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**HEALTH AND ENVIRONMENT IN SUSTAINABLE HUMAN
DEVELOPMENT: A GLOBAL PERSPECTIVE
(Trinidad and Tobago) ****

I must thank the Caribbean Water and Waste Water Association for the invitation to address this Ninth Annual Conference, and also the staff of the Division of Environmental Health of the Pan American Health Organization who supplied me with many of the details of the environmental health situation in the Caribbean and the Americas. Let me begin by telling you how I came to know of the Association and the efforts it is making to stimulate not only debate but action in fields related to the environment in the Caribbean.

Much of the respect I have for your Association is derived from the appreciation I have for one of your founders and the person with whom I link you automatically. That person is Ron Williams, whom I have known for almost as long as I have been a staff member of the Pan American Health Organization. He has been trying for years to have me attend one of your meetings, partly because he and I have shared many discussions and debates about the critical importance of the environment in the Caribbean setting, and the possibility that the close relationship between health and the environment is made even more relevant in small island states like ours that have decided that their economic development depends in large part on several aspects of the physical environment. So it is good to be here and to see him here. Let me hasten to point out that my reference to Ron Williams does not in any way indicate any lack of appreciation of other founders and stalwarts of the Association, such as Leo Lawson and Raymond Reid who have brought it to its current, and I hope, healthy state.

I never cease to quote Dubois' famous dictum that we should think globally and act locally. So I will begin, as the title of this address indicates, by dealing with some of the global aspects of the problems or issues, but will also try to relate these considerations to the Caribbean situation. When Ron worked for PAHO, he and I often discussed the meaning or the concept of sustainable development and later sustainable human development. The view that was popular in the late eighties and promoted by the Brundtland report, was that sustainable development referred specifically to the preservation of the physical environment such that future generations would not be compromised in terms of meeting their own needs. I always found that thinking

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rather limiting, partly because there is such variation in personal needs, and in addition, I could not see development only in terms of changes in the physical environment. I also became disenchanted with the view that almost seemed to propose that the environment should remain in its pristine state and any interference was an insult that could never really be repaired. The preservation of the environment in all aspects seemed to be an end in itself.

I too had read Rachel Carson's "Silent Spring," and, of course, like many others, deprecated the approach that saw humankind as dominating nature as our right, although I did not go as far as the eco-feminists who regarded the despoilation of the earth as yet another manifestation of male domination. I have sometimes had sympathy for this view when I note that the earth in almost all cultures and languages is represented as being feminine, and human contamination and wanton destruction to the extent of environmental rape may be derived from the assumed right of males to exercise control over the female.

But let us leave these rather extreme views. I became much more attracted to the concept of human development which, as I have said here often, relates to the ability of human beings to realize their potential—their options. Sustainable human development then meant that there must be the possibility that all persons could have the opportunity to realize these life options in the future. It is part of our responsibility to ensure that the stocks of the various forms of capital are replenished such that there can be opportunities for future generations to enjoy the options we currently do.

For the purposes of this presentation, I will focus predominantly on the relationship between health and the environment as two important components of the human development we wish to see and indeed enjoy. Of course, the most important event that dealt with these issues in recent times was the Rio Conference which not only shone the international spotlight on the environment, but marked the rise of civil society action in spheres that were previously thought to be the peculiar province of governments. I will refer again to this role of civil society in relation to your own Association. I am always pleased to note that the major focus of the Rio conference and its Agenda 21 was on the wellbeing of mankind and of relevance to our own work, the central importance of health.

There have been several evaluations of progress since Rio, and I will not describe here the various arrangements, such as the Global Environmental Facility that have been established to address some of the major problems that were identified. We continue to be concerned with the persistence and intensification of some of the forces that still affect the environment negatively and have adverse consequences for health. Population growth and movement still continue, and while no one accepts the apocalyptic Malthusian view, the growth of populations, especially in those countries least able to afford to sustain them, must be a source of global concern. The changing demographic profile that accompanies the increasing life expectancy and falling fertility rate will have more implications for health than for the connection between health and the environment.

The phenomenon of population movement will have much more impact on health. Movement of people is nothing new, and history tells us of the wandering of nomadic tribes and the mass migration of persons, willingly or unwillingly, for many different reasons. What is new

is the scale of movement of persons who have been displaced as a result of man-made or natural disasters. Whereas in 1985, the number of refugees and displaced persons in the world was estimated to be some 10.7 million, by 1995 this figure had swollen to 27.1 million with 11.8 million of these in Africa. Luckily we have been spared that problem in the Americas as a whole and the Caribbean, partly for obvious reasons of geography, and also because of relative political stability has not experienced this tragedy. Thus, we can only imagine the environmental destruction that occurs when large numbers of persons accumulate and overwhelm the carrying capacity of the location in which they settle. The overcrowding and disease outbreaks that occur in refugee camps frequently stretch the response capacity of countries and agencies. The health and nutritional problems that occur as a result of the recurring droughts in Sub-Saharan Africa continue to shock us who have no personal experience of such tragedies.

The issue that is foremost in the world today that has consequences for health and the environment is that of poverty. All agencies and all governments-the rich and the poor alike, are concerned with poverty. Poverty is associated with environmental degradation, and it is often futile to discuss which has primacy in terms of causation. Everyone has heard the figure of over a billion persons in the world having less than one dollar per day for their existence, and it is obvious that in such circumstances there is not the minimum to sustain health, and concern for environmental protection will not rank high among the issues that preoccupy the benighted billion. We have tended to focus primarily on economic poverty and analyses from the Americas show that we have, apparently, stemmed the increase in poverty that marked the decade of the eighties and the beginning of the nineties. The Caribbean has not been free of this scourge and all our governments recognize the need to address poverty in all their planning.

One interesting development in the debate on poverty is the call for us not to restrict our considerations of poverty to lack of money. The recent "World Development Report," which is the third in the World Bank's major publications on poverty, makes that point very forcibly. Poverty is seen in terms of deprivation of the various capabilities that make us function. Thus, poverty should be analyzed in relation to the absence of all the components of human development, including health, education, a safe environment, and, of course, economic capability. Obviously these are all linked, and it will be unlikely that people will lack one and not the others. The essential point is that in consideration of poverty alleviation, attention has to be given not only to the increase of money each person or family has to spend, as the human development will not be sustainable unless there is increased capability in other spheres, such as improvement of the environment, health, and education.

It has become apparent, however, that it is not only income poverty that should concern us, but it is inequality as well. It is now well established that our region of the Americas is marked by inequality, and the differences between those who have and those who have not is nothing foreign to us in the Caribbean. These manifestations of inequality are not confined to external manifestations of opulence, they are seen in the environment in which people live. It has become clear from studies that have been carried out in other countries of the Americas that the poor are doubly disadvantaged in access to such goods as water. The rich pay proportionately less than do the poor for water and sanitation services. I am not aware of similar studies here.

One of the current debates about inequality is the extent to which it is being accentuated by the inexorable trend towards globalization. This much abused word has many connotations, but it is widely accepted that the ease of communicating data, as well as the growing interaction and interdependence in the economic sphere, are leading to a widening of the divide between the rich and the poor within countries as well as between rich and poor countries. This widening divide, to the extent that it leads to more people living in poverty, will have a negative impact on the environment.

The last of these forces I will mention here that impact on the environment globally is the trend towards urbanization. We see it starkly in the Americas where megacities such as Mexico and Sao Paulo beggar anything that we dreamt about 50 years ago. But the phenomenon is present here as well. Cities like Kingston and Port-of-Spain continue to grow and accommodate most of the national population increase that occurs. Theoretically, urbanization should facilitate the provision of services, as the problem of dispersion that is seen in rural areas disappears. The logistics of providing services should be much easier. But the truth is that in all cities, great and small, the growth of population is outstripping the capacity of existing services, and authorities have not been able to plan and program the expansions necessary. We see the problem in all aspects of environmental services; the provision of water and, most graphically, in the accumulation of solid waste. In small islands such as those of the Caribbean, the process of urbanization does not only mean the physical migration of persons to the city, but also the extension of forms of urban living to the whole island. It is difficult to call any part of Barbados or New Providence really rural.

I have not addressed such issues as the impact of various forms of economic development on health and the environment or the atmospheric pollution caused by a whole range of varying human actions. The consumption of fossil fuels, for example, must affect the quality of the environment in both the short and long terms. Forms of transportation are crucial. It is estimated that the world's motor vehicle fleet increased from just over 400 million in 1980 to 650 million in 1995. I have also not dealt with the possible effect on health of the loss of biodiversity. The progressive loss of many plant species is probably depriving us of treatments for many of the illnesses we currently suffer.

There has never been any doubt that the physical environment affects human health. This has been known from time immemorial. The quality of the air we breathe, the water we drink, the physical surroundings in which we live, the food we eat, all have an impact on the state of our health. There is no doubt that the high levels of infant mortality in many developing countries, for example, bear direct relationship to the availability of clean water. Even in developed countries there is proper concern about the impact of micro and macro environmental conditions on human health. Naturally there are some differences of focus. In most of the developing world, for example, the greater emphasis is on availability of clean water and the use of adequate amounts of chlorine to ensure destruction of microbial agents. But we find, for example in the U.S. considerable debate on the permissible levels in water of the break down products of chlorine which, in themselves, may theoretically constitute health risks. Let me emphasize here that for most of our countries the health risks from break down products of chlorine are far less than those derived from inadequate chlorination as a method of disinfection.

However, the question is never asked as to whether or how there is any demonstrable impact of health on the environment. We take for granted the forward causality of the environment–health relationship, and rarely, if ever, examine whether the health of individuals or of groups affects any aspect of the environment. There are numerous studies on the interrelationship of other components of human development. For example, we are producing more and more data on the bi-directional relationships that exist between health and education and between health and economic growth, but not between health and one or other aspects of the environment. The standard approach is to indicate that ill health, poverty, and poor educational attainment are all bound together so strongly that it is impossible to tease out the impact of health on the environment. It would seem that this is a field ripe for detailed study.

The Rio declaration is of general interest to us all, but Agenda 21 is the part that has most relevance for our work. In response to the issues addressed in Agenda 21, the Pan American Health Organization organized the Pan American Conference on Health and Environment in Sustainable Human Development five years ago. This was the first inter-ministerial conference of its kind that I can recall and it produced the Pan American Charter as a guideline for future action in the Americas. It identified some common priorities for action and first among them was the resolve to strengthen national and local strategies in the field. Much of the technical cooperation of our own Organization has indeed been directed towards these local national plans, and especially in advocating for a more positive role of ministries of health in environmental matters. There has been a tendency to have environmental matters dealt with in ministries of the environment which, in many cases, are not alive to the human health dimension of environmental protection, even though everyone acknowledges what was stated unequivocally in Rio—that human concerns had to be at the center of our interest in the environment. The Charter was in some sense innovative in that it outlined various shared responsibilities, emphasizing that all of us, individually or in groups, have some responsibility for protection of the environment, and it was too important a matter to be left to governments alone.

As I indicated before, the Caribbean region should be particularly sensitive to environmental issues and I can attest to the enthusiasm of the ministers of health for environmental protection especially as it concerns health. The original Caribbean Cooperation in Health (CCH) initiative included the environment as one of the main areas for action and resource mobilization. In Phase 2 of the (CCH) initiative, which was entitled “A New Vision for Caribbean Health,” environmental health has been retained as one of the priority areas. As you are all aware, I am sure, the CCH2 is seen as a mechanism through which Caribbean states can direct action and resources to some critical health problems in a collective manner. The emphasis, as always, is on collective action. The subpriority areas included under environmental health are: vector control; liquid waste and excreta disposal; solid waste management; water quality; and workers’ health.

The emphasis on environmental health is a reflection of continuing interest and the desire to improve, as in many ways the Caribbean countries are well placed in terms of the indicators of environmental health. Our data show that between 1980 and 1998 the Caribbean increased drinking water coverage from 51 to 90 percent, with sewerage and excreta disposal increasing from 35 to 87 percent. Most of the major urban centers are served by systems of solid waste collection. Littering is noticeably less and every country or city is making major efforts to keep

streets clean. Unfortunately, the gains made in water supply are not matched by similar improvement in water quality. We estimate that only 65% of municipal pipe —born water meets international standards for safety. Many of the community water supply systems are not equipped with adequate disinfection systems that are monitored and evaluated regularly. I have been told that in some communities there is resistance to chlorination because of the taste of residual chlorine. Obviously, there is a lot to be done in terms of health education and getting communities to accept some of the responsibility for environmental health as was set out so well in the Pan American charter to which I referred.

There have been sustained efforts to raise the quality of drinking water and at a workshop held here recently on “The Fundamentals of Safe Drinking Water,” participants agreed on three steps that are essential if there is going to be sustained improvement. There should be national consultations on drinking water quality and countries should agree to adopt the World Health Organization Drinking Water Quality Guidelines. In addition, there is urgent need for a revision of the legislation on drinking water quality. I would add efforts at community participation.

The cleanliness of the environment is of critical importance to islands that depend on tourism for the major part of their income, and much of the effort we have made over the years to have the health -tourism linkage enter the policy dialogue here in the Caribbean has been based on the importance of environmental health. There is the obvious beauty of the physical environment as a selling point for attracting visitors, but of equal importance, are clean water and sanitation, as well as workers’ health. Diarrhea is feared by visitors, and it is the malady that perhaps does most to give tourist destinations a bad reputation. But we must be concerned not only with the attractiveness of the environment to tourists, but also with the impact of tourism on the environment which is to be enjoyed as much by the local population. Thus, education of tourists is almost as important as the education of locals in terms of environmental protection. The relationship of tourism to environmental health is a complex one and goes from the simple provision of safe water to the supervision of the development of sewerage treatment plants by hotels, and the permission to build along areas that may irreparably destroy the ecology. The balance of all these factors is of constant concern to governments.

Before I address the role I see for your Association in these areas, I wish to deal briefly with one aspect of the environment that is linked very closely to human development, but is frequently forgotten. I refer to disasters. There was a time when the consequences of natural hazards were regarded as inevitable and to be borne with fortitude. We know differently now, and understand that adequate preparation can do much to reduce the impact of these natural hazards when they occur, as indeed they will. The disaster is often the result of lack of proper preparedness to deal with the natural hazard. The major impact of the disasters to which this region is prone is on the environment, and one of the constant concerns post-disaster, is whether the environmental damage will result in ill health. The interruption of water supplies, the fracture of sewerage systems, and the accumulation of waste that results from the disaster, all represent health hazards. It is not surprising to me that the professionals who perhaps have been most involved in collaborating with the specialists in this field in PAHO, are environmental health experts. They realize that, with respect to disasters, there is a continuum of preparation, prevention relief mitigation, and development, and environmental concerns figure prominently at all stages.

Now let me be rash and give an opinion about the future of civic organizations like yours that have the environment as their major focus. We saw NGO's playing major roles in the Rio conference and that has been repeated in every international conference since then. We have seen what may appear to some as uncoordinated protests at several major conferences. This may blind us to the vital role that theme-specific NGO's can play at the national level. You have the benefit of having an association that is dedicated to one theme in one geographic area. There is a tremendous amount of expertise in your membership. You can be a major voice in national and Caribbean fora in which environmental matters are discussed. But you will not be called to the table automatically. You will have to advocate for the place, and by the quality of your participation make it obvious that you have a right to be there.

You can be a force for change. Good associations, especially professional ones, exist and flourish not only because their members derive personal pleasure from interaction among themselves, important though that may be. They prosper when they contribute, through being a group to some cause that transcends the individual interest. As an example, you participated in the workshop on "Fundamentals of Safe Drinking Water" and I would ask, if as a group or as national chapters, you have done anything to publicize the recommendations. Or have you organized mini or macro national consultations on the issue? I am sure that almost every one of you knows the WHO Guidelines well, and I would ask if as a group you have analyzed their local application and publicized them. How many articles have appeared in the press over your name calling attention to the issue, not in the sense of criticizing governments for things not done but informing the public about what should be done? I am sure that there is enough capacity in your Association to address the health education necessary with relation to chlorination of water supplies.

I would ask about the assistance you have given to CEHI. When I hear ministers discussing the future of this Institute that should be playing a major role in environmental matters in the Caribbean, I do not hear any ringing endorsement from your Association. I hope I can persuade you to take a more active interest in what that institution does and consider the extent to which your voice can help to ensure that it is on the right track and is supported by the Caribbean governments.

But there is another matter that has intrigued me over the years, and that relates to your name. I may be treading on delicate ground when I ask why you limit your concern for the environment to matters of water and waste-water. I acknowledge the fundamental importance of these topics especially here, but have your concerns not grown over the years? I am assuming a positive response based on the fact that you are now affiliated with AIDIS.

I hope you do not take these comments badly, and I am sure that you have answers to all of my queries now or they will be developed during the course of your Conference. I make them because I know many of you and have confidence in the talent that is here, and also the fact that you have existed and grown over the past ten years augurs well for your continuation and your capacity to make a difference. I also know that, although we share the concerns about the global perspectives, there is more urgency about the need to try to have optimal environmental conditions in this part of the world as a fundamental element of sustainable human development.

I wish you every success in the Conference.

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