealth worldwide.

Whatever the issue—whether it is local or international in scope—partnerships are vital for achieving a sustainable way forward. ■

Marian Hobbs is New Zealand's Minister for the Environment.

How fair trade helps the environment

Christopher Shore

IS IT POSSIBLE that a small decision by a consumer in the 'developed' world can benefit the environment? Is it possible that it can benefit the poor? Yes. How and where consumers purchase their coffee, tea or fruit can benefit the environment and the poor.

Fair Trade is an emerging consumer-led and NGO-supported movement that is reshaping purchasing patterns across Europe, and it is poised to sweep into other 'developed' economies of the world. It is an innovative concept that connects producers and consumers in more equitable, meaningful and sustainable ways.

How and where consumers purchase their coffee, tea or fruit can benefit the environment and the poor.

It happens through the development of consumer interest and the creation and cultivation of socially responsible companies. It is both values- and market-driven.

Fair Trade allows farmers in the developing world to gain a significantly higher share of the final price for the crops they grow. This happens through the creation of local co-operatives, which market the crops to the developed world, ensure that products are grown in sustainable ways, and guarantee that revenue is properly distributed to the members of the cooperative.

Certified organic

With the global price of coffee trading at a 30-year low, non-Fair Trade coffee farmers received an average of about US\$.20 per pound from the middlemen through which they

are forced to sell. Fair Trade coffee co-operatives receive a minimum of US\$1.26 per pound for their coffee, and receive an additional US\$.15 per pound premium if it is also certified organic.

Fair Trade certified coffee is grown on small, family-run farms. These farmers typically grow their coffee in the shade of a taller forest canopy, which provides habitat for wildlife such as migratory songbirds.

With respect to the values upon which Fair Trade is based, find below the seven principles of the Fair Trade Federation, the largest association of Fair Trade organisations:

1. Fair wages
2. Cooperative workplaces
3. Consumer education
4. Environmental sustainability
5. Financial and technical support
6. Respect for cultural identity
7. Public accountability

Environmental sustainability is described as engaging in environmentally friendly practices that manage and use local resources responsibly. However, the vast majority of Fair Trade products are also organically grown products.

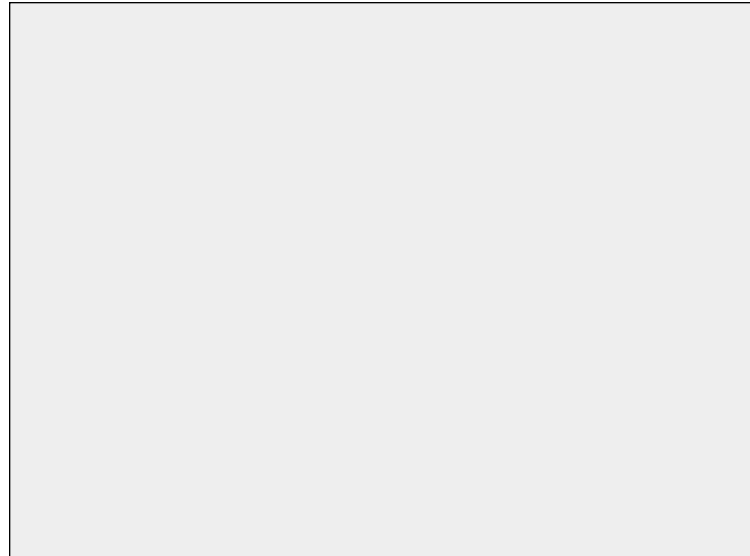
There are not only ideological or value-driven reasons for growing products organically. There are also very practical commercial reasons. Chiefly, many of the Fair Trade growers of these products could not once, or cannot now, afford the high prices of chemical fertilisers and pesticides.

They have not only chosen, but also have been forced to learn or relearn, the sustainable and organic methods of farming.

Highly advanced in Europe

In Europe, where Fair Trade is most widely supported and most highly advanced, the list of Fair Trade products has expanded significantly. It has grown from coffee and tea to

PHOTO BY BEAWIHARTA, (C) REUTERS 2000



chocolate, wine, groundnuts, mangoes, bananas, and honey. Products are now found not only in NGO-run shops and church basements, but also on supermarket shelves and in mainstream retailers. New products and processes are being certified on a regular basis. Moreover, the fastest growing segment of the market is for products that are both Fair Trade-produced and organic.

The prospect for sustained growth in Fair Trade globally is good. This means that the demand for environmentally sustainable methods will also grow. Supporting the mechanisms of Fair Trade provides not only sustainable incomes for farmers, it also provides environmentally sustainable approaches to farming. ■

Christopher Shore is Director of World Vision's Microenterprise Development Group.

A lesson from the past

Kelly Currah

IN 1722, A DUTCH CAPTAIN, Jacob Roggeveen, landed on a remote island off the coast of South America, which is now known as Rapa Nui, or Easter Island. He encountered a population that had depleted its environment and undermined its society through the obsessive construction of the Moai, the haunting monolithic statues that litter the island today.

According to archaeologists, the inhabitants of Easter Island started building these statues around 1400, and continued at an increasing rate. The statues represented gods and memorials to tribal chiefs and became synonymous with power and politics. However, the time, materials and energy needed to build more and more statues used up almost all the

History is cyclical, and the history of Easter Island should be considered a warning for the present.

wood on the island, which led to deforestation and soil erosion. As the population grew, food became scarce, as the land could no longer supply the needs of the community. With no more wood, the islanders could not build ships to escape their denuded land, and the civilisation collapsed into chaos.

Intertwined needs

According to historian E.R. Carr, history is cyclical, and the history of Easter Island should be considered a warning for the present. The needs of the population and the care of the environment are intertwined: society cannot work in exclusion of the other. Although this appears obvious, it has

taken some time for development specialists and environmentalists to agree and work together in creating a sustainable environment.

Especially in the past decade, we have come to realise that sustainable development is not possible without a stable environment, and that the environment needs communities with security of food and health to remain preserved. As an international development agency, World Vision is working in community development programmes to ensure that care for the environment is at the heart of its work in communities. World Vision is also a Christian agency that takes seriously God's call for the people of the world to act as responsible stewards of creation. World Vision's desertification programmes in Senegal, reforestation programmes in Zambia, and environmental education programmes for children in Lesotho are evidence of this commitment. Too often, as part of an agency working in humanitarian relief, our colleagues have seen the devastating consequence that casual disregard for the environment can wreak in communities—most often, the poorest communities.

Yet, despite work at local and national levels, without the commitment of governments at the international level, there can be no headway in creating a sustainable world. That is why the World Summit on Sustainable Development is critical in advancing the agenda agreed upon ten years ago in Rio de Janeiro. Unfortunately, the political will is absent in this regard. Governments are continuing to focus on narrow domestic agendas—issues that will win votes—rather than looking to the longer term.

All these policies are fighting against this new vision of sustainabili-

ty. The international community promotes policies that force developing nations to export cash crops that use intensive techniques that impact heavily on the environment, and that are vulnerable to price fluctuations.

Ignoring the crisis

The real threat to sustainable development is for governments to continue to maintain policies and strategies that do not account for the environment, and ignore the crisis that is unfolding. The summit in Johannesburg has the potential to re-

Without the commitments of governments at the international level, there can be no headway.

address this crisis. There are innovative proposals to ensure implementation of Agenda 21, including a new Type 2 Outcomes, whereby non-state actors work in partnership on implementing Agenda 21 actions. However, without government involvement and support, such methods risk letting governments off the hook for their commitments, rather than supplementing this work. Type 2 Outcomes carry the risk of implementing under-resourced, unco-ordinated programmes that are neither mandatory nor applied evenly. The world needs more co-ordination rather than a jigsaw puzzle of different initiatives.

Until governments wake up to the crisis that is looming, in terms of human vulnerability and environmental degradation, the history of Easter Island will haunt the future of sustainability. ■

Kelly Currah is Senior Policy Advisor for World Vision International.

The impact of our beliefs and choices

Peter Harris

WHILE WE ARE OFTEN able to analyse with some precision what causes an ecosystem to fail, or map out the steps needed to reduce the unsustainable resource consumption of a city, we often are at a loss when it comes to dealing with the human behaviour that lies behind the most persistent problems. If we hope to find any answers to major issues such as the destruction of biodiversity or climate change, we must consider our human beliefs. It is our beliefs and choices that determine the way we treat our world.

Ironically, this essential task flies in the face of the most cherished convictions of industrialised societies, which are responsible for most of the problems. During the past three centuries, strenuous attempts have been made to edit out of public discourse any consideration of belief, in favour of a more neutral or apparently objective apprehension of reality. In truth, such pseudo-objectivity is more a form of cultural blindness, since individualism and materialism—which are values and beliefs in themselves—lie more or less unconsciously at the heart of industrialised society. Members of societies built around alternative beliefs can see this clearly, even if we are unaware of it. Our

inability to look beyond technique, process or method in order to be clearer about our choices and beliefs becomes particularly disabling as globalisation gathers pace, impacting every corner of the planet with the culture and values of Western society.

A further irony is that those very societies and organisations most implicated in the damage have nominally shared a Christian heritage,

If we hope to find any answers to major issues, such as climate change, we must consider our human beliefs.

which ought, by its basic convictions, to have encouraged the emergence of a very different model for society.

Despite all of this, a genuine movement for change is emerging in the Christian church world-wide. Driven by the growing influence of leaders in developing countries, a radical re-evaluation of the implications of Christian belief for the care of creation is finding practical expression in a multitude of projects across the globe. At the same time, a challenge is being posed to mainstream Christian churches and

organisations in the so-called developed nations, who have until now co-existed too comfortably with ideas and values that are in reality hostile to Christian belief.

So what might be the distinctively Christian contribution to the struggle for creation's well-being? It may be that the work we actually do is little different from other groups. Many of the steps that must be taken are now obvious to all, even if the will to take them is lacking. Perhaps the most important contribution Christians can make at this stage is to insist on the relevance of belief and values to the very practical questions that arise, and to show how those beliefs can apply in practice toward the goal we share with many others of bringing about some restoration on earth. ■

Peter Harris is author of Under Bright Wings, and Founder of A Rocha, a Christian environmental awareness and advocacy group with branches in several countries. For further information about A Rocha, visit their website at www.arocha.org.

World Vision's new report on Christianity and the environment: God's Stewards, is now available from policy_advocacy@wvi.org. It also may be ordered from our website: www.developmentstudies.org.

WORLD VISION is a Christian relief and development partnership that serves more than 75 million people in nearly 90 countries. World Vision seeks to follow Christ's example by working with the poor and oppressed in the pursuit of justice and human transformation.

Children are often most vulnerable to the effects of poverty. World

Vision works with each partner community to ensure that children are able to enjoy improved nutrition, health and education. Where children live in especially difficult circumstances, surviving on the streets, suffering in exploitative labour, or exposed to the abuse and trauma of conflict, World Vision works to restore hope and to bring justice.

World Vision recognises that poverty is not inevitable. Our Mission Statement calls us to challenge those unjust structures, which constrain the poor in a world of false priorities, gross inequalities and distorted values. World Vision desires that all people are able to reach their God-given potential, and thus works for a world which no longer tolerates poverty. ■



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