

Telecommunications and the Challenge of Environmental Restoration

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THERE ARE four critical realities that challenge environmentalists, lawyers, teachers, and political leaders today in both India and the United States.

The first reality is that in the last ten years or so there has been a profound change in human communications systems at least as important as the development of movable print and the technology to produce books. Computer and computer telecommunications now, today, can connect schools, health organizations, lawyers, teachers, children, women's groups, and environmental organizations in Delhi, Madras, Bombay, with similar groups in, Rio, La Paz, Moscow, Dakar, Jakarta and New York. That is at reasonable cost students, teachers, lawyers, health workers, environmentalists, and those concerned with environmental justice in one

region of the world can write to or communicate with potential colleagues in many other parts of the world. Computer telecommunications using telephone lines is now cheap enough for modest budgets in "Third World communities."¹ According to a Michigan study, the average of cost of an e-mail message is about 1/600 of a U.S. Penny.

The second reality is that Climate Change, declining clean water resources, ozone depletion, and toxic hazards are a very serious threat to all of the life system of the planet today. One significant indication of Climate Change is the increase in frequency and intensity storms over the last twenty years. The intensity of storms is related to the surface water temperature of seas and oceans. The warmer the water temperature, the more severe the storm. Global Warming or Climate Change is not just an average increase in temperature, it is a profound shift in the climate and weather pattern of the planet. The change in the pattern of severe storms is one vivid and well documented illustration of this change. Environmental degradation is not just polluted lakes and rivers, it is a profound shift in the ecology of living things on our planet; amphibians are disappearing; coral reefs are dying, the world fish catch is in a state of global collapse. We are in the process of creating a global ecology that is inhospitable to life itself. This change is not limited by national boundaries. Acid rain, toxic rivers, ocean pollution, nuclear

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1. Here is information regarding telecommunications resources in India now, today.

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fallout and AIDS are global issues not merely national problems in Africa, India, Latin America or the U.S.²

The third reality is that there are very rich nations of the world that enjoy almost an excess of food, housing, reasonable health care, many educational options and freedom of personal choice in many aspects of life. A serious dilemma of the overconsuming nations of the world is that the health hazards of excess, obesity and heart disease resulting from overconsumption has become a primary health issue.

And, there are nations of the world that have many people living in difficult circumstances, with little food, inadequate shelter, limited health care, poor access to clean water, impaired access to education and few options for personal choice. In the South an estimated 13-18 million people, mostly children die from hunger and other poverty related causes each year. That is something like 1,700 an hour. During each session of the New Delhi International conference something like a 1000 people, mostly children will have died from poverty disease.

There are the rich and the poor nations and the very poor nations of the world where

development projects of the past forty or so years have not altered this reality.³

The fourth reality is that development, as it has been experienced in the nations of the South, has clearly not worked practically, ethically, or politically.

The essential development notion of recent decades was based on a presumed dichotomy between hungry, tradition shackled, overbreeding, uneducated, superstitious people of the Southern hemisphere, and the scientific, rational, democratic, educated people of the North who would provide the guidance and initiative that would lead the South into the ways of wealth and opportunity.

Forty or more years of this guidance and leadership has not led to the promised land of opportunity and wealth. Over the years the inequalities between North and South have grown and continue to grow today.⁴

Those who believe in the promise of development may claim that the expected level of wealth has not been achieved because of imperfect implementation. Development, some have argued, was impeded by local intransigence. Southern political leaders are said to be corrupt, Southern people are said to lack initiative : they refuse to be civilized in the Northern model.

Development in its various forms has been an economic prescription for Southern people often formulated by Northern experts, analysts, social engineers, or elites who often have neither familiarity with the lives ordinary people live, their concerns, hopes and dreams nor relevant knowledge about local, cultural or ecological circumstances. High rates of economic growth have not led directly to the reduction of poverty. In Brazil, for example, high rates of economic growth have produced a small elite that owns more than 90% of the wealth of the country.

Since the UNCED conference in Rio, the new language is "Sustainable Develop-

2. *Our Common Future: The World Commission on Environment and Development* (1987) Oxford: Oxford University Press. The Chair of this

Commission was Gro Brundtland of Norway. The Indian Member of this commission was Nagendra Singh. This report documents issues reported at the "International Conference on Shaping the Future by Law: Children, Environment and Human Health." *Our Common Future* is a significant parallel document. Most if not all issues discussed at the New Delhi conference are discussed in this significant UN publication. See also, Vandana, Shiva : *Philadelphia, PA and Gabriola Island*, BC New Society Publishers (1994).

3. Wolfgang Sachs, *The Development Dictionary: A Guide to Knowledge as Power*. New Jersey: Zed Books Ltd. (1992) See also Vandana, Shiva : *The Violence of the Green Revolution : Third world Agriculture, Ecology and Politics*. New Jersey : Zed Books Ltd., (1991).

4. Majid Rahnema, "Poverty" in Wolfgang Sachs (ed.) *Development Dictionary*. New Jersey: Zed Books Ltd, (1992).

ment." Although this is congenial language, it is not a clear conception. The admonition to be concerned with future generations is sensible but provides little guidance for future activities. How many people meet the needs of today without sacrificing the welfare of future generations? What does this mean in practical terms? Sustainable development, sustainable living requires changes in the ways we think about the world in which we live. One such change involves ideas about economic affairs. If India or the U.S. is to move towards sustainable living, some of our ideas about how the economic world works must be changed. Today the standard economic analysis does not take into account crucial environmental changes.

There are historical reasons for this. The Keynesian macro-economic model focused attention on consumption, savings and investment. Economists were preoccupied with the Great Depression and business cycles. Scarcity or the depletion of natural resources was of little concern in the 19th century when modern economic notions were developing. Today, we are facing new realities and our economic notions must change.

The 19th century economists regarded income as return on three kinds of assets: natural resources, human resources and invested capital. Modern economists after World War II conceptualized development in Third World countries as a matter of savings and investment in physical capital. Neither labor, since it was in surplus supply, nor natural resources were taken into account. The result of the use of this economic model has been the environmental crisis we face today: development with no assessment of the depletion of natural resources.

In earlier times it may have seemed

appropriate to ignore natural resources, but that time is not today. In the old economic model, buildings and equipment were valued as income producing capital, and their depreciation was a charge against the value of production. It was understood that consumption cannot be maintained indefinitely by using capital stock without replenishing it. However, in the prevailing economic model in India and the U.S., natural resource assets of water, air and forests are not depreciated as a charge against value production. Third world countries have been directed to use national accounting systems that ignore their principal assets: natural resources. Forests and other natural resources are not so abundant that they have no marginal value. Natural resources are not a free gift of nature because there are no investment costs. The value of a natural resource is not its investment cost, but the value of its investment potential. In the way that machines wear out, land depreciates. Ignoring the value of natural resources tends to create an illusion of a dichotomy between development and the environment. If the depreciation of the land and rivers and lakes is ignored then a mirage of development obscures illusory gains in income and the permanent loss of wealth, such as the satellite photographs of deforestation in India clearly reveals.

This reality is a challenge to law and to scholarship both in the U.S. and India. Both India and the U.S. have the intellectual resources, the legal system and the material means to address this intellectual challenge to rethink the basis of economic analysis that has led to the environment crisis we face today.⁵

The dilemma of development is that if it had succeeded in making the Southern nations rich in the style of the overconsuming nations of the world, it is likely the result would have made the life of our species and other species even more precarious as a result of pollution depletion of natural resources, deforestation and other environmental

5. Robert Repetto, "Accounting for Environmental Assents" in *World Scientists Warning Briefing Book* (Edited by the Union of Concerned Scientists) Cambridge, Massachusetts: Union of Concerned Scientists (1993).

hazards. If development trends continue as they have in the past they can only lead to greater North- South conflict.

The discrepancies between North and South are substantial but they are not absolute. The U.S. is a "developed" nation with an "underdeveloped" nation inside of it. Evidence of "underdevelopment" is present in most American cities. The urban unemployment rate is very high. In New York City, Detroit, Los Angeles and Chicago there is a large population of the chronically unemployed; health services are limited because of the budget crisis; homeless people live on the streets and in parks, in vacant lots and abandoned buildings; AIDS victims find it difficult to obtain expensive medical services; students in many communities quit school before graduation; many urban students are not learning how to read and write effectively, let alone are they excelling in science, mathematics or telecommunications. The abuse of licit and illicit drugs is a chronic reality and drug wars take a daily toll. Air pollution, toxic waste, clean water, and garbage are chronic crises. The U.S. and its cities face very serious challenges. The discrepancy between rich and poor in the U.S. mirrors the discrepancy between the North and the South today.

What language, what words should we use to talk about these matters ? Words are important. For many years the words "development" and "underdevelopment", and "less developed" and the "developing nations" was the terminology by which the South was conceptualized. An alternative was "Third World." There is also "The Fourth World." All of this terminology requires political analysis in order to reveal its

meanings. The notion of "Sustainable Development" may serve us no better. There is a simple descriptive terminology. When we refer to the "South" we are referring to the majority of the population of the planet. So, there is a majority and a minority. Let us think with those terms. Notions of "development" with its tainted conception of national assets have contributed to the environmental crisis we now face.

There are two fundamental health and environmental challenges:

Environmental crisis of twenty percent of the people

The crisis of the minority is environmental degradation arising from affluence and overconsumption of natural resources that cannot be renewed, and the development of throw-away societies that create crises of waste disposal with the associated health issues arising from over-consumption and environmental degradation such as cancer and heart disease. A striking example of the crisis of the North is the recent collapse of the fish catch from the Scandinavian countries to Canada and the U.S. The city of Gloucester, Massachusetts has a crisis of boat-owner bankruptcy because there are no more fish to catch. Iceland is facing similar circumstances. Marine pollution and the wasteful high technology fishing has wiped out a natural food resource.⁶

The environmental crisis of eighty percent of the people, the crisis of the majority, is environmental degradation resulting from development strategies that produce great disparities between the rich and the poor, ecologically unwise use of natural resources and the production of dispossessed people. The poorer nations of the world often have little control over their economy. Sometimes impoverished nations or communities agree to become sites for toxic waste dumps. Dispossessed people around the world move to cities in the hope of jobs or opportunity and

6. David Ehrenfeld, *Beginning Again: People and Nature in the New Millennium*, New York: Oxford University Press (1993) See also Kaufman, Les and Mallory, Kenneth *Last Extinction* Cambridge, Massachusetts: the MIT Press in association with the new England Aquarium (1993).

strain the capacity of urban communities to provide clean water, dispose of sewage or offer health and educational services.

Our most dangerous, most threatening environmental issue is the deep division between the experience and interests of the people of the North and of the South because there are no trends, and few policies or programs that are narrowing the gap between the overconsuming rich nations of the North and the people of the Southern nations of the world.

The solution, if there is a solution to the crisis we face, is not mega-projects of economic development, but "people projects" or grass roots projects that will help specific people in particular places to develop decent sustainable lives. We must find out what that means in the various regions of the world. And, we must help people share their life experience with others who face similar circumstances. Our responsibility and challenge is to work with people-to-people, school-to-school, women's center-to-women's center cooperative projects to make local communities and neighbourhoods livable, clean and healthy and if possible green. The legacy of NGO's with their work in particular communities, provides wise guidance to appropriate development projects.

In many nations the environmental crisis is an urban issue. New York is now, according to recent statistics, the fourteenth largest city in the world and London is the sixteenth. The majority of the great cities of the world are in the South.

The global environmental situation is indeed serious; climate change, ozone depletion, endangered species, the rainforests, the gap between the rich nations and the poor and biodiversity may seem remote, even academic concerns in comparison with the immediate pains of poverty, hunger and infant mortality.

It is an awesome moral challenge to ask of ourselves and each other in our relatively comfortable circumstances, what should be done about children dying, scarce food, polluted air, rivers, lakes and coastal waters? What can we expect of the law and lawyers, of schools and children, of health workers and environmentalists? Any answer is dangerous, perhaps arrogant, and surely partial, because there are no final answers to such fundamental questions.

We can try to be honest about the realities, intelligent about the alternatives, and as wise as it lies within our capacity.

How do we begin?

We should begin with ourselves.

- (1) We must affirm our own personal day-to-day commitment to ecological living, food consumption, and waste disposal that calls upon each one of us personally to acquire knowledge of the ecological consequences of our personal choices in our use of the environment and natural resources. We must begin with our personal life if we are to seek to engage others.
- (2) We must give leadership to the organizations, universities, courts, and health centers in which we work so that they become exemplars of ecological living, environmental responsibility. We must develop ways to demonstrate responsible environmental citizenship in waste disposal, energy utilization and the use of water. Responsible citizenship should be a routine feature of the organizations in which we spend our lives. If the best educated, most well informed people are not exemplary models of the ways of life that will sustain the ecology of the planet, we will have little hope of engaging others in the task of reclaiming our rivers, lakes and sea shores.
- (3) We must make use of telecommunication networks in order to "Network Globally-

-and Act Locally, and to Network Locally-- And Act Globally." Environmentally responsible living in the decades ahead must be grounded in telecommunications networking that clarifies the common fate of rich and poor, and must engage each one of us in the challenge to restore and reclaim the air we breathe, the water we drink, and the ecosystems of which our species is a small part.

It is awesome to acknowledge that we live in a world in which students and teachers, lawyers and environmentalists, health workers and political leaders may communicate directly with one another at a time when global environmental issues make that communication important, and when global economic issues make that communication a life and death matter.

If we are honestly to address the issue of dying children, health and justice, we must have clean hands in our personal and professional life.

Let us think about education, the environment and health. What education is relevant to these issues? Education is more than schools and children.

Education is concerned with learning how to live in our damaged world and learning how to repair the damage.⁷

Education for us all involves the clarification of the connection between the way we live, eat, work, play, use automobiles or bicycles or public transportation today and the consequences of that way of life for generations to come. The method of clarification is to:

- (1) Engage people, children, health workers, lawyers, and environmentalists in community study, conservation and environ-

mental restoration that provides opportunities for people to reclaim their neighborhoods, as their own by becoming water watchers tree huggers, tree planters, air pollution monitors and the guardians of gardens and greenspace.

- (2) Involve people, students, lawyers, teachers, professors in the restoration of their own work places. Consider each school, women's center, health service and all of the students of India and the U.S. as a work-force to restore and preserve the environment.⁸

- (3) Prepare students, lawyers and teachers to be employed in, and to give leadership to resolving local environmental issues, energy conservation, recycling, greenspace preservation, and water conservation.

- (4) Involve students, health workers, social justice lawyers in computer networking with their colleagues in other cities in India and other nations of the world. Computer telecommunications can provide opportunities for people to share experiences, to solicit advice and to make reports on their own activities across a city or across a nation or around the world. In addition, the use of telecommunications provides opportunities, for ordinary people, teachers, children and social justice workers to become literate in the basic means of communications in the world today.

If you think of the overconsuming nations of the North these actions are possible but deeply challenging because they call upon relatively affluent people to re-examine the excess of their every day life. If you think of the people of the South, some of these activities may be challenging because they call upon people to sacrifice their dreams of wealth and opulent living.

Let us think about the law and lawyers, while children are starving at this very

7. Millard Clements, "Technology and Education" in *Great Ideas in American Schooling: The Continuing Quest*, Paul M Robinson, Editor, Kappa Delta Pi, West Lafayette, Indiana (1989).

moment, as the air we breathe is being polluted and whole species are disappearing. The law, courts and lawyers must be involved in the clarification of the connection between social justice, the welfare of children and environmental restoration.

If you are concerned about children, if you care deeply and personally about the 3000 or so children who died of poverty diseases during the course of our "International Conference on Shaping the Future By Law," you must be concerned about the status and condition and fate of women.

Gender discrimination in India and in many other nations is the primary cause of poverty. Gender bias prevents hundreds of millions of women and their children from obtaining education, health services and legal status to escape from poverty.⁹

Poverty, in the majority population will not be diminished, the environment will not be restored when women have little access to productive resources and little control over family income. Women in such circumstances must depend on childbearing for social status and economic security.

Lawyers, among others, must bring the resources of their training and experience to implement laws that affirm the full humanity and human rights of women. Whatever hope we may have for the promise of Agenda 21, the prospects for sustainable development rest ultimately on the capacity to reduce gender bias in law, custom and tradition. It is

the great challenge to the law and lawyers. As that challenge is met, we will improve the health of our children and the communities in which we live. If we fail in that challenge we will continue in our doomsday course of degradation and conflict.

If we can learn from the collapse of the edible fish catch, if we can learn from the diminished ozone layer, we may then learn how to begin to avoid activities that are killing us, activities that:

- (1) require the use of non-renewable resources;
- (2) use renewable resources faster than their rate of renewal;
- (3) cause cumulative degradation of the environment;
- (4) require resources in quantities that could never be available for people everywhere; and
- (5) lead to the extinction of other life forms.

As we learn how to avoid a doomsday course of action, women will have to play a central role. The improved human rights for women in India and in other nations of the South is central to any mission of environmental restoration.

Without the full participation of women, all strategic development plans are, as those of the past, scenarios of disaster.

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9. Carolyn Merchant, *The Death of Nature : Women, Ecology and the Scientific Revolution* : New York : Harper and Row (1980).

