



**ADDRESS to the  
UNITED NATIONS  
CONFERENCE ON THE HUMAN ENVIRONMENT**

BY

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## I. INTRODUCTION

I am pleased to have the opportunity to participate in these deliberations. This conference, and the concern that has brought it into being, are of immense moment. But while the issues before us are serious, they are not beyond solution. Intensified research, precise analysis, and decisive day-to-day action are what they most require.

What they least require are anxious speculation and alarmist accusation.

In my view, what clearly needs to be done is to examine the relationship between two fundamental requirements: the necessity for economic development, and the preservation of the environment.

I would like to comment briefly on that relationship this morning. When I have done so, I would like to outline the steps we are taking in the World Bank to deal with the ramifications of that relationship, and illustrate practical measures which are proving to be both feasible and effective. Finally, I would hope to suggest the general direction all of us in the international development community might most usefully pursue in integrating our mandate to assist in the economic advance of the developing countries with our responsibility to preserve and enhance the environment.

## II. THE STATE OF DEVELOPMENT

One must begin with a candid appraisal of the state of development throughout most of the developing world.

It is—as I have noted recently in another United Nations forum—unacceptable.

It is unacceptable because hundreds of millions of people are living at levels of deprivation that simply cannot be reconciled with any rational definition of human decency.

Throughout the developing nations:

- Hunger and malnutrition are sapping energy, stunting bodies, and slowing minds.
- Illiteracy is locking out learning, and paralyzing opportunity.
- Unemployment is not only robbing men of the minimal means to make their way, but leaving their pride broken and their ambition atrophied.
- Wholly preventable diseases are injuring infants, killing children, and aging adults long before their time.
- In sum, hundreds of millions of individual human lives—with all their inherent potential—are being threatened, narrowed, eroded, shortened, and finally terminated by a pervasive poverty that degrades and destroys all that it touches.

The picture is not exaggerated. Throughout the developing world the estimates are that well over a billion human beings are hungry or malnourished. There are a 100 million more adult illiterates than there were two decades ago. Underemployment and unemployment entrap roughly one out of every five in the labor force. Infant and child mortality is four times greater than it is in the affluent world, and life expectancy is 40% shorter. To alleviate pain and arrest disease, there are in some developing countries fewer than one doctor for every 50,000 people—compared to one per 700 in the United States.

These facts are neither pleasant nor comfortable. But they are facts. They symbolize the lives of three-quarters of the human race.

### **III. THE DILEMMA OF DEVELOPMENT VERSUS GROWTH**

**2** Current development programs are seriously inadequate because they are not significantly reducing the poverty which

shapes and limits these lives. And though the matter is complex, basically we know why.

There are two overriding reasons: the developing countries are not moving decisively enough to reduce the severe social and economic inequities among their own peoples; and the developed countries are not moving decisively enough to reduce the gross imbalance between their own opulence and the penury of the less-privileged nations.

As I pointed out at the United Nations Conference on Trade and Development in Santiago, the broad statistical evidence is clear that there is dangerously skewed distribution of income both within developing nations, and between the collectively affluent and the collectively indigent nations.

I will not recount that evidence here, but I would reemphasize the conclusion: development simply cannot succeed unless that massively distorted distribution of income—both at the national and international levels—is brought into a more just and reasonable balance.

If it is not, the penalties of prolonged injustice are likely to be unavoidable. Restlessness will edge toward rebellion, and reason will give way to violence. Not only would that fail to assure development. It would prove to be catastrophically costly to rich and poor alike.

If development is to succeed, action is required by rich nations and poor nations alike—and that action can only proceed in a climate of growth.

It is here that the complexity of the problem becomes apparent.

For a poor country to operate an economy which distributes income among the people more justly, there manifestly must be economic growth. Without economic growth a poor country can only remain poor. There is little point in trying to redistribute indigence.

But economic growth means manipulating the traditional environment.

As we now know well enough, it is at this point that injury to the environment can take place. If nature is abused beyond limits, its revenge is inevitable.

If poor nations are faced with the problem of growth within acceptable environmental limits, the rich nations are clearly caught up in it even more seriously. We are meeting in this worldwide conference largely because the evidence is now overwhelming that roughly a century of rapid economic expansion has gradually contributed to a cumulatively monstrous assault on the quality of life in the developed countries.

There is no need to chronicle that evidence to this gathering.

But there is a need to ponder the dilemma it poses.

And that dilemma is this: the achievement of a level of life in accord with fundamental human dignity for the world's two and three-quarter billion poor is simply not possible without the continued economic growth of the developing nations, and the developed nations as well.

But economic growth on the pattern of the past—and most particularly that in the already highly industrialized wealthy nations—poses an undeniable threat to the environment and to the health of man.

There is nothing artificial or contrived about the dilemma. It is very real.

Both elements of the dilemma demand the most deliberate attention.

The question is not whether there should be continued economic growth. There must be. Nor is the question whether the impact on the environment must be respected. It has to be. Nor—least of all—is it a question of whether these two considerations are interlocked. They are.

The solution of the dilemma revolves clearly not about whether, but about how.

At its macro level, this dilemma demands a great deal more research than it has yet received. The preparations for this

ference's great value will be the impetus to expand and broaden that research.

Such research is necessary, not merely to provide us with a better understanding of the overall resolution of the dilemma, but to amend in a more scholarly manner the alarmist views of some who are deeply persuaded of the problem, but unaware of the full complexity of its elements. Mathematical modeling is useful. But it is only as useful as the validity of its assumptions and the comprehensiveness of its inputs.

What is needed in this issue—and what has not yet been achieved—is the close cooperation of economists and ecologists, of social and physical scientists, of experienced political leaders and development project specialists. The manifest danger in the solution of this dilemma at the macro level is to oversimplify.

When that oversimplification suggests the imminent risk of overloading the planet's life-support systems, or exhausting its essential resources, the developing peoples of the world are suddenly faced with a fearsome prospect. On top of all their present disadvantages, are they now going to be asked to forego their efforts at development in the name of preserving the already disproportionate (and still rising) patterns of consumption of the rich?

The poor are right to be indignant over such a prospect.

But in my view that issue need never arise.

It need never arise because there is no evidence that the economic growth—which the developing countries so desperately require—will necessarily involve an unacceptable burden either on their own or on anybody else's environment.

#### **IV. THE WORLD BANK AND ENVIRONMENTAL CONCERN**

Let me illustrate this view by a brief account of what we in the World Bank are doing to deal with the environmental issue in our day-to-day operations.

In 1970, we established the post of Environmental Advisor with a strong mandate to review and evaluate every investment project from the standpoint of its potential effects on the environment.

Our subsequent experience has been that the most careful review of environmental issues need not handicap our fundamental task to get on with the progress of development. On the contrary, it can enhance and accelerate that progress.

In cooperation with other development agencies, we have designed a careful set of guidelines, and have built into our whole economic assistance strategy a feasible method for correlating ecological protection with effective and cost-conscious development.

What we have discovered is significant.

By careful analysis, we have found, in every instance to date, that we can reduce the danger of environmental hazards either at no cost to the project, or at a cost so moderate that the borrower has been fully agreeable to accepting the necessary safeguards.

Central to the success of this approach is the principle that in the issue of environmental damage, prevention is infinitely to be preferred to cure. Not only is it more effective, but it is clearly less expensive.

Responsible officials in the developing countries are aware of this. We in the Bank have found no evidence that they are unresponsive to what can be demonstrated to be a serious ecological hazard or a threat to health and social well-being. It is unfair to suggest that the poor countries are indifferent to the environmental issue, and simply dismiss it out of hand as a rich nation's problem. They do not.

What they are concerned about, and justly so, is that some of the rich—under the influence of doomsday alarmism—may be tempted to impose unilateral and unreasonable roadblocks on the poor countries' desperate need to develop.

The poor nations, after all, have no desire to see their own environment contaminated or wantonly abused. But they also have no desire to remain caught in the permanent contamination of poverty.

Our experience is that environmental protection can be built into development projects as competently and successfully as any other requisite element. Our project officers are

thoroughly briefed in our environmental criteria, and in their early discussions with potential borrowers draw these considerations to their attention. Far from being resented, the considerations are welcomed.

Each project processed in the Bank is now reviewed by the Environmental Office, and a careful in-house study is made of the ecological components. If the project warrants it, an on-site "ecological reconnaissance" study is commissioned by the Bank with the use of qualified consultants. If more serious problems are uncovered, a still more intensive on-site evaluation is undertaken in order to determine what specialized solutions should be incorporated into the project's specifications.

While in principle the Bank could refuse a loan on environmental grounds—in a situation, for example, in which the problems are of such severity that adequate safeguards cannot be applied, or in which the borrower is wholly unwilling to take reasonable measures in his own interest—the fact is that no such case has yet arisen. Since initiating our environmental review, we have found that in every instance the recommended safeguards can and have been successfully negotiated and implemented.

We have been careful to include in our environmental guidelines not merely physical and health-related factors, but cultural considerations as well. We are concerned in the Bank that a development project does not adversely affect the indigenous culture that the country wishes to preserve.

When a project may require the relocation of people, we assure that plans are adequate for their successful resettlement, and that injurious disruptions of their socio-economic opportunities are avoided.

Health factors are, of course, often involved in environmental considerations. In those instances where a development project may threaten to create a new or intensify an existing disease problem, the Bank incorporates in the loan agreement appropriate arrangements for the requisite preventative health-care measures.

Nor does the Bank limit its operations simply to the environmental side effects of development projects. It finances many

projects that are directed specifically at environmental goals—urban water supply and sewage treatment, for example, as well as soil erosion control, and water resources management.

The fact is that the environmental criteria we have established in the Bank encompass the entire spectrum of development. They consist of a comprehensive checklist of questions designed to insure that foreseeable and injurious environmental consequences are carefully considered from the initial concept of a project, through its design stage, its actual construction, and into its ongoing operations.

The range of the checklist includes sectors as diverse as textiles and tourism, power stations and paper plants, steel-making and irrigation systems, fertilizer factories and harbor facilities—and many, many more.

Sample questions in some of these sectors illustrate their scope:

- **Irrigation Systems:** Will the changes in water patterns introduce disease-bearing organisms into previously unaffected areas? Will runoff water contain residues—such as pesticides and fertilizers—that contaminate downstream waters? Will there be sedimentation and erosion problems? What will be the ecological consequences of changes in land patterns and population distribution?
- **Ports and Harbor Development:** Will topographical changes adversely affect marine life? How will wave and current action be modified? Will ships create unhealthy air pollution from stacks in view of prevailing winds? Will the development create waterfront slum areas?
- **Fertilizer Plants:** What types and quantities of gaseous, liquid, and solid effluents will be discharged into the air, soil and water? Will nitrogen and phosphorous entering surface water bodies stimulate the growth of algae and aquatic weeds? How will raw materials be handled and stored?
- **Petrochemical Complexes:** Have hydrologic, geologic, seismologic, and meteorologic studies of the site been made to anticipate and minimize damage to human

populations and the environment if accidents occur? Will effluents contain toxic materials? How will they be controlled? What are the dangers of oil or chemical spills? What clean-up contingency plans are available?

- **Highway Construction:** Do plans include provisions for preventing unnecessary despoilment of the landscape and vegetation during construction? Will top soil be stored for respreading? Can temporary drainage systems, barriers, and sedimentation basins be used to prevent eroding materials from reaching waterways? Have provisions been made for adequate living conditions for people displaced by construction activities or for those attracted to newly-opened areas?

These are merely examples of the kinds of issues raised. The full checklist is far more comprehensive, and it provides borrowers with precisely the questions they themselves should analyze in their planning for pragmatic environmental protection.

The projects which pass for review through our Environmental Office include every major region of the developing world.

- In its funding of the expansion of a steel plant in Turkey, on the Black Sea, the Bank cooperated with the borrower in building into the specifications—as a result of thorough on-site study—provisions to control within acceptable levels the flow of liquid wastes into the sea, and gaseous effluents into the air. Originally no such controls had been contemplated. The study convinced the borrower that this would result in unacceptable damage to both off-shore waters and the surrounding terrain, and the recommended pollution-control technology was adopted. The cost for providing this important protection for the environment, as well as for the health of the local population, was only 2% of the overall project costs.
- In the Yagoua district of Cameroon, the rice farmers are poor. The Bank's estimate was that their cash income could increase five-fold in a decade if only irrigation facilities could be improved. But a serious environmental

hazard had to be reckoned with: bilharzia. This water-borne disease is carried by the Bulinas snail, and is endemic to the area. Though the proposed irrigation network would serve 3000 hectares of land and 2800 farm families, it was feared that the project might significantly increase the incidence of illness. To assess the problem, the Bank sent a highly qualified expert in the control of the snail vector to Cameroon. After on-site research, his report recommended changes in the engineering design of the canals, provisions for periodic surveys of the snail population, and appropriate molluscicide application as required. The borrower welcomed these recommendations, adopted them, and during the loan negotiations further agreed that public health officials would carefully monitor the region. Thus, an urgent development project was protected from potential ecological risk by inexpensive and practical preventative measures.

- In its financing of a marine terminal at Sepetiba Bay in Brazil—as part of an iron ore mining project near Belo Horizonte, and its attendant rail transportation to the sea—the Bank commissioned an ecological team to study in depth what was required to keep this unspoiled estuary free from pollution. The bay supported an important fishing industry, and possessed tourist and recreational potential. The Bank's team included a marine biologist, a shellfish expert, and an oceanographer. Their recommendations have been built into the loan agreement, and provide for protection against ore and oil carriers flushing their huge holds in the bay, contingency equipment for accidental oil spills, solid waste handling and terminal sewage treatment facilities, and landscaping to preserve the aesthetic values of the area. All of these measures—which will insure that the fishing industry can survive and the bay remain a tourist and recreational attraction—represent less than 3% of the total project cost.

These case histories could be multiplied. But what is common to them all is that they illustrate a critical truth: valid environmental considerations need not deny the advance in economic development the less-privileged countries so gravely require.

## V. WHAT MUST BE DONE

How then can the international community—rich and poor nations alike—best proceed?

It is clear that in environmental matters the developing countries enjoy one of the very few advantages of being late-comers in the development process: they are in a position to avoid some of the more costly and needless mistakes the developed countries made in the past.

Now what does that imply?

To begin with, what it does not imply is that late-comers to the development process must forego industrialization and technological advance.

That would simply mean stagnation. It is easy enough for the wealthy to romanticize about the supposed charm of pre-technological society. But the plain fact is that there was nothing pretty at all about the squalid poverty which the common man—in what are now the affluent nations—had to endure in the pre-technological period. For the vast majority it was a life of destitution and disease. No one wants to go back to that.

Anyone in doubt has only to examine poverty in the developing countries today. The deprivation is appalling by any acceptable standards of human decency.

It is not surprising, then, that those who call for a slowing down or a complete halt to economic growth tend to be those who are already amply provided with the advantages which that very growth has made possible.

What I mean by the environmental advantage of the late-comers to the development process is that they can far more easily and inexpensively build into their industrial infrastructure the practical preventative measures necessary to avoid the ecological damage the developed world has already suffered.

Our experience in the Bank confirms this. There is an increasingly broad variety of anti-pollution technologies available to the poorer countries—technologies the affluent countries have had to develop at a far later and more difficult stage of their industrial expansion.

Those technologies can work, and work well.

The air over London, for example, is substantially cleaner today than it was 15 years ago. There has been an 80% reduction in smoke emission, a 40% reduction in sulphur dioxide, and a consequent near doubling in the average hours of winter sunshine. It is estimated that this dramatic improvement—largely the result of the enlightened Clean Air Act of 1956—has cost Londoners only about 35 cents per annum. What it has saved them in discomfort and illness is beyond calculation, but one need only recall the disastrous and fatal smog of 1952—a smog that killed an estimated 4000 people—to reflect on the importance of the improvement.

There has been a corresponding improvement in the environmental conditions of many of the rivers in Britain through intensified sewage management. Ten years ago there were no fish at all in the Thames in a 30-mile stretch above and below the city of London. Three years ago more than 40 species were observed.

As the affluent nations continue to take their environmental problems more seriously, they are going to discover a whole new range of technology to abate and avoid ecological dangers. The less-privileged countries can adapt these technical advances to their own local conditions.

The danger that we will fail to achieve our twin objectives of advancing the development of the less-privileged nations while preserving the environment stems not from technological weaknesses but from potential failures of political will and social responsibility.

Ecological considerations have made us all more aware of the interdependencies of our world. We have come to see our planet as "spaceship earth." But what we must not forget is that one-quarter of the passengers on that ship have luxurious first-class accommodations and the remaining three-quarters are traveling in steerage. That does not make for a happy ship—in space or anywhere else. All the less so when the steerage passengers realize that there are at hand the means to make the accommodations more reasonable for everyone.

Have we the political and social awareness to give more attention to the present living conditions of the overwhelming

majority of the travelers? It means, in practice, making available more development assistance, and removing inequitable trade, tariff, and other discriminatory barriers. Those barriers are blocking the mutual benefits that can flow from application of the principle of comparative advantage. Justice and intelligent self-interest both suggest that it is wiser to open a vital bulkhead on increased opportunity than to keep it senselessly sealed in the name of some narrow and parochial protectionism.

There should be no question about whether the wealthy countries can afford to combine rising domestic environmental protection costs with increased development assistance for the developing countries.

It is clear that they can.

The continued growth of their gross national product will provide them by the end of the decade with an additional one thousand billion dollars per annum.

The suggestion that the rich countries cannot spare for the poor countries the miniscule percentage of that incremental income necessary to raise concessionary aid from its present level of .35% of GNP to the United Nations target of .7% is simply beyond credence.

The wealthy nations may not in fact meet that target. And they may delay dismantling the discriminatory barriers to a more just and mutually advantageous flow of trade. But if the rich do refuse greater trade and aid to the poor, it will have nothing to do with a disinterested and universal reverence for the environment. It will be because of a provincial response to the pressures of special interests.

What, then, must be done to reconcile our mandate to assist in the economic advance of the developing countries with our responsibility to preserve and enhance the environment?

In my view there are five essential requirements. We must:

- Recognize that economic growth in the developing countries is essential if they are to deal with their human problems.

- Act on the evidence that such growth, if properly planned, need not cause unacceptable ecological penalties.
- Assist the developing countries in their choice of a pattern of growth which will yield a combination of high economic gain with low environmental risk.
- Provide the external support required for that economic advance by moving more rapidly toward meeting the United Nations concessionary aid target of .7% of GNP, and by dismantling and discarding inequitable trade barriers which restrict exports from poorer countries.
- And, above all, realize that human degradation is the most dangerous pollutant there is.

In the end, it is respect for man—and his home—that has brought us to this conference.

When we leave, let us go with the conviction that that respect can and must be translated into practical action. The leading edge of that action must be to protect man from the one hazard which can injure not only his habitat and his health—but his spirit as well. Poverty. Cruel, senseless, curable poverty.

Our task is not to create an idyllic environment peopled by the poor.

Our task is to create a decent environment peopled by the proud.

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7

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