

## Comments by the Panel Moderator

**Thakoor Persaud**

*Senior Housing Specialist*

*Latin America and the Caribbean Technical Department*

*The World Bank*

We have heard various presentations on the specific aspects of how countries are attempting to prevent and mitigate natural disasters. Before we conclude this session, I would like to make a few observations about some of the points made earlier and how they tie in to what is occurring at the country level.

We heard presentations today telling us that ample documentation exists to describe the extent of damage and suffering caused by natural disasters. The cost-benefit analysis indicates that it is logical for a country to jump at the opportunity to invest and take the preventive and mitigative efforts for dealing with disasters. The question then becomes, why are countries not investing in disaster mitigation? There are many interpretations of the answer. I think one of things we should look at is, perhaps, one key element which causes a country's policy makers to interpret the situation differently; namely, policy makers have a different time horizon compared to the general long-term planner. If you look at individual countries, policy makers at most may be in office about six years if a disaster occurs just at the beginning of

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their term, or more likely of a shorter duration if the disaster strikes later. The priority for the policy maker is basically different - disasters are more of a long-term phenomenon for them. From the policy makers' point of view, because of randomness in location and frequency of disasters, it does not make sense to react the way we expect them to, especially when they have more immediate priorities and they can count upon external assistance if and when a disaster does occur.

Consequently, if we look at the way resources have to be allocated and the planning system has to prepare and accommodate to risk, then decision makers

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**Thakoor Persaud** is a Senior Housing Specialist in the Latin America and Caribbean Technical Department. He joined the Bank in 1976 after receiving a Ph.D. in economics from Texas Tech University, and he worked on projects in Africa and Asia before moving to the Latin American region. He has been involved in Bank reconstruction operations in Guatemala, Ecuador, El Salvador, and Jamaica. Mr. Persaud recently prepared a data base and reference-source orientation material to assist regional staff working in emergency lending operations. He is a member of the Bank's Task Force on Natural Disaster Reduction.

customarily do not see much sense in tying up substantial resources to deal with a big and unpredictable event. To some extent, this phenomenon occurs even in countries where the frequency and occurrence of a hazard is known. Let me digress a bit in this case because I have a good illustration to draw upon.

In many countries today, issues involving the maintenance of facilities are of paramount importance. We know that if a planner is designing a road with a set of technical specifications, there are various factors that can be predicted, for example, how long the road will last under normal conditions with proper maintenance. With these predictions and documentation of factors contributing to a road's longevity, it is still difficult to convince a policy maker that maintenance is important, even if the cost-benefit results are quite obvious. Then, superimpose upon this situation the fact that policy makers have many competing demands where they are usually firefighting rather than making plans, and that the overhanging debt crisis creates tight budgets in an environment of uneasiness and restlessness among the population. With these additional considerations, you find that people begin to look more on a day-to-day planning horizon compared to the long-term perspective in which we are deliberating.

So unless we take these factors into account when making suggestions to policy makers, we are going to have a tough time of getting our recommendations accepted. And unfortunately, one of the contradictions we encounter occurs when a country is most receptive to our recommendations, in the aftermath of a disaster, is the time it cannot take many of the recommended actions. Let me explain. A country experiences a disaster. Everyone bemoans it and says, "This disaster should never happen again. We should take all necessary precautions to

prevent future occurrences." At that time, however, all resources have to be diverted toward getting things going again. The emergency is immediate - relief needs to be administered. The victims are struggling just to put their lives back together. At this frantic time, instead of thinking about relocating people away from hazardous areas, the government and relief community is trying to provide shelter to the homeless with the implicit or explicit understanding that it is a temporary move and that these victims will return to normal shelter in safer zones at some later time.

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Then, the development community embarks on a long-term study to see what needs to be done. Most of the donor agencies agree to assist in reconstruction activities with adequate prevention and mitigation measures. But as you drift away from the disaster, what happens? The window of opportunity begins to close. People look at the zinc sheet on their roofs and they say, "Well, it lasted four weeks, it will last another four." Priorities begin to change again. The government claims that there are other urgent demands. Shortages of food and petroleum compel policy makers to divert resources to the provision of these necessities.

In essence, the complications encountered dictate the actions taken. And even if we get to a point where good recommendations made by a well-equipped team are available, the recommendations are usually just applicable to the formal sector. In the case of housing, often we are addressing about twenty percent of the population. The informal sector will continue to comprise a significant proportion of the population. The impact of well-designed recommendations will thus still ignore a large share of the population unless special efforts are made to reach this level.

Look at the other part of disaster prevention, retrofitting. As a development planner, you come up with items to be purchased and steps to be taken to reinforce a hospital, school, or health center. At the same time, the minister of health tells you that there is a long waiting list for new hospitals in the country. The hospital is in demand. How do you set your priorities?

I hope I am not giving a gloomy picture of what is happening and what can be done. We need to look at the situation realistically because it helps us to understand the thinking processes behind many of the actions taken and we can therefore plan our responses accordingly. It would be nice to be able to legislate or put conditions in our loans mandating a country to take steps to mitigate future disasters, but unfortunately, I do not think this method would be successful. In some countries, we have had success in setting realistic mitigation and prevention goals and dividing these into specific discrete steps with measurable achievement targets to show progress and keep interest in the operation alive. This also means that we have to set goals which are in line with the government's term, emphasizing shorter-life tasks for administrations in the mid-term and longer tasks for newer

administrations. In order to reach the informal sector, we have to seek the aid of NGOs and other locally-based institutions (churches, cooperatives, etc.), which have access to the informal sector and are highly regarded by the people. Seconding of experienced staff for specific tasks can also help overcome inertia and bureaucratic impediments.

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*"We have to be aware of the concerns of various participants and identify the zone of coincidence of interest among policy makers, international and regional entities, citizens and NGOs."*

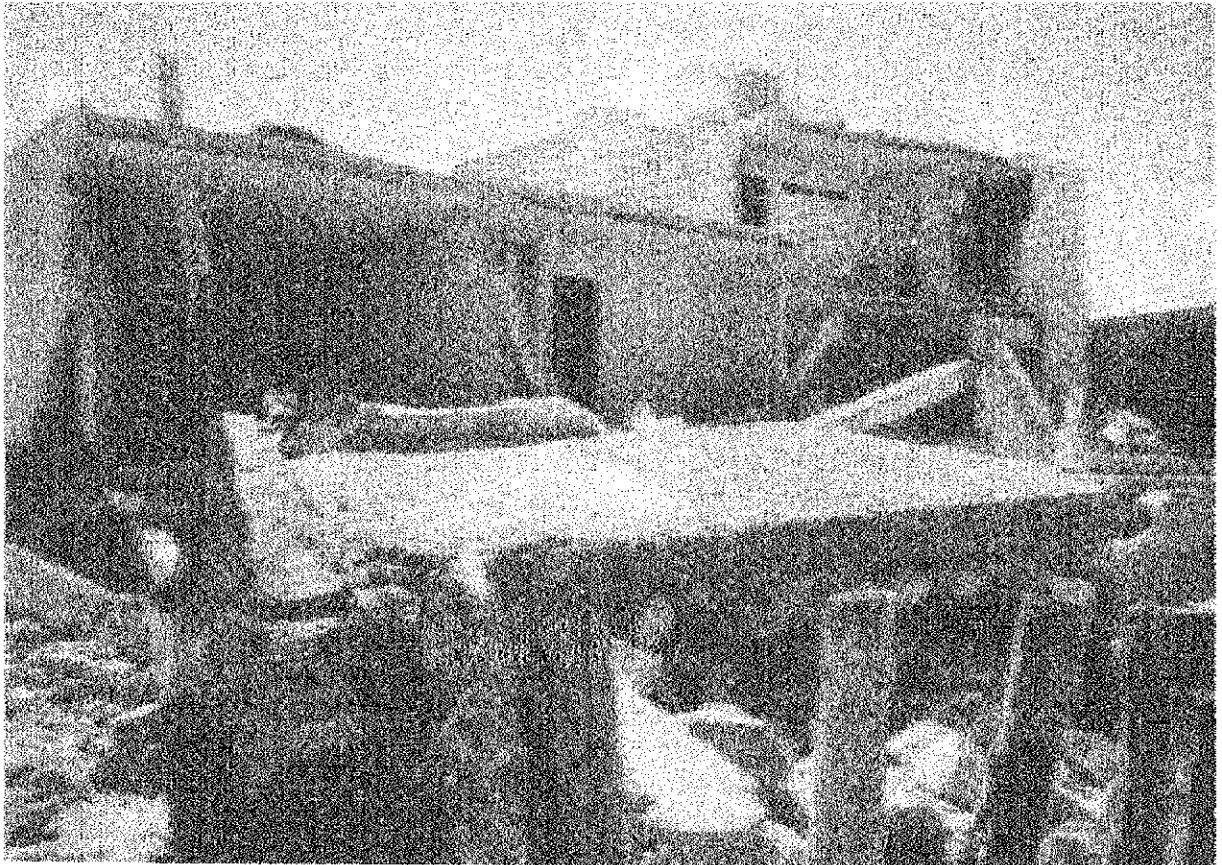
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The great strides now being made in construction technology and early warning systems are having a significant positive impact in saving lives and minimizing losses. In this area, we also have to make sure that the technology is appropriate, accessible, and cost effective if it is to have a wide measure of acceptance. There should be an active program aimed at bringing these tools to the people and making them cognizant of the benefits. We have to be aware of the concerns of various participants and identify the zone of coincidence of interest among policy makers, international and regional entities, the citizens and NGOs, and build upon this through appropriate programs in schools, churches, demonstration projects, etc., to constantly reinforce the system.

## Part IV. Concluding Session

*"As I speak to you the damage caused by Hurricane Hugo is still being assessed in the Eastern Caribbean Islands of Antigua and Barbuda, Montserrat, Dominica, St. Kitts and Nevis, Guadeloupe, the Virgin Islands, and Puerto Rico. At our meeting just one year ago we had to confront the destruction caused by Hurricane Gilbert . . . These natural disasters emphasize with stark and frightening reality the vulnerability of the countries of the region. Many hard-won gains of economic development can be wiped out in a few hours by an act of nature and it takes many years for countries to attain their former economic status."*

*-- John G.M. Compton, Prime Minister of St. Lucia, before the 1989 World Bank/IMF Annual Meeting*



## Concluding Remarks to the Colloquium

**Kenneth W. Piddington**  
*Director*  
*The Environment Department*  
*The World Bank*

I believe we have had a rich series of presentations today. We started with the generality of the Decade, moved through the day to particular issues, and concluded with specific case studies. Someone said before the last session that the case study panel would bring us down to earth, and I think, indeed, that is the sequence which we needed.

I certainly do not propose to sum up all that has gone on today. I leave the major task to Alcira Kreimer and colleagues in the Environment Department. We mentioned that a publication of the record of proceedings will be prepared, which I think will be of great value. I would like, very simply, to draw some of the policy leads which have emerged during the day. Before I move into my conclusion, I would like to thank colleagues from the other institutions who came to join us today. I think we have been rewarded by your participation and contribution. I am also very pleased to have had Marilyn Quayle with us this afternoon.

I think you have collectively left a challenge to the Bank. The first thing to say is that we are in the mood to pick up that challenge. You will recall that the subtitle for the Colloquium was, "A Look To The 1990s". Perhaps, in looking ahead, we have to begin by looking back on experience. I return to my theme of this morning.

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*"I hear no disagreement about the following propositions. We should bring hazard assessment and available information into our baseline environmental studies and environmental assessments. Mitigation should be integrated into design work. I would not be surprised after all the complaints about the additional cost for environmental protection or risk management to find that these costs are relatively small."*

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If we are looking ahead to the 1990s, on whatever scenario, we are looking at a period when the environmental crisis of the world will deepen. We have had exchanges today about the pressure on space, the increase of population, the consumption of resources, and the degradation of natural systems. But, we also know that there will be international and national action to address these issues. The fascinating question for a policy analyst is not an academic one: Does the feedback mechanism function sufficiently well for changes in policy to take place and for the worst situations to be averted? In the special area we have been discussing today, that question is very relevant.

We heard Erik Arrhenius present

his scenario of more extreme events: the increase frequency of the hundred-year flood so that it becomes a seventy-year flood, and so forth. I am aware that Mr. Webster said we should avoid fatalism. I think his message was addressed to his colleagues in the media, but perhaps, it should also be taken on board by the bankers. I imagine there is nothing worse than a fatalistic banker. You do not want to go to your bank and be confronted with a message of fatalism.

What then are the positive messages we can take away from the Colloquium? I found that there were quite a number.

First, experts told us what is actually available. In the area of technology, we have communication systems, hardware, and satellites which can assist considerably. At the human resource level, awareness is growing among officials involved in planning and decision-making. A variety of agencies and NGOs are able to move in a positive way. And information is increasingly available and the machinery for coordination does exist.

As a former foreign service officer who dealt in a minor way with disaster relief operations in the South Pacific and Peru, I was intrigued that there was no reference to the diplomatic network, which moves very efficiently at the time of a disaster. There is nothing an ambassador wants to do more than to be helpful to a government which is stricken with a disaster situation.

The second set of positive messages I heard concerns the use of traditional techniques to deal with disasters. In the South Pacific, a school of thought exists among island leaders which says, "We have coped with hurricanes, our ancestors dealt with disasters, and we survived, or most of us did." The islanders continue, "We have lost some of these techniques, because the

Hercules arrived with canned food. We have forgotten how to develop," that key phase which was used early on today, "resilience to cope."

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One also finds in disaster situations that there is a cross-cultural aspect. What one culture may express as fatalism, for example, the acceptance of loss of lives in a hurricane situation, would surprise the outsider for whom the hurricane is an extraordinary event. I referred earlier to the familiarity of risk; the risk we accept because we live with it. Mr. Sykes made an interesting point about the use of local vernacular to get the message across. In that instant, he spoke of a bard who sang messages in the local Bangladesh vernacular for a project aimed at disaster mitigation.

We heard also about regional arrangements in the eastern Pacific and in the Caribbean, where in the judgments of the experts, there is a mechanism which can assist in handling disaster situations.

A third point which may be of immediate concern to us in the Bank and in the environmental community, is the question of how we can develop and,

indeed, are developing a code of conduct for environmental assessment, including hazard assessment. An interesting exchange occurred when Stephen Lintner was in the chair on the question on conditionality.

Let me express a view which endorses what was said from the floor about the limits of conditionality. I find colleagues in the Bank are not convinced that conditionality is the key to producing results. As I said earlier, we will make far more progress in the environmental area through dialogue and cooperation with our borrowing countries. The message I get from New York from the United Nations, and I am sure Philippe Boule would endorse this, is that Third World ambassadors do not want to hear the World Bank talking about conditionality in the context of the environment.

Where should the Bank be heading from here? I thought again Stephen Lintner gave a us keynote message when he said, "Obviously, we have to go beyond where we have been." Indeed, I hear no disagreement about the following propositions. We should bring hazard assessment and available information into our baseline environmental studies and environmental assessments. Mitigation should be integrated into design work. I would not be surprised after all the complaints about the additional cost for environmental protection or risk management to find that these costs are relatively small. The case studies have illustrated this point. We also must make the link with natural resource management and make this explicit as part of our environmental work. This must be loaded into the policy dialogue. The Bank itself, and I speak as a relative newcomer, can learn from its extensive experience. Mr. Harth's paper clearly points to the lesson which are to be drawn.

Above all, we must see the link between natural disasters and sustainability. As someone said, "invulnerability" can be equated to "sustainability." We were asked to bring long-run economics into the calculation; a key point in terms of the concept of sustainability. To come back to my original question of the cost at the margin of additional protection, if by adding five or ten percent to a project's cost, you insure that it is sustainable in a disaster situation, then you have achieved sustainability and greater benefit.

Similarly, with technology, I think there was a strong message that we have the opportunity in the Bank to not simply study, but to foster the use of technology that can be sustainable in a disaster situation. I see a link between the use of technology for communications and the management of protected areas. A particular interest of mine in my earlier responsibilities for national parks in New Zealand was the degree to which the parks service's communications network was vital to the country's response to disasters, which often happened in remote areas.

The Bank has a role in providing a degree of continuity, someone said, between disaster, and certainly after the immediate reaction to the disaster when it is not a good time to ask decision makers to focus even on the medium term. Alcira has been looking at that in the context of her work in Mexico. We would, as you might expect, turn to work on institutions, which is a matter of general interest in the environmental area and one which we at the Environment Department are giving high priority. We can look at ways in which information and communication techniques are more widely available for response.

Can I leave you with two parting thoughts?

The first is that military technology should be linked with peaceful technology, such the available technologies discussed by Glenn Morgan, to provide needed environmental information. I have long felt that we are losing opportunities in the oceans of the world, where the next environmental crisis after the atmosphere is surely building up. We are not watching to see what happens to toxic materials day-to-day. We have the technology -- the superpowers certainly have the technology to detect what is happening. What, for example, happened to the payload of the ship that left the coast of Madagascar with a full cargo of toxic waste and arrived empty in Singapore? I believe there is an opportunity in the present climate of discussion between the Soviet Union and the United States to utilize existing technology in the military area for the real security of the world, which surely lies in the care of its environment.

Now, the second parting thought. Was it not interesting that there were only one or two references to resources? They were in the vein that resources are normally available to deal with the disaster situation and the immediate response. These references were in the vein that, "Yes, there may be some additional costs for prevention and mitigation, but if we did the sums right, the costs would be justifiable." I did not hear the usual chorus which is, "If only we had the resources. If only the resources could be made available," subtitled, "If only the Bank could print more money."

I feel that we have a very positive conclusion to the day and I wanted to share those thoughts with you.

Many contributors expressed their own thanks to Alcira Kreimer for the effort she put into organizing this event and the thought in planning it. I want to reiterate my own acknowledgement of what she has

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achieved. I believe it has been the most successful event. Of course, Alcira, the Colloquium takes us onto the next stage. We ask for no more than to have the challenge before us, which I have mentioned earlier. I think an event like this also helps to develop networks. And surely in this institutional world, networks, as in the village, are still the most efficient means of transacting business.

I would like to thank the conveners, who brought together the different sessions and kept us remarkably close to our timetable, and all those who have contributed, colleagues in the Bank and others. And the event, of course, does not take place without the work of a support team. You have seen Michele Zador having everything ready as we move into the next stage. Thank you, Michele. You will note from your binder that Marriatu Morton assisted, as did Olivia McNeal, who has been sitting patiently waiting to deal with any disaster that may occur.

So with thanks to all those people, could I just close by wishing you all the best and thank you for being part of this event.



# **APPENDICES**

**DISASTERS, SUSTAINABILITY, AND DEVELOPMENT:  
A LOOK TO THE 1990s**

Tuesday, June 6, 1989  
9:00 a.m. to 5:00 p.m.

Room J B1-080  
701 18th Street, N.W., Washington, D.C.  
The World Bank

A Colloquium Sponsored By  
The Environment Department & The Human Resources Development Division,  
The World Bank

Colloquium Coordinator:  
Alcira G. Kreimer, The Environment Department

**9:00 INTRODUCTION**

Introductory Remarks

Kenneth W. Piddington,  
Director of the Environment Department, The World Bank.

"Disasters, Sustainability, Development: A Look to the 1990s."

Alcira G. Kreimer,  
Urban Environmental Specialist of the Environment Department,  
The World Bank.

**9:30 THE INTERNATIONAL DECADE FOR NATURAL DISASTER REDUCTION (IDNDR)**

"Background to the IDNDR."

Stephen Rattien,  
Deputy Executive Director of the Commission on Engineering and Technical Systems,  
National Research Council.

"Formation of National Committees for the IDNDR."

Richard E. Hallgren,  
Executive Director, American Meteorological Society, and  
Chair of the IDNDR Committee, National Academy of Sciences.

"Planning for International Participation in the Decade."

Philippe L. Boule,  
Director of the New York Liaison Office,  
United Nations Office of the Disaster Relief Coordinator (UNDRO).

Moderator: Everardo Wessels,  
Technical Director of the Latin America and Caribbean Country Department,  
The World Bank.

**10:40 COFFEE BREAK**

**10:50 VULNERABILITY: COMMUNICATIONS AND TECHNOLOGY**

"International Disaster Communications."

David Webster,

Director of the International Disaster Communications Project, The Annenberg Washington Program, Northwestern University.

"The Role of NGOs in the Reduction of Vulnerability."

Charles Sykes, Assistant Executive Director, CARE.

"Communications in Relief: Armenia, Bangladesh, and Sudan."

Frederick M. Cole,

Assistant Director of Asia and the Pacific,

Office of U.S. Foreign Disaster Assistance (OFDA), Agency for International Development.

"Technology Transfer and Disasters."

Francisco R. Sagasti,

Division Chief at the Strategic Planning and Review Department, The World Bank.

"Natural Disaster Mitigation: World Bank Operational Policy Issues."

Alberto Harth,

Operations Adviser of the Central Operations Department, The World Bank.

Moderator: N. Erik A. Arrhenius,

Principal Adviser on Science and Technology to the Vice President of Sector and Policy Research, The World Bank.

**12:30 LUNCH BREAK**

**2:00 REGIONAL EFFORTS FOR DISASTER REDUCTION**

"Response Efforts in Health Emergency Preparedness."

Dr. Jose Luis Zeballos,

Medical Officer, Pan American Health Organization.

"Disaster Prevention and Mitigation in Latin America and the Caribbean."

Stephen O. Bender,

Project Chief of the Natural Hazards Project, Organization of American States.

"Satellite Remote Sensing Applications for Natural Hazard Preparedness and Emergency Response Planning."

Glenn S. Morgan,

Environmental Officer at the Environment Department, The World Bank.

Moderator: Stephen F. Lintner,

Senior Environmental Specialist of the Europe, Middle East, and North Africa Environment Division, The World Bank.

**3:30 COFFEE BREAK**

**3:40 COUNTRY EFFORTS TO PREVENT AND MITIGATE NATURAL DISASTERS**

**"Recovery and Mitigation Efforts in Bangladesh and Nepal."**

**Patrick E. McCarthy,**

**Senior Financial Analyst of Asia Country Department I, The World Bank.**

**"Prevention and Mitigation in Mexico."**

**Felix A. Jakob,**

**Senior Urban Planner of Latin America and Caribbean Country Department I,  
The World Bank.**

**"Mitigation Efforts at the Municipal Level: The La Paz Municipal Development Project."**

**Maryvonne Plessis-Fraissard,**

**Project Officer of the Latin America and Caribbean Country Department III,  
The World Bank.**

**Moderator: Thakoor Persaud,**

**Senior Housing Specialist of the Latin America and Caribbean Technical Department,  
The World Bank.**

**4:45 COLLOQUIUM CONCLUSION**

**Kenneth W. Piddington,**

**Director of the Environment Department, The World Bank.**

**5:00 RECEPTION**

## APPENDIX B. LIST OF PARTICIPANTS

Adelaida Alicbusan  
The Environment Department  
The World Bank

\*Stephen O. Bender  
Natural Risk Assessment and Disaster  
Mitigation Pilot Project  
Organization of American States

Mary Anderson  
International Relief/Development Project  
Harvard University

Ulrich Boegli  
General Services Department  
The World Bank

\*Erik A. Arrhenius  
Office of the Vice President  
Sector Policy & Research  
The World Bank

\*Philippe Boule  
United Nations Disaster Relief  
Co-ordinator (UNDRO)

Denise Balzano  
Office of Mrs. Quayle

Suzanne Brooks  
Volunteers in Technical Assistance

Tevita Banuve  
The World Bank

Jonathan Brown  
Africa Country Department  
The World Bank

Peter Barss  
Injury Prevention Center  
Johns Hopkins University

John Burfield  
Louis Berger International

Lynn Belland  
Interaction

Franklin Cardy  
Africa Country Department  
The World Bank

Mourad Benachenhou  
Executive Director's Office  
The World Bank

Nancy Clements  
Latin American Technical Department  
The World Bank

\* Colloquium speaker or moderator

Nelson Coar  
Office of Multilateral Development Banks  
U.S. Department of Treasury

Marcos Ghattas  
Executive Director's Office  
The World Bank

Michael Colby  
Strategic Planning & Review Department  
The World Bank

Jean-Louis Ginnz  
Latin America & The Caribbean Country  
Department  
The World Bank

\*Frederick Cole  
Office of Foreign Disaster Assistance  
U.S. Agency for International Development

\*Richard Hallgren  
American Meteorological Society  
U.S. IDNDR Committee

Evelyn Cortez-Fusco  
Industry & Energy Department  
The World Bank

Toneema Haq  
Central Operations Department  
The World Bank

Surinder Deol  
Human Resources Development Division  
The World Bank

Ernest Hardy  
The Environment Department  
The World Bank

Martha Desrosiers  
Project Hope

\*Alberto Harth  
Central Operations Department  
The World Bank

Aly el Tobgy  
Europe, Middle East & North Africa  
Country Department  
The World Bank

Vibeke Hein  
Danish Civil Defense and Emergency  
Planning Agency

John English  
The Environment Department  
The World Bank

Fay Henderson  
Office of Foreign Disaster Assistance  
U.S. Agency for International Development

Donald Finberg  
Pan American Development Foundation

Gudren Huden  
Office of Foreign Disaster Assistance  
U.S. Agency of International Development

Donald Geiss  
Architectural Research Council

John Innes  
Africa Country Department VI  
The World Bank

**\*Felix Jakob**  
Latin America & The Caribbean Country  
Department  
The World Bank

**Spyros Margetis**  
Europe, Middle East & North Africa  
Technical Department  
The World Bank

**Dennis King**  
Office of Foreign Disaster Assistance  
U.S. Agency for International Development

**\*Patrick McCarthy**  
Asian Country Department  
The World Bank

**Maritta Koch-Weser**  
Latin America & Caribbean Country  
Department  
The World Bank

**Pilar Moreno**  
Inter-American Development Bank

**\*Alcira Kreimer**  
The Environment Department  
The World Bank

**\*Glenn Morgan**  
The Environment Department  
The World Bank

**Paul Krumpe**  
Office of Foreign Disaster Assistance  
U.S. Agency for International Development

**Lisa Mullins**  
Interaction

**Ved Kumar**  
Africa Technical Department  
The World Bank

**Andrew Natsios**  
Office of Foreign Disaster Assistance  
U.S. Agency of International Development

**Pierre Leger**  
Bryler Corporation

**Peter Nicholas**  
Asia Country Department  
The World Bank

**\*Stephen Lintner**  
Europe, Middle East & North Africa  
Technical Department  
The World Bank

**Per Nyegaard**  
Danish Civil Defense and Emergency  
Planning Agency

**Carl Lundin**  
Office of the Vice President  
Sector Policy & Research  
The World Bank

**Ronald Parker**  
International Relief/Development Project  
Harvard University

**Aung Pe**  
Executive Director's Office  
The World Bank

**\*Thakoor Persaud**  
Latin America Technical Department  
The World Bank

**\*Francisco Sagasti**  
Strategic Planning & Review Department  
The World Bank

Ib Peterson  
Executive Director's Office  
The World Bank

Peter Sebastian  
Bryler Corporation

Paul Peterson  
Worldvision

Narendra Sharma  
Asian Technical Department  
The World Bank

**\*Kenneth Piddington**  
The Environment Department  
The World Bank

Mauricio Silva  
Economic Development Institute  
The World Bank

George Plant  
Asia Country Department  
The World Bank

Jacqueline Snyder  
Executive Director's Office  
The World Bank

**\*Maryvonne Plessis-Fraissard**  
Latin America & The Caribbean Country  
Department  
The World Bank

**\*Charles Sykes**  
CARE

Marilyn Quayle

Ellen Tillier  
Office of the Vice President  
Sector Policy & Research  
The World Bank

Rosalinda Quintanilla  
International Economics Department  
The World Bank

Gilbert Tisnado  
Goddard Space Light Center  
NASA

**\*Stephen Rattien**  
Commission on Engineering and Technical  
Systems  
National Research Council  
National Academy of Sciences

Boris Utria  
Industry & Energy Department  
The World Bank

John Redwood  
Operations Evaluation Department  
The World Bank

Jan Vermeren  
Organization of American States



**J.A. Nicholas Wallis**  
Economic Development Institute  
The World Bank

**Thomas Waltz**  
Office of the Vice President  
Sector Policy & Research  
The World Bank

**\*David Webster**  
The Annenberg Washington Program  
Northwestern University

**\*Everardo Wessels**  
Latin America & The Caribbean Technical  
Department  
The World Bank

**Leslie Whitworth**  
U.S. Committee for UNICEF

**Peter Woodrow**  
International Relief/Development Project  
Harvard University

**Michele Zador**  
The Environment Department  
The World Bank

**Mario Zelaya**  
Europe, Middle East & North America  
Country Department  
The World Bank

**\*Jose Luis Zeballos**  
Pan American Health Organization