

Beyond Johannesburg:

Where Do We Go From Here?

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About the Author

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Where Do We Go From Here?

“There lies before us, if we choose, continual progress in happiness, knowledge, and wisdom. Shall we, instead, choose death, because we cannot forget our quarrels? We appeal as human beings to human beings: Remember your humanity, and forget the rest. If you can do so, the way lies open to a new Paradise; if you cannot, there lies before you the risk of universal death.”

– *Russell Einstein Manifesto, 1955*

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

– *World Commission, 1987*

“We live in one world, not two. No one in this world can feel comfortable, or safe, while so many are suffering, and deprived.”

– *Kofi Annan, U.N. Secretary General*

Why we have come?

In June 1992, the 35,000 delegates to the Earth Summit in Rio de Janeiro ratified Agenda 21, a plan of action to initiate sustainable development - to empower workers and farmers, to strengthen opportunities and protections for women and children, and to implement specific programs to achieve these goals. Agenda 21 gave us hope that we knew how to tackle the crises of the planet and build a sustainable future.

Agenda 21 remains vital and valid in its goals and should be the foundation of our work at the current summit. However, the agenda must be updated to reflect changes the world has seen since Rio: the rise of AIDS as the fastest growing threat to health and life in developing countries and the expanding power and influence of international corporations under the World Trade Organization (WTO).

We also must acknowledge that the hope we felt as we left Rio was not borne out. The goals of Agenda 21 have not been achieved. It has become clear that the governments entrusted with implementing programs to achieve those goals of Agenda 21 have failed to do so. But knowing that will only take us so far. The delegates to the Johannesburg summit must change their approach and make a new plan – a plan that does not leave the planet’s future in the hands of governments or corporations.

This summit is essential for us to reexamine the commitments we made a decade ago at Rio. We must learn how far we have come and where we have fallen behind. The chief question facing us is: given the state of the world and existing ecological support systems, what exactly must we do to bring about sustainable development and save life on Earth? Who will do it and how will it be done?

This summit is vitally important for three reasons. First, it enables us to come together to determine why the Rio summit did not lead to the success for which we had all hoped. Second, we must

understand the specifics of Earth's crises as well as what will happen to us if we continue on our current path. Third, we must commit ourselves to a drastically new plan of action by addressing issues not through governments but from the grassroots – through non-governmental organizations and people in their own communities. They must now take up all challenges, as governments have failed. Our task is to formulate a plan to change our institutions absolutely, and to give people and local organizations the tools and the power to determine their own sustainable futures.

The state of the problem

Because the nations of the world have failed to act in concert to implement Agenda 21, the problems addressed at the Rio summit have worsened. Wars in the future will be fought over access to water rather than over conflicting political ideologies. Hunger remains a grave crisis in Africa and portions of Asia due to the disappearance of groundwater, the degradation of soil, the loss of forests, and, primarily, because of distortions and inequities in the world's food distribution system. Far from reducing hunger, the advent of genetically modified foods will increase it. Underlying these problems are the two fundamental ones of environmental destruction and overpopulation, against both of which the world still fails to move decisively.

The three greatest health threats in the developing world – malaria, tuberculosis and AIDS – have yet to be adequately addressed. Military budgets, which had been falling, have begun to rise around the world again, squandering twice as much money every year than would be necessary to rescue the planet's ecosystems and implement sustainable programs to support the world's people and environment. The globalization of commerce under the rule of the World Trade Organization threatens the future of farmers and small businesses throughout poor countries.

The challenge before us in Johannesburg is not only to update Agenda 21 to address these problems in their current state, but also to coordinate global and local plans that empower people and nongovernmental organizations in their own localities to take charge of their own affairs and chart their own futures.

Poverty

One of the goals set forth in the United Nation's Millennium Declaration in the year 2000 was to reduce by half the number of poor people in the world by 2015. If the economies of India and China continue to grow at the current rate, these countries may perhaps achieve that goal. But progress has not been uniform throughout the developing world. According to the World Bank, at least 1.3 billion people still subsist on one dollar a day or less, the poorest 25 percent of them on less than half of that amount. In Manila, 40 percent of the people live in slums; in Mumbai, 68 percent. These indicators convey that merely expanding world trade and implementing capitalistic economies is not enough to reduce poverty for the 1.3 billion people who remain in the most abject poverty. Also, the world is adding 80 million people each year, 95 percent of them in poor countries. This number is growing faster than the availability of food, water and the other resources needed to sustain these additional people. Consequently, while some countries such as India or China may progress economically, poverty will continue to increase in many parts of the South.

Poverty in the South, however, is not just a cause of misery. It is a symptom of a variety of other problems – problems that cannot be solved by the implementation of market economies. People are not poor because they do not have a job making blouses for \$1 a day for wealthy Northern consumers.

People are poor because, at the most basic level, they lack the resources for survival upon which sustainable progress depends.

The crisis of water

All of the world's resource crises are immediate, but the most crucial and far-reaching is the crisis of water. Humankind, including government leaders and delegates to this summit, has yet to awaken itself fully to the reality of the water crisis.

The World Health Organization has determined that every human being needs no less than 30 gallons of clean water a day. However, today 40 percent of the people in the developing world are living with fewer than 10. If we continue on our present path, that figure will rise to 60 percent by the year 2015. The crisis of water worsens everything – the problems with disease, agriculture and food shortages, and, therefore, the chance of survival for hundreds of millions of people.

At present, 70 percent of the world's fresh water is used for irrigation, which leaves relatively little for people, animals, plants, and ecosystems. This problem is widespread in India, Pakistan, and many other countries. This summit must resolve to promote the installation of drip irrigation systems wherever possible to minimize water use without compromising harvests.

Other losses of water are harder for humans to control directly and so must be addressed even more urgently. Today, 40 lakes in the Himalayas are overflowing, scientists presume, due to global warming caused by excessive CO₂ accumulation in the atmosphere. The snow in these mountains is melting, as it is in Antarctica, flowing into the lakes, and pushing the water over the banks. The 1.3 billion people living in South Asia depend on water from underground reservoirs that are recharged each year by gradual snowmelt from the Himalayas. If current conditions continue, by 2050, these 1.3 billion people will have their groundwater reserves depleted. This process poses a serious threat of drought in the whole of South Asia – from Afghanistan to India to Bangladesh, and it is only one example of the water crisis that is already upon us.

Just as important, the depths below ground at which remaining groundwater's lie are increasing. Groundwater table in the state of Punjab in India lay 12 meters down 40 years ago; today, it is 180 meters. Many farms and villages do not have electricity to pump water from that depth. Seventy percent of the people of India, Pakistan, Bangladesh, and Africa depend on groundwater. If more and more of them cannot reach the water, the farms die, the villages die, the people migrate to cities to live in slums, or they cut the forests and try to start over in a new place.

Increasingly, the water that remains at or close to the ground surface is not usable. Outside of Lagos, Nigeria, the Shell Oil Company releases dirty water from its refinery that has turned groundwater red or blue as far away as 10 miles. Similar examples of industrial pollution of water are common in Mexico, especially in the maquiladora corridor along the U.S. border, and in many parts of the developing world where industrialization has occurred.

Despite these warning signals, the world's governments and institutions have not acted to preserve the water that nature, so far, continues to give us. More than 93 percent of water that falls on India during the rainy season flows to the sea. It is not stored or properly utilized. Around the developing world, 50 percent of the people will be deprived of water by 2010 unless planned and coordinated actions are taken. Conservation plans absolutely must be developed and implemented globally as well as locally.

The crisis of food and agriculture

When the United Nations was founded in 1945, there were about 200 million hungry people in the world. In July 2002, the number was 840 million people. Today, one out of every seven people in the world consumes less than 1,500 calories per day – the absolute minimum, according to the World Health Organization, required to sustain life for an adult. More than a third of the people living in Africa suffer a food deficit.

In 1996, during the World Food Summit in Rome, 186 governments pledged to reduce by half the number of undernourished people in the world by 2015. That target is far from being met. The number of hungry people is falling by about eight million each year, but that is less than half the rate of 20 million annually that must be achieved to meet the 2015 target. At the present rate, the target will be met 15 years late, in 2030, resulting in 15 years of additional suffering and death for countless millions of people.

In the developing world, 850 million people live in hunger. In Bangladesh and parts of India, millions of people subsist on a daily meal of a piece of bread with perhaps an onion or a bit of fish if they can find it. In Nepal, I have seen people try to survive by eating the bark of trees.

The problem is not entirely due to a scarcity of food. World food production has been increasing and now has reached two billion tons each year. But most of the increases are taking place in the developed world – not where most hungry people live. The problem of scarcity is largely one of distribution and over-consumption, not global shortages.

In the developing world, 40 percent of all children suffer from malnutrition. In the U.S., it is estimated that 50 percent of all children, and a third of all adults, are seriously overweight. Americans spend \$60 billion a year on schemes to reduce their weight. Forty percent of the people in Europe overeat. Food resources are diverted to make junk food, or extra food for people who already have more than enough, while almost a billion people in poor countries cannot find the 1,500 calories a day needed to sustain life.

In this way, hunger is directly related to poverty. The average family in the Third World comprises six people. If these six people are struggling to survive on \$1 per day, as many of them are, they cannot compete for food with families in the West who earn \$200 per day.

The world could easily reach its goal of reducing world hunger by half by 2015 if the distortions in food consumption around the globe could be resolved. But dramatic variations in food prices around the world prevent that from happening in a variety of overt and subtle ways. In Kenya farmers are growing organic food, but one out of three people in that country goes to bed hungry. The organic food grown in Kenya is being sent to Denmark and Norway because Danes and Norwegians are able and willing to pay vastly more for it than Kenyans. As a result, Kenyan farmers who export food become rich and buy the land of the poorer farmers so they can further expand production for export. As more and more land is used to grow food for export, less land is available to feed the poor people who live there.

India has claimed for 20 years to be able to feed its people without outside aid. But the claim is deceptive: one person in four in India remains hungry. The markets may be full of food, but in a market economy, if one does not have money, the markets might as well be empty. When a person's ability to eat is based on the amount of money that person has, one goes hungry not because there is no food but

because one does not have the tools and means to earn an adequate income. This summit can begin to address the problem of food by initiating a plan for a global distribution system based not on who has the most money, but on where the greatest need is waiting to be met.

Many look to genetically modified or GM crops to solve the problem of hunger. However, it is probable that GM crops will make the crisis worse, not better: as a result of GM crops, by 2015 hunger may well increase, not decrease. By then, we might have doubled the number of hungry people on the planet because of these experimental products.

We must understand that, first and foremost, genetically modified foods are an experiment, the outcome of which we do not yet know. Can people eat them all their lives, remain healthy, and produce healthy children? We do not yet know the answer. Yet corporations with the approval of governments are busily planting seeds for everything from corn to cotton around the world. If the experiment does not turn out well – and it very well might not – the impacts will be irreversible.

As a comparison, consider the problem of removing unwanted chemicals from soil. It is extremely difficult. A recent program in Africa to recover soil damaged from pesticides lasted almost five years, during which that land was not productive. When it comes to recovering land from unexpected and unwanted genetic changes to soil bacteria, no one has proposed a way in which that might be done. It is entirely possible that edible food could never again be grown in that soil.

We do not even know the biological impact of GM crops on humans who consume them, but we can predict the dire results for the developing world's farmers if poor countries turn to GM crops out of desperation to solve the crisis of food and hunger. Many GM crops are designed to grow from "terminator" seeds: the mature crops are seedless, so farmers have no way to gather seeds to plant the next year. They must buy seed every year from the corporation that created the particular GM crops.

In the spring of 2002, the government of India approved the cultivation of GM cotton and corporations began wooing farmers with the promise of increased yields. But very few Indian small farmers can afford to buy a ton genetically altered of cottonseeds every year when their income is often no more than a dollar a day. But the corporations refuse to provide seed to poor farmers without regular cash payments. This may well force large numbers of small farmers in the developing world to stop farming. They simply will not be able to buy the seeds to plant crops.

If farming is only affordable to those with money to buy seed, the proliferation of GM crops may cause more and more land in developing countries to fall into the hands of large farmers or agricultural corporations. In Asia and Africa, 70 percent of the people live from farming; in Latin America, the number is about 50 percent. If significant numbers of these people are driven from their farms, we risk worsening the problems of deforestation, urban migration, and a host of others, while turning farmland over to those whose interest is maximizing cash profits for shareholders instead of growing food for local people.

The causes and solutions of the food crisis are global and, therefore, must be addressed in a global forum such as the Johannesburg summit. Droughts caused or worsened by climate change have affected a billion people in the last two years; in southern Africa today, 12 million people are without food because of drought. Many food scientists have ignored the issue of climate change, but it is a global reality and must be addressed by creating a plan to reduce CO₂ emissions around the planet.

The distortion in food distribution is an international problem. Global trade is concentrating wealth in the North and increasing the number of poor people in the South. Until we address that, there will continue to be less and less money for the poor to buy food in a global economy. For the same reason, there will be less and less land and water available for food production for the poor.

In addition, the world is adding 80 million people every year, 95 percent in the poorest countries. Poor countries get babies; rich countries get wealth. The goal of halving the number of hungry people in the world by 2015 cannot be achieved unless poor countries reduce their population growth rates to sustainable levels by 2010. At the same time, there is no way we can achieve sustainability unless the North halves its consumption and reduces its average per capita income of \$20,000, which does not add any more to the quality of life.

The crisis of deforestation and soil depletion

The depletion of soil and the loss of forests to recharge groundwater have contributed to the crisis of hunger. Because of climate change, the extravagant over use of chemical pesticides, and overuse, 50 percent of the land in Africa and Asia is now exhausted, a wasteland. As populations grow, people exhaust farmland more quickly. The cycle of deforestation and soil depletion continues. In the year 2000, the world lost close to 30 million acres of rain forest.

Also, farmland has been lost to urbanization and industrialization. The construction of factories, highways, and the slums where workers live, claims farmland that is lost forever. But, beyond the factories and highways, a significant amount of land in the developing world has been poisoned by industrial pollution. Factory and chemical wastes from Bangkok have turned soil acidic upto a 70-mile radius around the city. Similarly, much of the best farmland in Indonesia has disappeared under industrial sites, highways, and slums.

Delegates to this summit must begin to develop ways to foster plans at the global, national, and local level to control land use to preserve farmland wherever possible.

The health crisis

The lack of these resources – water, food, and fertile land – gravely threatens the health of the people in developing countries.

Water-borne diseases such as cholera and typhoid, which have been virtually eliminated in the North, are still rampant in the South. Half the world's people lack water-based sewer and sanitation systems and a billion people lack clean drinking water. In Manila, 40 percent of the residents live in slums. Many build huts set up on poles with streams of sewage running underneath. Children play in the sewage, then go home and eat – if the family has managed to collect any food that day – without washing their hands because there is no water (and also as spoons or forks are not part of their cultures.) This scenario is repeated in various forms throughout the South. Consequently, 3.4 million people – most of them children – die each year from water-borne diseases. With education and basic sanitation, most of these deaths would never occur.

But water-borne diseases are not the greatest health threats facing the developing world. The three greatest health threats are posed by malaria, tuberculosis, and AIDS.

According to the WHO, two billion people – a third of the world’s population – show signs of latent tuberculosis infection. Tuberculosis kills 1.5 million people every year and, at the rate it is spreading, could kill 100 million people by the year 2050. The increasing rate of infection is due largely to the fact that people infected with HIV are more prone to TB, but there are new strains that are more virulent and drug-resistant than the ones we have known in the past.

On an average, there are 300 to 500 million cases of malaria every year in the world and between 1.5 and 2.7 million people die as a result – at least 80 percent of them in sub-Saharan Africa, where about 52 percent of the population carry malaria parasites in their blood. In Africa, 2,800 children die every day of malaria; in Brazil, the disease kills more people than AIDS and cholera combined. As we count all of the disease’s costs, from medical care to lost productivity, we see that malaria takes almost \$2 billion annually out of Africa’s economies – an amount that is desperately needed for other things.

The situation is becoming worse: the anopheles mosquitoes that transmit malaria are increasingly becoming resistant to pesticides and malaria parasites are more and more resistant to the usual treatment drugs. The disease also will spread to new areas as global warming makes more geographic areas hospitable to the mosquito.

Developing new drugs is important, but we also must not ignore local medicines and the plant-based remedies that evolved through history. They may have an equally strong part to play in controlling the disease.

At the same time, we must eliminate the mosquitoes that transmit the malaria parasite. As a priority, national and global health organizations must identify the places where water stagnates and mosquitoes breed, and implement programs to eliminate these breeding grounds. Natural predators that eat mosquito larvae can be introduced to reduce the problem without the use of chemical pesticides and their harm intended or not, to human, animal, and ecological health.

Research, eventually leading to immunization, is where the major breakthroughs lie. However, the additional research needed is not done in the developing world; and, in the North, most of the resources needed for research are given to AIDS and to lifestyle related illnesses of the developed world, such as cancer and heart disease.

Of course, the focus of research on the treatment of AIDS is necessary and welcome. AIDS has become the fastest-growing health threat in the South and, after water-borne diseases, promises to become the greatest killer. Of the world’s 40 million current cases of AIDS, 90 percent are in the South. As many as 28 million cases are in Africa, and by the end of this decade there may well be 20 million orphans in Africa because of the disease. As it is, 5,000 Africans die every day from AIDS. But the disease also has spread to China and India, and throughout the developing world.

The world needs \$10 billion annually to manage the AIDS epidemic. The South does not have enough resources to deal with the education, treatment, medical facilities, and everything else, to combat this plague. This summit must begin to formulate a global approach to eradicating AIDS. Private foundations, such as the Gates Foundation in the U.S., are beginning to address the need. But these efforts must be coordinated under an international plan – and, of course, the efforts also must be vastly, indeed exponentially, increased.

Population: the fundamental crisis

It has been said that every problem – the scarcity of clean water, the disappearance of forests and fertile soil, the epidemic spread of AIDS – is, in some respect, a population problem. The world cannot implement a global program of sustainable development until it acts against the continued growth of population. In 1798, Robert Malthus showed that population increases exponentially while resources increase arithmetically: the more people there are, the faster they outgrow available resources. In Malthus's time, there were only about 800 million people in the world. Today, the number of people going to bed hungry is more than the number of people alive when Malthus published his paper.

The 80 million people we add to the world this year – one out of four in India, most in Africa – create two critical problems. First, there is no room for them; 6.1 billion people already are failing to equitably share the finite resources of the planet. Second, a larger and larger population exacerbates problems that were already grim. Of the 80 million people that will be born this year, 95 percent will be in poor countries where already two-thirds of the world's population exists. Ninety percent of these children will be born into poverty and a heritage of misery.

The most reliable estimates predict that by the end of this century, about 10.5 billion human beings will inhabit our planet. Already by 2025, there will be about 7.9 billion. The Earth cannot sustain that many people, especially if most are to be born in poor countries. Studies indicate that the world can properly sustain about 2.5 billion people, no more. At that rate, all should have adequate food, water and other resources without threatening ecosystems and extinction of other species. Greater numbers place an unsustainable demand on the planet for those resources without which people themselves cannot survive. Without farmland, trees, insects to pollinate plants, birds to control insect populations, wetlands to process nature's wastes and refresh surface waters, how will humans survive? The problem of population underlies all others that arise in discussions at Johannesburg.

In India, the use of condoms and family planning is growing, but very slowly. That is why we now have 1.9 or two percent growth, which is equal to 20 million people added annually in India or about 60,000 every day. Africa is overcrowded in the sense that there is not enough food or other resources to support the number of people trying to live there. There is no reason why Africa should have 2.5 or 2.7 percent annual growth of population, or India 1.9 percent, or Bangladesh 2.5 percent.

But there are reasons for hope. For example, ten years ago Kenya's population was growing at 4 percent, the world's highest rate. Now that has fallen to 2.8 percent. To drop that rate even more, our institute is establishing a clinic in Nairobi, and it will have only one job – giving free condoms and educating as many women and girls as possible about their use.

Measures to control population need not be cruel or inhumane. The best programs provide free education and support systems for family planning. In India, 45 percent of couples do not know that you can control population - and when you don't know you can control, you don't control. In contrast, Thailand's effort has been one of the most successful: 80 percent of its sexually active population uses condoms. Within ten years, Thailand has succeeded in establishing a birth rate that is entirely sustainable.

If Thailand can control its population growth as they have in the last twelve years, other countries can. Programs like Thailand's are not costly; they are far less expensive than the loss of resources due to overpopulation and the spread of AIDS. Every country can implement such programs.

However, programs that control population – especially those that give free condoms or offer women and families freedom of choice – face objections from organized religions and conservative, religiously oriented political factions in the developed world, and particularly in the U.S. It is unconscionable to allow people's lives to be ruined by poverty, and criminal to let the Earth stripped of its resources, because of the distorting ideologies of religions and politics. Delegates to the Johannesburg summit absolutely must work actively to separate the population problem from religious dogma. Until we succeed in doing so, any plan for sustainable development will remain crippled.

The role of corporations and world trade

Many government officials, aid agencies, and scholars claim that the globalization of world trade will bring prosperity to poor countries. Indeed, over the last ten years – as governments have privatized and corporate power, influence, and control have expanded – corporations and their business-oriented approaches have become central to plans for sustainable development. If we do not change course, over the next 25 years many of the developmental efforts will be in the hands of private corporations.

While many are cheered by corporate involvement in development, there is more reason for fear than hope. Corporations have extreme latitude in choosing how they will use their money, and they have more influences among the top echelons of business and government in individual countries than does any single country. Therefore, the governments of poor countries are forging more and more partnerships with corporations in the hope that they will use the money for the purposes of sustainable development. But in many areas – the treatment of workers and environmental protection, to name only two – corporations routinely violate basic principles of sustainability. We do not ask or expect the anopheles mosquito to cure malaria, but we somehow hope that corporations will cure the ills that their presence causes. It must be said that some corporations try earnestly to do so; many U.S. and European firms have begun to improve their environmental practices and treatment of workers because of public pressure. But they are too few in number, and many have been too slow to act.

Since the Rio summit in 1992, more and more efforts of the United Nations itself have become partnerships with multinational corporations. This is an admission on the part of U.N. that corporations are where the money and the power in the world really are, not in the hands of governments. But a large number of NGOs working with U.N. agencies oppose these partnerships as a matter of concern for the U.N.'s integrity. The U.N. was set up by governments and should work closely with people, not to promote the profits of multinational corporations.

In addition, many NGOs fear the undue pressure and influence that the United States places upon its policies, plans, budgeting and development. The U.N. was established to represent objectively the interests of all of the world's people and look at those interests based on what the U.N. judges to be right – not what the U.S. enforces or decides what is right.

The independence of the U.N. is key to our future – its power to look at global issues objectively and scientifically, and to fulfill its mandate to bring not only sustainability, but also equity and justice to all the people of the world. Many forces at work on and within the U.N. act against the organization's purpose – not only in preventing it from achieving those goals, but also in making the U.N. redundant, leaving it unable to take direct action that will benefit the Earth and its peoples.

Global trade and the World Trade Organization

Perhaps the greatest force working against the U.N.'s mandate to achieve equity and development for all the people of the Earth is the globalization of the economy, abetted by the World Trade Organization.

An example: in 2001, garlic was imported to India from China. In the Indian city of Pune, that garlic was being sold at half the price of garlic produced locally. Since then, those Indian garlic farmers have not been able to sell their crops for enough money to cover their costs and now are going out of business. That kind of "free trade" destroys local economies instead of building them. When the WTO promotes the destruction of local economies in the name of free trade, what does it accomplish for the goal of sustainability? Butter is imported to Scotland from Australia while butter made in Scotland is exported to Sweden. Fossil fuels are burned, increasing pollution and greenhouse gases, to move a product thousands of miles to displace one made locally. Is this the wisest use of resources in the name of sustainability?

It is generally assumed that the lowest price reflects the most efficient use of resources. This is the belief that has given rise to the globalization of economies. But this is a narrow view. The lowest price often means that essential resources are being denied to poor countries where those resources are needed to build local economies. The North can pay more for the resources of the South than local people can, so to earn desperately needed cash, poor countries strip their resources and ship them to the rich countries that already control most of the world's resources. Because the World Trade Organization promotes the philosophy that leads to such inequities, it is responsible for increasing poverty in the developing world, for the waste of resources, and for driving people toward desperation.

The WTO exists to drive down prices around the world. This is good for buyers, but not always good for sellers. In practical terms, the developed world is the consuming world and the developing world is at a severe disadvantage. Poor countries seeking to build their economies find that jobs often go to the workers willing to accept the lowest wage. The factories go to the countries that place the fewest restrictions on what corporations do to people and the environment.

The WTO should promote local jobs and local production systems, not make it possible to destroy them more easily than ever. The directors of the WTO must see to it that the organization fosters trade in a way that benefits poor people without exploiting them. The WTO's policies must not be based solely on seeking the lowest price in every case, but also must implement ways to encourage the development of local industries without forcing local people to work at slaves' wages. In addition, any sustainable trade policy must work to reduce, instead of increase, the air pollution and ozone destruction that result from additional transportation of goods around the planet. The delegates at Johannesburg can and must strongly present this message to their governments.

The ethics of capitalism

As it is now constituted, the WTO cannot foster the sustainable development of local resources to benefit local people in the ways that will bring health and prosperity to individuals. Global trade based on lowest prices cannot in itself address the crisis of resources that we see in poor countries – and, increasingly, in rich ones as well. The WTO is a business organization, and business organizations are not in the primary business of promoting social values such as equity for the poor, education, and conserving scarce resources.

Global trade is based on the idea of free-market capitalism, which has created national prosperity in the West. Many people believe that capitalism is, therefore, good. But we must distinguish between capitalism and the entrepreneurial spirit. The entrepreneurial spirit is positive: the promise of economic benefits motivates people to work to improve their personal situations. Micro-loans, pioneered by the Grameen Bank, are a means of funding entrepreneurs to start and succeed in sustainable local businesses. This is an appropriate use of capital.

But capitalism is the dark side of entrepreneurship. The ethic of capitalism calls upon each person to be materialistic and to place selfish financial interests above any interests of other people. Of course, people pursuing capitalist agendas also are expected to deal honestly and to obey the law, but the wave of recent corporate scandals in the U.S. has shown that these principles also are secondary and are violated, often flagrantly, at the highest levels.

Capitalism calls upon every human being to subordinate all other values to greed and personal gain. Its goal is the accumulation of wealth through the removal of competition. In the context of sustainability, pure capitalism can be seen as profoundly narrow and even unethical. What obligations do we owe to other human beings and to the Earth? Do we honor that obligation by working to put other people out of business, accumulating more and more money for ourselves, paying workers as little as we can, and dumping our industrial wastes in the water or on the ground? Unfettered capitalism is not a sustainable economy.

The World Bank

The World Bank presents an alternative to the growing corporate role in development. It was originally established to foster development that would bring prosperity to the people of poor countries. But it has not been as effective in achieving that goal as it should have been, and recently also has placed development projects, particularly for water, in the hands of private, profit-seeking corporations.

It is time for the World Bank to again place poor people first in its priorities. The delegates to the Johannesburg summit must call upon the bank to invest in the development of localized agriculture and rural industries instead of funding massive industrial projects that destroy rural societies, drive people out of their villages, and leave them no alternative but to migrate to cities where they rot in slums. Equally important, the bank must support urban projects that provide basic housing and sanitation to the people living in the gutters of the Third World.

The World Bank also must combat major diseases that plague the developing world. The Bank could fund local pharmaceutical companies to make drugs at lower costs, in part by reducing the cost of transportation. These companies also could research and develop local plant-based medicines. Our institute has established a pilot project to create medicines from native plants in northwest India.

The Bank also must recognize that development is impossible without controlling population, and must use its influence toward a goal of zero population growth worldwide by 2015. For partisan political reasons, President Bush has refused to pay the \$34 million the U.S. had promised to the U.N. for population control. The World Bank should replace that money, because once population is brought to a sustainable level, sustainable development becomes a much easier task.

In addition, the World Bank must recognize its key role as an investor in local education – the kind of education that empowers people with the knowledge and means to increase their incomes through

sustainable enterprises. The World Bank should work with local governments to create decentralized, local education programs run by local people with the significant participation of NGOs.

But this is only possible if the World Bank adopts a different philosophy recognizing that money is to be used not by national governments or multinational corporations, but by local people for their own development and for setting up income systems at the local level.

To begin to implement that new philosophy, the Bank definitely should endorse cancellation of the \$2.2 trillion in debt now carried by poor countries, especially in Africa.

When a country has a significant portion of its population living on \$1 a day, does it serve the interests of sustainable development to demand that the country pay billions of dollars annually in interest? Countries such as Brazil and Argentina have already paid in service charges three times the original debt they have incurred. The massive foreign debt and payment schedule has been a significant factor in the collapse of Argentina's economy and the other economic crises in South America. If the governments of poor countries find the money to pay their debt and interest charges, they have little or no money left to use for development projects at home. In the end, it is always the poor and powerless who pay. They pay in lack of education, lack of health care and lack of housing and sewer systems, because the money to pay for those things is being sent to foreign banks and governments.

To raise hard cash to pay debt and interest, these countries often must deplete one of the few sources of wealth they have – their natural resources. Governments sell concessions to international corporations to strip-mine, build refineries, and cut down their timber, all to make payments to banks in countries that already are rich. By canceling the debt, the lenders will ensure that those resources and the ecosystems they sustain will be preserved. At the same time, the countries can use a greater portion of their budgets to invest in education, agriculture and other urgent needs.

Forgiving international debt is not an issue that can be addressed one country at a time. It must be addressed globally because these debts are tied to the world economy and globalization. It is a question that should be ideally suited for discussion by the delegates in Johannesburg.

Militarism and the “peace dividend”

If neither governments nor corporations are willing to fund development, and if the World Bank's policies prevent that institution from adequately doing so, where can money to implement and sustain locally controlled development initiatives come from? The most obvious answer is perhaps surprising.

The best estimates tell us that to save the developing world we need about \$450 billion a year for 25 years. That is what it will take to begin to address disease, poverty, environmental protection, soil regeneration, creation of sustainable local-industries, population control, and the rest of the developing world's ills. Currently, the amount the countries of the world spend on arms and the military is about \$850 billion, and rising. The combined budget of all countries for armies and armaments is twice what is needed for comprehensive, sustainable global development.

Governments claim that they have no money to fund initiatives for sustainable development, yet they can find twice as much to buy weapons and maintain armies. The \$850 billion spent for these purposes must come from somewhere. In India and Pakistan, one out of three persons has less than a dollar a day to live. Yet the two countries can produce \$20 billion a year to spend on their military forces. Right

now, there are 500,000 soldiers on each side of the dividing line in Kashmir. Each country has nuclear weapons. If they went to war, what would the winner get? In July, Spain and Morocco almost went to war over 30 acres of rocks in the Mediterranean Sea on which no one lives. In Sri Lanka, a 20-year civil war has killed almost 100,000 people. How do these conflicts benefit the cause of sustainable development?

Currently, developing countries import \$30 billion worth of arms and armaments every year – amounting to nearly 15% of their income. In the year 2000, Africa alone spent close to \$13 billion on arms purchases. These purchases represent the greatest waste of resources on Earth, because war as an institution and the concept of national sovereignty are completely outdated. We now live in a world in which the security of any one group is bound up with the security of all human beings.

Clearly, we have the money needed for global development. What we lack are priorities and leadership. We must develop more effective methods by which the U.N. becomes the institution to resolve international conflicts.

But most governments participating in the Johannesburg summit have rejected any discussion of, or possibility of an agreement about, militarism and disarmament. This silence is folly; indeed, it will prove suicidal. It is not possible to talk meaningfully about sustainable development until one talks about disarmament and the redirection of massive military budgets away from armies and armaments.

Obviously, disarmament has long been professed as a universal goal. But now we see indications that the goal might be more than a dream.

In July an African Union was established which encompasses almost all countries on the continent. At this time the concept of African unity seems almost impossible. But today, 50 years after World War II, no one can imagine the army of Germany invading France. Therefore, France is not spending huge sums to arm itself against Germany. Instead, both countries are part of the European Union, which allows member countries to spend smaller portions of their military budgets to maintain a one regional defense force instead of a dozen national armies.

The developing world can go far beyond the European example. It can develop an Asian Union, a South Asian Union, and similar alliances in different regions throughout the South. Member countries could then redirect huge sums away from military budgets and toward development. The unions would be able to pursue a common plan for family planning, use of resources, combating AIDS, and trade among their member countries and thus become powerful forces for change. Regional development can become a more efficient and effective approach to dealing with these issues while it gradually eliminates many of the artificial barriers among nations that borders represent. Europe has shown that this is possible and Africa shows us that the will and desire is there.

Education

If the people of the developing world are to address this formidable range of crises and opportunities locally and effectively, they must be equipped with a new kind of education. That, in turn, calls for an education revolution in the South.

Throughout poor countries, education as an institution is a disaster. The developing world inherited its present system of education from colonizing countries. That system was established to serve the needs

and interests of the colonizers. Most people became not learners but memorizers. The teacher's role was to keep a cane in hand and beat students who failed to memorize. Even after decolonization – which took place only in the literal sense but not in many other ways – poor countries still regarded the North and West as superior and more sophisticated, so the educational system that prevails in those regions was retained. That system, with somewhat less physical punishment, persists. Too many teachers today still function largely as human radios that broadcast facts. That demoralizes students. So they memorize what they are told to memorize, their natural curiosity and initiative ebb away, and they stop thinking. The result has been that nowhere in the South has education become a process of creative problem solving. Education to bring development, solve problems, and bring people the capacity to enhance their life's purpose never evolved.

The numbers of students in the developing world who attend university are too small to create a critical mass of people who can bring necessary changes. No more than five of every hundred who enter school reach university. To enter a college, a student must amass a certain number of credits from high school. There are vast numbers of people who could benefit from college and use advanced education to bring change to their societies, but they have not had the background and therefore cannot go.

For those who do not, rote memorization can help a large number of individuals at least learn to read and do arithmetic. But the South's other problems have prevented that goal from being realized. According to UNESCO, 120 million children in developing countries do not go to school because there are no schools or teachers where they live. By the time they are eight or nine years old, vast numbers of children in poor countries must go to work. The girl helps her mother to haul water and get firewood and cook and clean. The boy helps his father to farm. In Pakistan, children seven or eight years old shine shoes on the street. In Manila, children collect garbage – cans, bottles and plastic – to earn a few cents a day. Pervasive poverty and lack of adequate resources makes putting children to work an urgent necessity for families throughout the South.

As a result, 35 percent of people in India are illiterate; in Nigeria, 70 percent. The problem is even worse among girls and women. In India, for every two boys who can read, only one girl is literate. In Saudi Arabia, out of every 10 girls only two are literate. In Bangladesh, only three girls out of 10 are able to read and write. Of the 4.8 billion people living in poor countries, there are perhaps 900 million children who are completely illiterate.

Making matters worse, the institution of education in poor countries often is disastrously bureaucratic. Most of the money governments put into education go into bureaucracy. Very little is left for innovation or improvement. As a result, in many areas of the South, public education – where it is available – is of the lowest quality.

As a result, two problems are pervasive. First, teachers are paid little. Many earn the equivalent of \$20 to \$50 per month at a time when the cost of living in poor countries is rising as the necessities of food, water, and other resources for life become scarcer. Those with the knowledge and intellectual capacity to earn more, work elsewhere. The less able become teachers and regard the profession as a job no different from a job in a factory or a shop. The teacher who inspires, stirs curiosity, unlocks creativity, or challenges students to think cannot be found in most of the South. (In fairness, it must be admitted that such teachers are rare anywhere. But they are easier to find in developed countries.)

The second problem is one of basic facilities. It is not unusual in the rural areas of poor countries to find school buildings with no lights, with holes in the ceiling through which rain pours in, with no books to

learn to read or paper to write on. It is rare that they are encouraged to question why they live in these conditions or to imagine changing those conditions or otherwise improving their lives. These questions are not asked; students are expected to only to memorize and accept. Education as a means to advance oneself and one's society does not manifest.

Some, especially politicians, advocate the increasing privatization of education either by sending children to private schools or by hiring for-profit corporations to run public school systems. This is not a sustainable solution to the problem of educational improvement. For the last decade, in developing countries, the growing privatization of education has made learning too expensive for non-privileged people and is relegating the mass of poor to the worst schools with the worst facilities and teachers and the least resources.

As the children of the rich and those of middle income in the South enroll in private schools in increasing numbers, two additional problems are emerging.

First, in elite private schools for which parents pay tuition, education is geared to the Western model. Educational forms and issues are not designed to give people the knowledge and tools they need to work locally to improve conditions and help local people. Private education is designed to help children of the well-to-do gain the background they need to enroll in university and to get a high-paying job abroad or to begin their own lucrative businesses. Young people in private schools are oriented toward the Western values and goals of personal wealth and achievement. The purpose of elite education in the South is not to learn to think or to acquire the tools to improve one's society but to make money.

Second, private schools take only the so-called "best" students. That leaves public schools with abnormally large proportions of students with learning disabilities or deprived backgrounds. Instead of public schools becoming a place where levels of society mix, learn to communicate and discover common values, privatization of education creates two societies: one of educated people oriented toward Western values of personal gain, and another of undereducated people ill-equipped to improve their society or even their own lot in life. In this way, private schools can rob a developing country of some of its best potential leadership.

The Western experiment of allowing profit-seeking corporations to run public school systems creates an inherent conflict. The goal of education is to produce people who can think, create, and effectively address the problems of the world. The goal of a corporation is to cut costs and make money. The two goals are in fundamental conflict and, in fact, early results from corporate-run school systems in the U.S. shows that the experiment fails on both levels: children do not learn more effectively and the corporations do not make money.

Schools should be run by the people, offering the best education to all students, free of narrow traditions and government or corporate bureaucratic dictates that control how and what they teach. All people should have equal rights to the best education. There is no other way to lift these countries out of poverty once and for all.

To achieve that goal, education in the developing world must be freed from antiquated Western traditions and frameworks of teaching. Bureaucratic control must be reduced and more freedom provided to teachers and students so that questioning and investigating, not just memorizing, becomes part of the learning process.

There is a growing movement in Western education called “problem-based learning” or “project-based learning” that cultivates students’ abilities to think, analyze real problems, and create solutions. For example, students are asked to imagine that the water wells in their home town are becoming contaminated with a chemical. They must research the effects of the chemical on people and animals that consume it, use evidence to track down possible sources of the chemical, then create a plan to drill a limited number of strategically placed test wells to see where the chemical is most concentrated, thereby determining the probable source. Finally, the students must create a clean-up plan.

In the course of their investigation, the students learn to analyze a problem, to gather and use evidence, to make plans, and interpret results. They also learn the usual chemistry, mathematics, scientific procedures and so on, and tests show that these students retain basic knowledge better because they have learned these things in the context of a real-world problem that has personal meaning to them. This approach, in which teachers become guides and coaches, could be used throughout the developing world to bring solutions to problems such as water shortage, deforestation, soil degeneration and so on.

To enable students to conduct this kind of research, we must enlist the technologies of wireless communications to achieve the goal of universal education in poor countries that have few teachers or school buildings. For example, a California company called ICE, the acronym for Information, Communication and Education, is creating ways to teach basic knowledge orally so people need not know how to read or write before they begin to learn useful information. As soon as funding becomes available, ICE programs will become functional in rural India.

To bring these educational services to remote areas lacking electricity or telephone service, poor countries can enlist the help of NGOs and private donors to establish information centers in rural communities. Each center is equipped with a cell phone, a radio, a television set, a videocassette recorder, a computer connected to the Internet, and a computer printer, all powered by solar or other forms of renewable energy. Satellite and broadcast communications can bring education through radio and television on all subjects: literacy, hygiene, infant care and sustainable farming, among others. A company called Telesys plans a system of low-orbit communication satellites, and has guaranteed that a certain portion of its capacities will be reserved for exactly this kind of use by poor countries. Already in India, these information centers have been installed in several villages.

Information technology has been put to effective use for education in other areas as well. In Brazil, educational programs are broadcast by radio to remote regions, reaching more than 85 percent of the nation’s villages. In Africa and South America, radio dramas communicate the need to control family size by telling stories. But our goal must be to go far beyond these early successes. We can apply information technologies to help all people not only to learn to read and write, but also to think and create.

We can revolutionize education with technology by educating teachers to think in new ways and to use new kinds of tools, and by freeing education from the dogmatic influences of religions and political ideologies. If that can be accomplished, education can become the fundamental tool for sustainable development. Our children must not only learn to think, analyze, create, and question. They must be prepared to become agents of real change in their societies.

We must use the tools of technology, and all we have learned about the inner workings of the human brain and mind, to foster humanity’s next step in evolution: to rise above the struggles that have marked the previous millennia and brought us to the edge of extinction by pitting person against person and

group against group. Human beings are the only creatures we know of who are self-aware, and that gives us the power to direct not only our own collective future, but that of the entire planet. The next stage of our evolution must be not to improve material things, but to use the creative process to identify life's higher meaning and purpose. If delegates to the Johannesburg Summit hold to that idea, we will have fulfilled our purpose in coming here.

Information technologies

Information technologies, however, can play a larger role in development. If a villager needs to communicate with a distant relative about a family matter, the villager need not travel for a day to meet the relative; she or he need not even know how to write a letter. At a village information center, she or he can make a telephone call. An example: a farmer wants to sell her mangoes. Three towns away, the price of mangoes is 24 rupees while everywhere else it is 18. Instead of selling her mangoes at the nearest town for 18 rupees, or carrying her mangoes from village to village, she can check the price by making phone calls or sending e-mail at the information center in her village. If a storm is approaching, emergency warnings can be sent to every village by radio. In a medical emergency, a doctor at a faraway hospital can give instructions over telephone or video to villagers. The uses of wireless information technologies, powered by renewable energy, for sustainable development are almost limitless.

Grounds for hope

The problems facing us are great. But as I travel, I do see some changes taking place around the world. Thailand has achieved a sustainable birth rate. After two decades, warring factions in Sri Lanka have at last begun to negotiate for peace. The ecovillage movement is growing, bringing sustainable agriculture and local industries to rural areas. We cannot deceive ourselves about science and the facts known to us today. But it is these hard truths that enable us to take proper action and change our common fate for the better.

In the past, the human species has faced many disasters, although perhaps not so many deadly ones as we do today. We always have succeeded in overcoming them. Whether we will succeed this time we do not know. Our task is to find practical ways to create hope that is feasible. We should not fool ourselves; we have a long and difficult journey to make. This century will determine whether the Earth and all who live on it survive. But there are enough people in the world who care. For them, and for the world's poor, it is our task to find hope, to change our institutional frameworks, and to begin to redirect our efforts, look for alternatives, and employ our resources to preserve the planet and the life that depends on it.

Changing our ethics and institutions

To achieve the ambitious goals we have set for this meeting, we must be prepared to change our institutions – to refashion their purposes and reallocate their power in ways that promote, instead of thwart, sustainability.

The basis of these changes is the world's need for a new ethical structure. This new structure must replace the non-ethics of capitalism, competition, exploitation, and self-interest with a shared recognition of the fundamental moral principle of sustainability: that no group can truly live well if they live at the expense of others or of the planet, and that no group or person can truly be secure until all

people share the resources, freedom, and dignity necessary to life.

If the world is to live by the principles of sustainability, our institutions must be reconfigured to reflect those principles.

First, it is necessary to understand that those who control military power, natural resources, money, and the development and dissemination of new technology control the planet and the destiny of all who live on it. Currently, institutions such as the World Bank and the World Trade Organization are structured by those who colonized the globe for their own benefit. One billion people control the resources on which six billion depend. Those who control these resources through global institutions must be prepared to surrender their gluttonous ways of living and to share the planet's resources and wealth more equitably. Resources must be democratized. At the same time, there will be no democracy until local people can make their voices heard and exercise control over their own destinies. There can be no sustainability without equity.

Second, the equity we seek is not possible as long as one nation holds a vastly disproportionate share of the planet's wealth, political power, and military capability. The community of nations must address the question of whether the United States will continue to dictate United Nations and international policy and control world events to suit its own political and economic interests.

Third, the world cannot be made sustainable until nations redirect the money, creativity and attention they lavish on armies and weapons – especially nuclear weapons – into initiatives to benefit people instead of destroy them.

Changes in the policies of global economic, trade, and aid organizations have been mentioned above. But we must move beyond those individual changes if the world is to recognize and live by the ethics of sustainability. To do that, we must strengthen the United Nations as the only international organization created to serve the interests of all people equally.

It is the United Nations that holds the mandate to promote the fundamental changes needed to create a sustainable world. For that reason, the U.N. can evolve to become the institution that brings the global form of governance needed to:

- ☞ distribute food and other resources more equitably;
- ☞ replace individual protocols and voluntary programs to protect the environment with enforceable measures to end humanity's pillaging and destruction of nature;
- ☞ end senseless wars of territory and conquest by arbitrating conflicts among nations and enforcing an equitable peace.
- ☞ promote a global action plan that can be tailored and carried out locally around the world to improve human welfare and implement sustainable development and ways of life.

Above all, the United Nations can grow to symbolize the reality that nationhood as a principle of global organization and operation is obsolete. One nation does not exist apart from others; security for one group of people lies in the security of all, and in the recognition by all that each has the right to live with dignity.

By embodying and acting upon the ethic of sustainability, a stronger United Nations can show humanity

not only a new way to live, but also a new way to think. It is only when people learn to think differently that we will achieve a sustainable world.

Goals of the Johannesburg Summit

Because the 21st century will be the defining century for Earth's future, this summit could be the most significant event of this century, even of this millennium. Never before have we been at the crossroads at which we now stand. We now have the capacity to kill the Earth very easily in several ways. We must consider the questions we must answer if life is to continue.

By the end of this century, what will be our condition and the condition of the Earth if we continue on our present path? What will we do about population? Poverty? Can and will we attempt to reverse our destruction of the natural world? Our responses to these questions will determine the answer to the fundamental question of whether any form of life on this planet will survive.

But answering those questions will only take us so far. To go farther, the delegates assembled in Johannesburg must form a plan that can become the basis of action. We must lay out a global agenda that coordinates international responses to the array of problems we face, but that also empowers local people and local organizations to address the same problems effectively in their own areas. Both aspects are equally important.

What to do now?

To accomplish that task, we must chart a new course. One of the most important lessons we have learnt in the ten years since Rio is that without a global approach, we will never succeed in overcoming the crises we face in achieving a sustainable way for all creatures to live together on this planet. We do not need an Indian plan or an American plan. We need a global plan for climate change, population control, ozone depletion, water development, technology, and the rest – a plan that combines global vision with local actions and control.

Our task is to create a people's movement around the world to bring the changes and build the world we envision. Good intentions are not enough. Meeting the challenge requires the labor of people working together at the grassroots level around the world, united as citizens of the world, working for a common purpose: to create a world that is just, equitable, and sustainable, and good, not only for all humans but sustainable for all living beings.

Obviously, a major social revolution is required, and that is possible if we can bring another major institutional revolution – to eliminate the divisions that institutionalized religion and political ideologies place between people. We need a religion and an ideology that brings us common ethics and unites people under the values of development, unity, justice, and equity. That is the religion that we all must learn to share, regardless of what name we call the divine power.

The challenge is great. We may succeed or we may fail to meet it. But if we do not put our labor behind our ideals, then failure is assured not only for all of humanity, but also for our planet. The human journey began in Africa. It now takes us back to Africa to lay the foundation for the next stage of our evolution, one on which the future of the Earth itself depends.
