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THE GLOBAL 2000 REPORT

HEARING
BEFORE THE
SUBCOMMITTEE ON INTERNATIONAL ECONOMICS
OF THE
JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES
NINETY-SIXTH CONGRESS
SECOND SESSION

SEPTEMBER 4, 1980

Printed for the use of the Joint Economic Committee



U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1980

67-833 O

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

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CONTENTS

WITNESSES AND STATEMENTS

THURSDAY, SEPTEMBER 4, 1980

Reuss, Hon. Henry S., cochairman of the Subcommittee on International Economics: Opening statement.....	Page 1
Speth, Hon. Gus, Chairman, Council on Environmental Quality.....	2
Pickering, Thomas R., Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs.....	10

SUBMISSIONS FOR THE RECORD

THURSDAY, SEPTEMBER 4, 1980

Pickering, Thomas R.: Prepared statement.....	16
Reuss, Hon. Henry S.: Statement entitled "Securing the World's Common Future," by the Honorable Edmund S. Muskie, Secretary of State, before the 11th Special Assembly of the U.N. General Assembly in New York on August 25, 1980.....	11
Speth, Hon. Gus: Prepared statement.....	4
President Carter's directive relative to the Global 2000 Report.....	21
Statement by President Carter on the Global 2000 Study, dated July 24, 1980.....	22
Memorandums from President Carter, dated July 24, 1980, regarding the Presidential Task Force on Global Resources and Environment.....	23
Statement by the Honorable Edmund S. Muskie, Secretary of State, on the public release of the Global 2000 Report to the President, dated July 24, 1980.....	25
Statement by Mr. Speth on the public release of the Global 2000 Report to the President, dated July 24, 1980.....	32
Joint press release of the Council on Environmental Quality and the Department of State, dated July 24, 1980, releasing the report entitled "The Global 2000 Report to the President: Entering the Twenty-First Century".....	37

THE GLOBAL 2000 REPORT

THURSDAY, SEPTEMBER 4, 1980

CONGRESS OF THE UNITED STATES,
SUBCOMMITTEE ON INTERNATIONAL ECONOMICS
OF THE JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10 a.m., in room 2128, Rayburn House Office Building, Hon. Henry S. Reuss (cochairman of the subcommittee) presiding.

Present: Representatives Reuss and Long.

Also present: Kent H. Hughes, Keith B. Keener, and Lloyd C. Atkinson, professional staff members.

OPENING STATEMENT OF REPRESENTATIVE REUSS, COCHAIRMAN

Representative REUSS. Good morning. The Subcommittee on International Economics of the Joint Economic Committee will be in order for its hearing today on "The Global 2000 Report."

Last month the Council on Environmental Quality and the State Department submitted to the President a study providing us with a glimpse of the world in the year 2000. It makes for grim reading. The study, entitled "The Global 2000 Report," documents a world a bare 20 years from now that is desolate and dying, the result of the past, present, and prospective follies of its people.

According to our Government's study, this is what is in store for planet Earth in the year 2000: 6.4 billion people will populate the Earth, an increase of 55 percent. Fully 77 percent of that population—5 billion people—will live in the less developed countries—LDC. Already crowded LDC cities will become more crowded. Mexico City is projected to have more than 30 million people; Calcutta will have nearly 20 million; and Greater Bombay, Jakarta, and Seoul are all expected to be in the 15-20 million range.

And what will life be like for these teeming millions? Miserable. Most of the people in these LDC cities will live in "uncontrolled settlements"—slums and shanty towns where sanitation, water supplies, and health care will be minimal at best. And difficult as urban conditions are likely to become, conditions in the rural areas of many LDC's will be worse.

Will food production be sufficient to sustain 6.4 billion people 20 years from now? The globalists tell us, "Yes," but then add that for the LDC's, rising food output will barely keep pace with population growth; and for the poorest LDC's—in parts of the Mideast, Asia, and Africa—a calamitous drop in food per capita is predicted, so sharp in fact that "the quantity of food available to the poorest groups of

people will simply be insufficient to permit children to reach normal body weight and intelligence.”

The Global 2000 Report also points to a world where half the forests are gone; where up to 2 million species—mainly insects and plants—is made extinct because of loss of habitats and pollution; and where the resources essential for agriculture deteriorate further because of soil erosion, loss of soil nutrients, and increased salinization of both irrigated land and water used for irrigation.

In the year 2000 we will witness a world that is less stable ecologically, and a world that is more vulnerable to upheaval than the one we live in today.

Despite these depressing forebodings, the Global 2000 Report ends on a potentially upbeat note. Disaster need not be our inevitable fate, the globalists tell us. These projections will materialize only if we fail to take the “vigorous, determined new initiatives” necessary to change the course of present trends and present policies. The “fundamental constraints” we face are social, not physical, so if we end up with the kind of world portrayed in the report, we have no one to blame but ourselves. At least the conclusion gives up some hope.

We have with us today two of the Nation’s most knowledgeable experts on our global problems—Mr. Thomas Pickering, Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs, and Mr. Gus Speth, Chairman of the Council on Environmental Quality and recently appointed head of the President’s Global 2000 task force. That task force will carry on the work of providing some lines of action to the problems raised by the Global 2000 Report.

Under the rules, and without objection, the prepared statements of Mr. Speth and Mr. Pickering, for which we are very grateful, will be placed in the hearing record.

The basic question which I have asked you two gentlemen to answer is: What lines of action ought this country and indeed, members of the human community to take to avoid the apocalypse envisioned in your report? In asking that question, I am aware of the fact that you are both public officials, especially Mr. Pickering who, as a member of the Department of State, is not known for loose talk. I, therefore, want to give you advance absolution. Please, in your remarks, go beyond the parameters of your office. I encourage you to speculate; I encourage you to put far out ideas in terms of “some have suggested that” and, thereby, not exculpate your department from any flack that may attach to what you say.

I would now like to hear from each of you, and then we will proceed to some questions.

Mr. Speth, please summarize some of the parts of your prepared statement which relate to the report which, of course, exists in history, and then come down heavily on “where do we go from here?”

STATEMENT OF HON. GUS SPETH, CHAIRMAN, COUNCIL ON ENVIRONMENTAL QUALITY

Mr. SPETH. Thank you. I would like to just very briefly hit a couple of highlights for you in my prepared statement, and then address the question you would like us to focus on principally.

Mr. Chairman, I think you have accurately summarized the basic findings of the report. They are disturbing. I want to stress three things at the outset.

First, we review these findings not as predictions of what will occur, but as projections of what could occur if we and other nations do not respond. So we do not feel that we are locked into this future. Quite the contrary: We think it is a future that we, by publishing this report, by taking other actions, should strive in every way to avoid.

Second, we were impressed as we conducted the study and did the analysis with the strong, positive, relationship among the environmental issues, the resource questions, and the development questions. We concluded that too often there has been a feeling that environmental values and economic development values were antagonistic. We reached the strong conclusion that in fact we are not going to solve the environmental and resource problems without sound and sustained economic development. We also concluded that the converse was the case as well.

The third point I would like to make at the outset is that we often think of the world's renewable resources as being unlimited, and the nonrenewable resources as being the source of concern. Nonrenewable resources are clearly a source of concern right now—for example, in the energy area. But the report also brings out clearly the fact that our renewable resource base is threatened as well—our forest resources, our fishery resources, and our agricultural resources. Indeed, apart from the energy question, these problems seem, if anything, to be more depressing on a global scale than some of the nonrenewable resource problems which have attracted so much attention in the past.

The report is quite clear—and the President was quite clear in his response to the report—in pointing out that we have to exercise strong international leadership, that the United States has a major role to play in addressing these problems.

The President also made it clear that he wanted us to develop a quick and effective response to the report. He has asked a group of us to work with other agencies which have expertise on these issues and to develop this response for him. We are now engaged in that task.

As we begin to cope with these problems, Mr. Chairman, we have to realize that we must lay a sound base at home for addressing them. For example, by relying increasingly on energy conservation and renewable resources here in the United States, our Nation is enhancing its ability to provide leadership abroad as countries search for sustainable energy futures. We must also move to protect our domestic agricultural base. If we continue to lose productive farmland at current rates, our position as a major food exporter and our ability to feed people of other nations will be jeopardized.

It should be obvious to all of us by now that the interests of our Nation and other nations are inextricably linked. In helping others, we help ourselves. And in vigorously pursuing our own efforts to preserve and protect our Nation's environment and resources, we find the means and the strength to help other nations do likewise.

To provide the basis for a strengthened and sustained U.S. response to the problems identified in the Global 2000 Report, the President has established a task force, which I mentioned earlier, and asked it to report back to him with a plan of action early next year. Members

of the task force, in addition to the Council on Environmental Quality, are the Department of State, the Office of Management and Budget, the White House Office of Domestic Affairs and Policy, and the Office of Science and Technology Policy.

As chairman of the task force, I am looking forward to working with those agencies and with many others that made such valuable contributions to the report in developing specific proposals for insuring that our Government does what is necessary to address these urgent problems.

Mr. Chairman, I would like to add at this point that I consider this assignment from the President to be the most important assignment anyone in my position could have at this time. Developing for the President, for the Congress, for the public, a set of strong and effective recommendations for action will be our highest priority in the coming months.

I am pleased to report that the efforts of the task force are now well underway. Its initial assignment, to gather information and suggestions from all relevant Government agencies on priorities for action and to inventory agency resources, will be finished soon. In addition, we have asked several hundred experts and interested persons, including Members of Congress and their staffs, to provide us with their advice and suggestions on how our Government might better address these problems.

Many internal agency working groups and special committees now exist which have compiled information on the overall Federal effort in this area. In addition to forming its own working groups when necessary, the task force will rely on these existing institutions and their work in developing recommendations for action. In our efforts, we hope to give initial attention to the problems that seem most pressing in light of the findings of the Global 2000 Report. These include population growth, underdevelopment and poverty, loss of cropland, deforestation, species extinction and genetic diversity, and water quality and supply.

Clearly, this is a very ambitious effort. We recognize that we are not going to be able to do everything that needs to be done—that should be done—in this first step. But the scope of the problems that we face demands that we act decisively, and we intend to do that.

In closing, Mr. Chairman, I would like to emphasize once again that the Global 2000 Report should be viewed not as a counsel of despair, not as a prediction of a gloomy future, but as a challenge and a unique opportunity for leadership. There is no doubt in my mind that we have the ability to alter the trends depicted in the Global 2000 Report. The issue is not one of capability, but of will—not only our will, but the will of other nations as well.

Mr. Chairman, that concludes my opening remarks. While Mr. Pickering is giving his statement, I will give further thought to the questions you asked at the outset. I will have some further comments in a few moments.

[The prepared statement of Mr. Speth follows:]

PREPARED STATEMENT OF HON. GUS SPETH

Mr. Chairman and Members of the Committee, I am very pleased to have this opportunity to discuss the government's Global 2000 Report with this distinguished Committee. I very much appreciate the interest of Chairman Reuss and

the other members of the Committee in the vitally important global economic and environmental issues raised by the report.

The Global 2000 Report, which was released to the public on July 24, is the result of an intense and wide-ranging inter-agency effort, initiated by President Carter in 1977, to examine the long-term implications of present global population, natural resource and environmental trends.

The Report is unprecedented. It is the first attempt by the U.S. Government—or any government—to make long-term quantitative projections across the range of population, resource and environmental concerns. Given the obvious limitations of such projections, the Global 2000 Report can best be seen as a reconnaissance of the future. And the results of that reconnaissance are disturbing—identifying possible future conditions and developments that can no longer be viewed as distant from us, either in time or in space.

The conclusions of the Global 2000 Report indicate the potential for deepening global problems over the next two decades if policies and practices around the world continue as they are today. The next 20 years will see an increasingly crowded world, containing more than 6 billion human beings by 2000. It could be a world in which growing numbers of people are suffering hunger and privation; where losses of croplands and forests are mounting while human numbers and needs for food, fiber, and timber increases; where per capita supplies of fresh water, timber, and fish are diminished; where degradation of the earth's air and water is accelerating; and where plant and animal species are vanishing at rates without precedent. Even now, some 800 million people live in conditions of absolute poverty, their lives dominated by hunger, ill health, and the absence of hope. By 2000, if current policies remain unchanged, their number could grow to more than one billion.

The effect of rapid population growth and poverty on the productivity of renewable natural resources systems is certainly one of the most troubling of the Study's findings. We have become accustomed in recent years to warnings about the need to conserve nonrenewable resources, which eventually must run out. But the Global 2000 Report points to serious stresses that threaten our renewable resources as well. Even now, the earth's carrying capacity—the ability of biological systems to meet human needs—is eroding. By 2000, matters could be considerably worse, if the trends toward progressive impoverishment of the earth's environment and renewable resource base continue.

One important conclusion reached by those of us who worked on the Report is that the conflict between development and environmental protection is largely a myth. Many of the pressures on renewable natural resources noted in the Report are the result of the desperate struggle of poverty-stricken peoples to stay alive; thus the key to easing these pressures is to improve the conditions of the earth's poor through sustainable economic development, which requires, among other things, sound resource management, environmental protection, and family planning. Instead of being an obstacle to development, protection of resources and environment is an essential aspect of development. Many of the resource problems outlined in the Global 2000 Report stem from a lack of sound, sustainable development, and will be effectively addressed only by economic progress.

I believe that the Global 2000 Report confronts this nation and the other nations of the world with one of the most difficult challenges facing our planet during the next two decades—second only, perhaps, to the global arms race in importance. While the United States can and must assume a strong leadership role in meeting this challenge, it is clear that no one nation or group of nations can cope with international problems of the magnitude described in this Report. Many of the trends I will be discussing today are as much the result of social and economic conditions—that is, of conditions which can be altered by human action—as they are the result of physical constraints on the world's resources and natural systems. It is humanly possible to correct these conditions and to change or reverse the trends depicted in the Global 2000 Report—but no nation can do it alone.

Dealing with these problems will require wisdom, restraint and vision—the vision to recognize the necessity for international cooperation and commitment on a scale that has not been approached until now. A number of astute observers, including the prestigious Brandt Commission, have pointed out in recent months that it is time for nations to stop talking past each other and to begin working with each other—for the common good of all humanity. The alternative, as depicted in the Global 2000 Report, is simply unacceptable.

Having made those general comments by way of introduction, I would now like to spend a few minutes outlining the Global 2000 Report's major findings and conclusions. I will then briefly discuss some of the report's implications for U.S. policy as well as some of the activities already underway by our government and other governments to address the problems discussed in the Report. I will conclude with some thoughts on what we in the United States must do if we are to head off the trends depicted in the Global 2000 Report.

Major findings and conclusions

The essence of the Global 2000 Report is contained in its first two paragraphs:

If present trends continue, the world in 2000 will be more crowded, more polluted, less stable ecologically, and more vulnerable to disruption than the world we live in now. Serious stresses involving population, resources, and environment are clearly visible ahead. Despite greater material output, the world's people will be poorer in many ways than they are today.

For hundreds of millions of the desperately poor, the outlook for food and other necessities of life will be no better. For many it will be worse. Barring revolutionary advances in technology, life for most people on earth will be more precarious in 2000 than it is now—unless the nations of the world act decisively to alter current trends.

President Carter, in a statement issued when the Report was released said, "(I)ts projections can and should be timely warnings which will alert the world to the need for vigorous determined action, at both the national and international levels." This nation, he declared, "must provide special leadership in addressing global conditions." The President then concluded, "It is my firm belief that we can build a future in which all people lead full, decent lives in harmony with a healthy and habitable planet."

Population

The Report's projections point to continued rapid population growth with world population increasing from 4.5 billion today to more than 6 billion by 2000. Although the annual percentage rate of growth will slow marginally—from 1.8 percent to 1.7 percent—more people will be added to the world's population each year in the year 2000 than today—about 100 million a year as compared with 75 million today. Most of the additional people will live in the poorest countries, which will contain about four-fifths of the human race by the end of the century.

Income

Unless other factors intervene, this planetary majority will see themselves growing worse off compared with those living in affluent nations. The income gap between rich and poor nations will widen, and the per capita gross national product of the less-developed countries will remain at generally low levels. In some areas—especially in parts of Latin America and East Asia—income per capita is expected to rise substantially. But gross national product in the great populous nations of South Asia—India, Bangladesh and Pakistan—will be less than \$200 per capita (in 1975 dollars) by 2000, despite considerable increases in production and national income in some of these countries. Today, some 800 million people live in conditions of absolute poverty, their lives dominated by hunger, ill health, and the absence of hope. By 2000, if current policies remain unchanged, their number could grow to more than one billion.

Food

While the Report projects a 90 percent increase in overall world food production in the 30 years from 1970 to 2000, a global per capita increase of less than 15 percent is projected over the same period. Most of the per capita increase will go to countries that are already comparatively well-fed. In South Asia, the Middle East, and the poorer countries of Africa, per capita food consumption will increase marginally at best, and in some areas may actually decline below present inadequate levels. Real prices of food are expected to double during the same 30-year period.

Cropland

The pressures of population and growing human needs and expectations will place increasing strains on the Earth's natural systems and resources. The spread of desert-like conditions from human activities now claims an area about the size of Maine each year. Croplands are lost to production as soils deteriorate because of erosion, compaction, and waterlogging and salinization on irrigated lands. Meanwhile, cropland in the United States and other industrialized countries is

being converted rapidly to other uses—residential development, highways, shopping centers, and reservoirs. In poorer countries as well, villages and cities are expanding at the expense of cropland.

Energy

The increases in world food production projected by the Report are based on continued improvements in crop yields per acre, at the same rate of the record-breaking increases of the post-World War II period. These improvements depended heavily on energy-intensive technologies like fertilizer, pesticides, fuel for tractors and power for irrigation. But the Report's projections show no relief from the world's tight energy situation. World oil production is expected to level off by the 1990s. Many less developed countries will have difficulty meeting their energy needs because of rapidly increasing prices. "A rapid escalation of fossil fuel prices or a sudden interruption of supply," the Report says, "could severely disturb world agricultural production, raise food prices, and deprive larger numbers of people of adequate food." For the one-quarter of humanity who depend on wood for fuel, the outlook is bleak. Projected needs for wood will exceed available supplies by about 25 per cent before the turn of the century.

Forests

The conversion of forested land to agricultural use and the demand for fuelwood and forest products will continue to deplete the world's forests. The Report estimates that these forests are now disappearing at rates as high as 18-20 million hectares—an area half the size of California—each year. As much as 40 percent of the remaining forests in poor countries may be gone by 2000. Most of the loss will be in tropical and subtropical areas.

Genetic resources

The loss of tropical forests, along with the impact of pollution and other pressures on habitats, will cause massive destruction of the planet's genetic resource base. Between 500,000 and 2 million plant and animal species—15 to 20 percent of all species on Earth—could be extinguished by 2000. One-half to two-thirds of the extinctions will result from the clearing or degradation of tropical forests. This would constitute a massive loss of potentially valuable sources of food, pharmaceutical chemicals, building materials, fuel sources and other irreplaceable resources.

Water resources

Deforestation will worsen severe regional water shortages and the deterioration of water quality. Deforestation destabilizes water supplies, aggravates water shortages in dry seasons and intensifies flooding, soil erosion and siltation of rivers and reservoirs in rainy seasons. Population growth alone will cause demands for water to at least double from 1971 levels in nearly half of the world. Competition for water could also exacerbate international tensions. The Report notes that 148 of the world's major river basins are shared by two countries and 52 are shared by three to ten countries. "Long-standing conflicts over shared rivers . . . could easily intensify," the Report says.

Air quality

Industrial growth is likely to worsen air quality. Air pollution in some cities in less-developed countries is already far above levels considered safe by the World Health Organization. Increased burning of fossil fuels, especially coal, may contribute to acid rain damage to lakes, plants and building materials and to the increasing concentration of carbon dioxide in the Earth's atmosphere, possibly leading to climatic changes that could have highly disruptive effects on world agriculture. Depletion of the stratospheric ozone layer, attributed partly to chlorofluorocarbon emissions from aerosol cans and refrigeration equipment, could also have an adverse effect on food crops and human health.

Policy implications

Disturbing as these findings are, it is important to recognize the Global 2000 Report's conclusions for what they are: not predictions of what will occur, but projections of what could occur if we do not respond. If there was doubt before, there should be little doubt now—the nations of the world, industrialized and less developed alike, must act in concert to secure sustainable economic development, to control population growth and to protect the Earth's resources and environment, before the trends depicted in the Global 2000 Report become realities.

I am optimistic that as people here and abroad come to realize the full dimensions of the challenge before us, a positive and ultimately powerful response will be forthcoming. The humanitarian reasons for action are strong enough by themselves but we must be aware of the Report's implications for our security as well. The Global 2000 Report should alert us to the possible consequences of increasingly widespread hunger and poverty, growing competition for scarce resources and widening income disparities between the richer and poorer nations of the world. The Brandt Commission put its finger on this central truth when it wrote that its report

. . . (i)f reduced to a simple denominator . . . deals with peace. War is often thought of in terms of military conflict, or even annihilation. But there is a growing awareness that an equal danger might be chaos—as a result of mass hunger, economic disaster, environmental catastrophes, and terrorism. So we should not think only of reducing the traditional threats to peace, but also of the need for change from chaos to order.

Secretary Muskie also made the point well in his recent defense of the U.S. foreign aid program before the Foreign Policy Association:

It is in our interest to do all we can now to counter the conditions that are likely to drive people to desperation later. . . . We would rather send technicians abroad to help grow crops than send soldiers to fight the wars that can result when people are hungry and susceptible to exploitation by others.

EFFORTS NOW UNDERWAY

Our government is already addressing many of the international problems discussed in the Global 2000 Report. We have participated actively in a series of U.N. conferences on the human environment, population, food and hunger, human settlements, water, desertification, and science and technology. We are working together with other nations on family planning programs, sound economic development, and protection of the Earth's environment and resource base. Following President Carter's 1977 Environmental Message to Congress, our programs of development assistance have added emphasis to natural resource management and environmental protection. The President's 1979 Environmental Message called particular attention to the alarming loss of world forests, and an interagency task force led by the Departments of State and Agriculture has developed a U.S. government program to encourage conservation and wise management of forests. The President on July 24 directed all federal agencies to respond within 60 days to the task force's report, which was submitted to him in June, outlining the steps they plan to take to carry out the report's recommendations. The United States is also a world leader in wildlife conservation and the assessment of environmental effects of government actions. The President's Executive Order of January 5, 1979, ordering U.S. Government agencies to consider the effects of their actions abroad is another example of this leadership.

Other nations are also taking steps to respond to some of the problems noted in the Global 2000 Report. Responding to the deforestation problem, for example, the Philippines is now undertaking a \$75 million reforestation program funded by the World Bank to protect the watershed of two large dams from erosion. The African nation of Togo should be self-sufficient in wood production within a few years by virtue of a major reforestation project funded by the U.N. And in Latin America, Brazil, which has come under heavy criticism for allowing excessive cutting in the Amazon, has begun a major effort to plan for the sound development of the Amazon region through new forest assessment and management techniques. Other nations are adopting new approaches to energy conservation, making family planning measures widely available, taking actions to reduce soil losses and desertification, and using natural predators and selective pesticides to protect crops instead of broadscale application of chemicals. The recent Venice Summit declaration committed the Summit Nations to a cooperative effort with the developing countries in coming to grips with food, energy and population problems. And many of the issues raised in the Global 2000 Report were the subject of last week's U.N. General Assembly Special Session on economic development.

Encouraging as these developments are, however, they fall far short of what is needed. The urgency and scope of the challenges set forth in the Global 2000 Report call for a new era of global cooperation and commitment. Prompt changes in public policy must be made around the world before these problems worsen and options for effective action are reduced.

THE U.S. ROLE

In bringing about these changes, the United States has both the ability and the obligation to continue its strong leadership role. Even though many of the problems identified in the Report may seem remote from us, they are not. We must turn our attention, ingenuity and generosity increasingly to them.

We must begin to cope with these global demands in part by laying a sound foundation at home. For example, by relying increasingly on energy conservation and renewable resources here in the United States, our nation is enhancing its ability to provide leadership abroad as countries search for sustainable energy futures. We must also move to protect our domestic agricultural base. If we continue to lose productive farmland at current rates, our position as a major food exporter—and our ability to feed people of other nations—will be jeopardized. It should be obvious to all of us by now that the interest of our nation are linked inextricably with the interests of the rest of the world. In helping others, we help ourselves; and in vigorously pursuing our own efforts to preserve and protect our nation's environment and resources, we find the means and the strength to help other nations do likewise.

To provide the basis for a strengthened, sustained U.S. response to the problems identified in the Global 2000 Report, President Carter has established a Presidential Task Force on Global Resources and Environment and has asked that it report back to him with a plan of action early next year. Members of the Task Force, in addition to CEQ, are the Department of State, the Office of Management and Budget, the White House Office of Domestic Affairs and Policy and the Office of Science and Technology Policy. As Chairman of the Task Force, I am looking forward to working with these agencies and the many others that made such valuable contributions to the Global 2000 Report in developing specific proposals for ensuring that our Government does what is necessary to address these urgent problems. Mr. Chairman, I would like to add at this point that I consider this assignment from the President to be the most important assignment anyone in my position could have at this time. Developing for the President a set of strong, effective recommendations for action will be our highest priority effort in the coming months.

I am pleased to report that the efforts of the Task Force are now well underway. Its initial assignment—to gather information and suggestions from all relevant government agencies on priorities for action, and to inventory agency resources—will be finished soon. In addition, we have asked several hundred experts and interested persons—including members of Congress and their staffs—to provide us with their advice and suggestions on how our government might better address these problems.

Many internal agency working groups and special committees now exist which have compiled information on the overall federal effort in this area. In addition to forming its own working groups when necessary, the Task Force will rely on these existing institutions and their work in developing recommendations for action. In our efforts we hope to give initial attention to problems that seem most pressing in light of the findings in the Global 2000 Report. These include population growth, underdevelopment and poverty, loss or cropland, deforestation, species extinction and genetic diversity, and water quality and supply. Clearly, this is a very ambitious effort, but the scope of the problems we are facing demands nothing less.

In closing, Mr. Chairman, I would like to emphasize once again that the Global 2000 Report should be viewed not as a counsel of despair, not as a prediction of a gloomy future, but as a challenge and a unique opportunity for leadership. There is no doubt in my mind that we have the ability to alter the trends depicted in the Global 2000 Report. The issue is not one of capability, but of will.

We must take advantage of our unique ability to foresee the consequences of our actions, and to alter those actions in accordance with our own long-term best interests. For our own sake, and for the sake of our children's children, we must begin to do so now.

Thank you, Mr. Chairman, for this opportunity to testify. I will be pleased to answer any questions that you and other members of the Committee may have.

Representative REUSS. I hear much rustling on the staircase, but no one has entered yet. And I want to perhaps hear from you, Mr. Speth, in an uninhibited way, a speculative way, before we get to the questions.

But let's hear from Mr. Pickering first, and then we'll come back and ask some questions.

STATEMENT OF THOMAS R. PICKERING, ASSISTANT SECRETARY OF STATE FOR OCEANS AND INTERNATIONAL ENVIRONMENTAL AND SCIENTIFIC AFFAIRS

Mr. PICKERING. Thank you, Mr. Chairman.

I would like very much to tell you how much we appreciate having the opportunity to come down and talk with you today about these issues. I will certainly try to summarize the prepared statement which you have so generously been willing to include in the record.

And I would like to thank you very much for the kind accolade for the State Department, which is not often known as "tight-lipped," and I appreciate that remark and your kindness in saying so.

The Department has been deeply involved in the Global 2000 study since its beginning, and we certainly intend to play a strong continuing role in the critical followup period.

My remarks this morning will be drawn from my prepared statement, but I want to very much emphasize the followup period in that sense.

We have a Secretary who, when he was at this end of Pennsylvania Avenue, had a strong, enlightened, and forward interest in these sorts of issues. And I can assure you that he's continuing that.

He made, as the centerpiece of a statement he made in New York at the Special Session of the United Nations General Assembly last week, the Global 2000 Report—

Representative REUSS. May I at this point interrupt you? I think it would be appropriate that, under the rule, and without objection, the Secretary of State's remarks to the United Nations be placed in the record at this point in the testimony.

[The remarks follow:]

Secretary Muskie

Securing the World's Common Future

August 25, 1980

United States Department of State
Bureau of Public Affairs
Washington, D.C.

Following is a statement by Secretary Muskie before the 11th Special Assembly of the U.N. General Assembly in New York on August 25, 1980.

I welcome this opportunity to address the U.N. special session on economic development. I intend to speak frankly. And I will suggest some specific obligations of the world's nations—including my own—to secure our common future on a fragile planet.

We meet because we are in the midst of a world economic crisis. We cannot escape it. We must respond to it. Millions of our fellow humans are starving, and millions more are malnourished, on what can be a bountiful planet. Soaring oil prices have crippled the developing world; even the strongest industrial economies are struggling. Infectious recession and inflation touch us all. Nations in desperate need of growth and development instead face worsening trade deficits, deeper debt, and diminishing prospects for meeting the needs of their people.

The work ahead is substantial. The time is short. But if we take an ambitious view, seasoned with realism, we can accomplish our main purposes at this special session. We can adopt a realistic international development strategy that will help improve development prospects. And we can agree on procedures and an agenda for a new round of global economic negotiations—serious work aimed at concrete progress where the need is urgent and consensus appears within reach. My country will participate constructively in these proceedings. Progress is essential for the world's interest and also our own.

We are encouraged that progress is possible because progress has been made. The fact is that over the past decade many people in developing nations have attained better lives. Per capita income in the Third World has risen by some 3% per year. Exports have increased by 8.7% annually. Manufacturing output is higher. Life expectancies and literacy rates have improved. Infant mortality rates have declined. Striking progress has been made, much of it recently, in adjusting the system to improve Third World prospects.

- The flow of aid to poorer nations has steadily increased. More than \$100 billion in replenishments for the multilateral development banks and their affiliates have been agreed.

- Access to International Monetary Fund resources has been sharply increased. Terms are more flexible. New facilities are in operation. A major quota increase is in process. The World Bank has also launched an innovative program of lending for structural adjustment.

- The Common Fund negotiations have been completed. We have moved ahead on individual commodity agreements.

- On trade, last year's multilateral trade agreement will mean an average cut of 25% in tariffs on principal developing country exports. Preferential tariff systems have been adopted by all Western industrial countries.

- Use by developing countries of world capital markets has increased fourfold—from \$11 billion in 1970 to \$44 billion in 1978.

- The effort to increase world food supplies has been advanced through the International Fund for Agricultural Development and through the concentration of World Bank resources. In the past 5 years the World Bank committed some \$11.6 billion to agricultural projects.

- And in another urgent priority area—energy—the World Bank will be lending well over \$10 billion for energy projects between now and 1985.

This partial listing is not the record of a world community frozen in short-sighted self-interest, rigidly divided by ideology, or stalemated on methods. Those tendencies do afflict us. Yet in recent years we have also found the common sense and good will to move forward.

But our accomplishments are still far short of our needs. My government has just completed a major study of the world's population, resources, and environmental prospects for the year 2000—just 20 years away. Its conclusions remind us again why these debates must move from rhetoric to reality. Our "Global 2000" study begins with a harsh truth. In the year 2000, the world population will be more than half again higher than in 1975. Over the last quarter of this century, more than 2 billion people will be added—2 billion more mouths to feed, bodies to clothe, individual hopes to be fulfilled.

Given this fact, the study tells us what could happen if nations fail to act in time and with reason. Based on current trends, food production should nearly double. Still, the number of people going hungry will rise by millions. Many nations already hungry see their croplands and grasslands drying to desert—a loss each year equal to the size of my home state of Maine.

GLOBAL 2000 REPORT

Volumes 1 and 2 of *Global 2000: Entering the Twenty-first Century* are available through the U.S. Government Printing Office, Washington, D.C. 20402. Volume 3 is expected to be released in November 1980 and will also be available through GPO.

Volume	Stock No.	Price
Volume 1, The Summary Report	041-011-00037-8	\$ 3.50
Volume 2, The Technical Report	041-011-00038-6	\$13.00
To be released:		
Volume 3, The Government's Global Model	041-011-00051-3	\$ 8.00

On energy, from the vantage of a precarious present, we could face a punishing future. Unless trends are changed, oil supplies will be insufficient and, for many, unaffordable. Wood, the main household fuel for over 1 billion people, will be found only at ever greater distances and in dwindling amounts.

We have become accustomed to warnings about the need to conserve, nonrenewable resources such as oil. But the "Global 2000" study also points up serious stresses on renewable resources—croplands and forests, fisheries, air, water and land—resources we have taken for granted as endless.

Another central observation of the study is that protecting the environment and succeeding in economic development are not competing goals but complementary paths. Poverty worsens the most acute environmental dangers, such as the loss of forests and soil. Thus we will not save the environment unless we also solve the problems of the poor and move the global economy forward.

"Global 2000" is not a forecast. It is a projection of present trends. But it is another chilling reminder that our common future depends on our common success, here and throughout the complex of relations known as the North-South dialogue. We must work together to raise food production, to diversify energy sources and to use energy and other resources more efficiently, to protect our common environment, to restrain population growth, to deal effectively and equitably with mounting deficits, and to keep an open system of trade.

It falls to us to rewrite the future. It is within our power to do so. But it will require a change not only in the quantity but in the character of our effort. For as fast as we have run in recent years, the challenges still outpace us. Too often, as the Brandt Commission reminds us, we have engaged in a "dialogue of the deaf," in which "we judge ourselves by our good points and the other side by their failings. The result is frustration and deadlock."

Global Responsibilities

That deadlock must be broken. The demands of our common future require it. They compel a new inquiry. We must ask not only what individual nations can take from the global system but what each nation must bring to it. Without exception, we must recognize that assigning responsibility for the future to others is not an answer but an abdication. Such excuses will not feed, nor clothe, nor heal, nor comfort our successors if we fail. And fail we will, unless all nations are fully engaged.

Industrial Countries. I do not by any means exclude my own country from this prescription. In suggesting what different societies, differently situated, should offer, let me begin with the industrial countries.

- First, we must reduce the rate of our domestic inflation. Spiraling prices restrain growth and make the world economy more vulnerable and less fair.

- Second, we should keep our markets open, particularly to products from developing countries.

- Third, the industrial nations must use energy more efficiently, increase domestic production, spur the development of new energy sources, and cut our reliance on imported oil.

- Fourth, despite the need for budget restraint to control inflation, we should increase our aid to the developing nations. This Administration has said many times to the American Congress and the American people that our present levels of assistance to lower income countries are not enough. I intend to keep doing all in my power to change that condition.

- Fifth, developed countries should continue to accept an increasing role for developing countries in international economic decisionmaking—a role commensurate with their growing importance in the world economy and their willingness to share international obligations.

- Sixth, we must increase the capacity of developing countries to apply science and technology for development. We must accelerate the transfer of information, technology, pollution-control strategies, and other skills.

Most of these steps will entail short-term sacrifice for the sake of long-term returns. I believe the American people will support those investments. But as a former practicing politician, let me speak frankly. The American people will insist that their contributions have an effect—that people's lives must actually be changed for the better. And we can assure that only if other nations are also prepared to do their part.

Oil-Exporting Nations. The oil-exporting nations have a unique responsibility. In recent years rising oil prices have been a ponderous drag on development and growth and a major cause of inflation. This year the oil-importing developing countries will have to spend—for that single commodity—almost double the amount they will receive from all sources in aid. Thus steps such as these by oil-exporting nations will be vital to our common goals:

- First, they must adopt stable price and supply policies to avoid further trauma to the international economy.

• Second, the oil-exporting countries must increase their aid and recycle more of their surpluses directly to developing countries.

• Third, oil-exporting countries should join with consuming nations in working for rational global energy arrangements.

Developing Countries. Whatever the level, external assistance will always be a secondary factor. The major determinants are internal—the ability to use resources effectively, to encourage innovation, and to share broadly the benefits of growth. Thus, there are responsibilities that developing countries must shoulder.

• First, domestic and external resources must be used efficiently and fairly, with concentration on such priority areas as energy and food.

• Second, serious family-planning efforts are vital. Nine-tenths of the world's population increase in the next 20 years will be in developing countries. No other single factor does more to darken their future.

• Third, as their economic strength grows, individual developing nations should accept more responsibility for the common management of international economic problems.

• Fourth, as their development proceeds, they must open their own economies to free flows of world trade.

Centrally Planned Countries. The market economy countries have received dominant attention in the North-South dialogue. But the centrally planned countries have global responsibilities as well. Empty bellies will not be filled by polemics. No nation or group of nations has grounds to remain aloof from this struggle. World opinion looks to the centrally planned countries:

• First, to increase their assistance to developing countries;

• Second, to increase their unconditioned purchases of LDC (less developed country) products; and

• Third, to cooperate in international efforts to stabilize commodity markets.

Proposals

For all of us, the principles I have outlined must be the basis for practical action. For our part the United States is prepared to join with others to meet the global challenge.

Our most urgent task is to confront the specter of imminent famine haunting Africa. This summer alone the United States has provided an additional 235,000 tons for emergency African food relief. We strongly urge that all nations able to contribute foodstuffs or funds join under

the leadership of the Food and Agriculture Organization to coordinate relief to drought-afflicted regions. I am happy to note that the Director General will convene a meeting of concerned governments and international organizations in the coming weeks.

Targets have been set for annual food assistance in the new Food Aid Convention and for emergency food aid through the International Emergency Food Reserve. We encourage others to join us in the effort to reach those targets, to guarantee that food will be available to those in need. Further, we should develop reserves that are adequate to back up donor commitments and assure that food emergencies can be met. My government is working toward a 4-million-ton reserve of wheat to assure our food aid commitments.

Despite efforts to produce more food, many poor developing countries will still have to import substantial quantities over the next decade. We should consider new arrangements to assist those developing countries that are improving their own food production.

The vision we share is a vision of opportunity and of peace. It is within our capacity to alter the future to fit that vision.

We should explore ways to channel more international funds, both concessional and nonconcessional, into food production. We therefore support rapid agreement on an equitable replenishment of the International Fund for Agricultural Development (IFAD). We would also consider further measures to strengthen IFAD.

To help developing countries adjust to oil-driven balance-of-payments deficits, we favor continued improvements in International Monetary Fund facilities, including subsidizing the Supplementary Financing Facility. Such arrangements should receive strong support from those who prosper as oil prices climb. Private capital flows also will continue to play a critical role. We look forward to the Development Committee's report on proposals for increasing nonconcessional flows to developing countries.

We are committed to the stimulation of energy production worldwide and to the increased use of renewable fuels. The United States strongly supports an expansion of World Bank energy programs, to permit Bank participation in multinational risk-sharing ventures to discover and develop new energy sources. Here, too, as we agreed at the Venice summit, we are open to new institutional and fi-

nanacial arrangements. We will participate positively in the U.N. conference on new and renewable energy sources. We urge the U.N. Secretariat and member nations to make every effort to insure its success.

Coal is an attractive alternative to high-priced oil. We will expand our capacity to produce and ship coal, and we are ready to help developing countries establish coal-burning facilities and increase their use of coal.

We support discussions between oil-exporting and oil-importing nations on ways to insure orderly market conditions and on further assistance for non-oil-developing countries.

Requests for population program assistance have outpaced the international community's ability to respond. We are ready to join an international commitment to double, in this decade, the availability and use of family-planning and related health services.

On trade, my country would support a pledge by all countries to restrain protectionism and ease adjustment. Such a commitment would provide more assured market access to developing countries. Also, beyond the sharp reductions in tariffs already agreed, we are prepared to increase the benefits of our Generalized System of Preferences for poorer developing countries.

These proposals reflect the positive approach we believe our common problems demand and this special session deserves.

Let me conclude with this observation. I am persuaded, to the depth of my being, that the challenges ahead are not beyond us. The "Global 2000" report has been described as a reconnaissance of the future. It describes the possibility. I believe it will not be the reality. The vision we share is a vision of opportunity and of peace. It is within our capacity to alter the future to fit that vision. The resources do exist. The solutions can be found. Together we can summon the will. Knowing what is at stake, we must not fail. ■

Published by the United States Department of State • Bureau of Public Affairs • Office of Public Communication • Editorial Division • Washington, D.C. • August 1980
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Mr. PICKERING. Thank you, Mr. Chairman, for your recognition of that. I'm very pleased that you have taken this initiative to introduce those remarks, as I think they're important. They do set the groundwork for much of the followup, and much of his personal thinking is incorporated in that statement.

As Gus Speth has pointed out, Secretary Muskie's warnings about the gravity of the problem is as much a domestic as an international concern of this country, and we expect the rest of the world will join us in addressing the challenges that are implicit in the study and in the actions that we will be calling for in the months ahead.

We must clearly continue to put our own house in order with respect to environmental protection and resource conservation as we proceed with this effort.

I want to give you a very brief summary of the actions we've already taken to date to acquaint the international community with the study. We have now distributed the study through our embassies, through our AID missions, and through the international communications agencies to all the countries overseas.

We've presented a special briefing here in Washington to the foreign diplomatic corps at the time we released the study and had a great deal of interest in that briefing, in the study, and in its followup.

Secretary Muskie has sent a personal letter to each one of our American Ambassadors overseas, noting the importance he attaches to the study and asking that they insure that high-level officials in the countries to which they represent the United States receive a personal briefing from the Ambassadors on the study.

The response to these presentations has already been very encouraging and, in some respects, almost overwhelming. We have what appears to be a genuine bestseller in the world of futurology; 17,000 copies have already been distributed, and we have to go back and print more. In response to numerous requests, we are printing the summary volume—portions of, at least—in the French and Spanish languages.

We hope to contemplate other language editions. In Japan, a well-known Japanese organization has undertaken to translate both of the volumes, almost 800 pages, into Japanese to meet the heavy public demand there.

One manifestation of the sense of interest in the study has been the foreign press coverage. And, in general, it has been very well received in capitals overseas.

Representative REUSS. If I may interrupt, what does the Government Printing Office charge for volume 1?

Mr. PICKERING. The volume you have in your hand is \$3.50. The larger volume is \$13. And the volume yet to appear is in the neighborhood of \$8.

Representative REUSS. Thank you.

Mr. PICKERING. The overseas press has been almost uniformly complimentary of our initiative in undertaking this work. We are particularly heartened that the focus that they're reporting has been on the major findings and conclusions and the implications for societies around the world, not a discussion of the study's methodological imperfections which we have, frankly, acknowledged.

Interestingly enough, one carping criticism comes from the Soviet Union, where they maligned the study for its capitalistic bias and for

its alleged assumption that the Western monopolies will continue to exploit developing nations.

The generally favorable reaction has really offered us several opportunities in dealing with the problems of population, food, environmental protection, and natural resources management, especially without undertaking the handicap of appearing to impose a solely U.S. view of these global problems on the international community.

In addition to that, last June, in response to the need for long-ranged, improved planning, the whole Global 2000 effort was introduced into the economic summit meeting in Venice, Italy. There was agreement among the summit heads of state that these issues will be increasingly important factors in economic growth in the years ahead. And they want to keep these issues under close review.

We intend to have a preparatory meeting for the next summit in Canada—here in Washington—perhaps as early as next month to plan for ways to follow up the Global 2000 Report and the issues that it discusses in the Canadian summit next year, including programs of action which the summit countries might take specifically to follow up.

We have also raised the Global 2000 issue in many other international forums, as the President asked us to do. The most recent, of course, was the Secretary's speech at the U.N., which we just mentioned.

It was, I think, a remarkable opportunity, early, to introduce these issues to the major countries, who are focusing on foreign policy and economic questions at this special session. And the issues are clearly important to all nations. And that addressing those is, in our view, certainly not incompatible with the major economic aspirations of the Third World.

As Gus Speth has just indicated, the interrelationship between economic development and environmental consequences and protection is close and important, and that was a message we were able to get across in this forum.

We will be meeting with the UNESCO General Conference in Belgrade next month. And we intend to, in similar fashion, focus on the Global 2000 issues there.

In coming months, we will be challenged to be more creative and forthcoming in terms of designing and mounting more effective responses to Global 2000.

At a time of extremely tight budgets here at home and fiscal austerity throughout the international community, our country has, in effect, in a role of leadership, called for a new attack on a complex and difficult series of global problems.

Our willingness and commitment to respond is likely to be met by skepticism, and possibly cynicism, in quarters of the world. However, we do intend to proceed vigorously with these issues.

We are sustained in our efforts here by the conviction that we have the right issues and that the world and our own country will ignore and neglect them at our peril.

In addition to the steps that I noted earlier, we have developed within the State Department a task force to support directly the larger efforts which Gus Speth is heading in the Presidential task force.

We will pull together, within the Department of State, a broad-based strategy to help guide our own participation in the international dialog on Global 2000 issues, and to increase our Department's capabilities for focusing these issues back into policy planning.

Mr. Chairman, I would like to close with just a few remarks on the other steps that we must take within the Government, and especially within the State Department, to organize ourselves to address Global 2000 issues.

We believe we must begin now to insure that foreign policy analysis and planning is responsive to the long-term issues raised in Global 2000. And to do this, we have to upgrade our own institutional capacity to project trends in population resources and environment and then to assess the likely economic, social, and political consequences for specific countries and regions. This is an important aspect of Global 2000 and one in which important followup will be required.

We are planning, certainly, to build into the U.S. Government's response to Global 2000 and, indeed, into the followup by the State Department, mechanisms and programs to respond to these needs. Foremost among those, of course, will be the question of foreign assistance. We hope that the very favorable reactions we have received from the general public and the Congress and the international community will be sustained and expanded as we move forward with the vastly more difficult followup phase.

Clearly, congressional support for the new U.S. policy and program directions which are called for by Global 2000 will be central to your collective success.

We would value having the ideas, the thoughts, the perspectives, the criticisms, and the suggestions and recommendations of the Congress as we move ahead to make recommendations to the President on this issue.

We are very grateful for your committee's interest in this study and for the opportunity the hearing is providing to us to describe our plans for utilizing it in support of our own long-term economic, humanitarian, and foreign policy interests.

I am grateful for the opportunity to present these views and certainly stand ready, with Gus Speth, to respond to the questions you have for us.

Representative REUSS. Thank you, Mr. Pickering.

I can say, right at the outset, that you do have hearty congressional support for the initiatives you and the task force are undertaking. It is the future of the world that is involved here. And Congress will not, I am confident, drag its feet.

[The prepared statement of Mr. Pickering follows:]

PREPARED STATEMENT OF THOMAS R. PICKERING

Mr. Chairman, Members of the Subcommittee on International Economics, it is a pleasure to appear before you today to discuss the international aspects of the recently released Global 2000 study, including the challenges and opportunities it presents for U.S. foreign policy.

The State Department has been deeply involved in the Global 2000 study since its inception, and we intend to play an active part in the crucial follow-up phase. This reflects the importance we attach to its findings and conclusions in terms of the implications for world conditions—and, hence, U.S. foreign policy—in the months and years ahead. Secretary Muskie has taken a deep personal interest in the study, and made its contents a centerpiece of his August 29 speech to the Special Session of the UN General Assembly on Economic Development.

While he referred to Global 2000 and its relationship to international economic issues throughout the speech, perhaps the following excerpt best summarizes the thrust of his and our concern.

Secretary Muskie "observed that the study" is another chilling reminder that our common future depends on our common success, here and throughout the complex of relations known as the North-South dialog. We must work together to raise food production to diversify energy sources and to use energy and other resources more efficiently to protect our common environment, to restrain population growth, to deal effectively and equitably with mounting deficits, and to keep an open system of trade.'

As Chairman Speth has pointed out, the Secretary's warning of the gravity of these problems is as much a domestic as an international concern of this country. If we expect the rest of the world to join with us in addressing the challenges implicit in Global 2000,—and the actions we will be explicitly calling for in the months ahead—we must continue to put our own house in better order with respect to environmental protection and resource conservation. However, in my statement I will confine myself to the international aspects . . . focusing on our efforts to utilize the study to raise international awareness of the issues, and then to mobilize a coordinated international response.

Let me begin by summarizing the action we have taken during that period to acquaint the international community with the study. The Global 2000 report, and related interpretative information, have now been distributed broadly throughout the world via State Department Embassies, AID Missions, and the International Communications Agency. We presented a special briefing on Global 2000 to the Washington based foreign diplomatic corps as one of our first steps following release of the report; and Secretary Muskie sent a personal letter to each of our Ambassadors noting the importance of Global 2000 and seeking their involvement in ensuring that the issues are brought to the attention of senior officials in each host country.

The response to these presentations has been very encouraging and in some respects overwhelming. Our initial supply of 17,000 copies of the Summary Volume was quickly exhausted, and we are now rushing through another printing. In response to numerous requests, we are preparing French and Spanish translations of the Summary Volume, and are considering Arabic and Portuguese translations as well. In Japan, the Japan Productivity Center has started translation of both Volumes 1 and 2 to meet what they report to be a "heavy public demand". As the study becomes available in other languages, and as government and opinion leaders in Europe and elsewhere return from the traditional August vacation period, we expect an expansion of overseas interest in the report.

One manifestation of the degree of foreign interest in Global 2000 is the extensive press coverage it has received, much of it front page, in most of the major capitals. The tone of the overseas press reaction so far has been similar to the press reaction in the United States, namely that the conclusions are deeply disturbing and that early international action is called for. The overseas press has also been almost uniformly complimentary of the U.S. Government's initiative in undertaking this task. We are particularly heartened by the fact that the focus of the reporting has rightfully been on the major findings and conclusions of the report, and their implications for society—and not on the study's methodological imperfections which we have frankly acknowledged. The Russian press, however, has not been so generous, with Izvestiya calling attention to the report's "capitalistic bias", its alleged assumption that "Western monopolies" will continue to exploit the developing nations, and its failure to address the "main problem facing humanity" which Izvestiya defines as an end to the arms race.

This generally favorable reaction presents us with good opportunities to take new initiatives in attacking the problems of population, food, environmental protection and natural resources management without the handicap of appearing to impose a U.S. view of these global problems on the international community. It is also important to note that a number of other recent reports on worldwide conditions and trends reinforce those which emerge from Global 2000. These include the report of the Brandt Commission on "North-South" relationships, World Bank President McNamara's report on international development issues, and the Worldwatch Institute's study of trends and implications of urban growth around the world. They collectively argue for a serious re-examination of current international development policies and programs in light of the global conditions they portray and portend.

Last June, the United States introduced the Global 2000 issues, and the need for improved long-range planning, into the Economic Summit Meeting in Venice.

There was agreement among the Summit Heads of State that these issues will be increasingly important factors in economic growth in the years immediately ahead; and that they should therefore be kept under close review. We now want to capitalize on this high-level attention. We have just extended invitations to the other Summit nations to meet in Washington on October 14 to discuss Global 2000 in relation to their own perspectives and similar studies they and others may have carried out.

We hope to use this meeting as a stepping stone toward agreement on both the highest priority problems associated with population, resource and environmental trends, and on the appropriate international responses. This could then form the basis of a special report to the next Summit which will probably be held in Ottawa next year.

We are also examining the best opportunities to raise Global 2000 issues in other international forums. This is in response to a specific charge given to the State Department by President Carter in his July 24 statement on Global 2000. We are proceeding with several objectives in mind. The first is to increase international awareness and discussion of the issues and problems highlighted in the study. We hope to stimulate other governments and international organizations to join us in seeking a consensus on policy and program initiatives which should be pursued by governments acting alone and together. In addition, we wish to draw on the best thinking, information, and modelling methodologies which exist elsewhere in the international community to enable us to test and revise, as appropriate, our own models and projections of the possible future.

Our most prominent follow-up to date has been the Secretary's recent speech at the UNGA Special Session. Through the medium of that speech, we have served notice to the entire international community that the issues raised by Global 2000 have become a major U.S. foreign policy interest; that we believe they are important to all nations, regardless of their political or economic status; and that addressing the issues is not incompatible with the economic aspirations of the Third World. On the contrary, the issues go to the very foundation of international economic development on which those aspirations must ultimately stand.

It is too early to assess the reaction to the Secretary's speech. The speech was delivered in the context of the North-South dialogue, and we know from experience that the Group of 77, representing the "South", would not be expected to be the friendliest of audiences. But we felt that the message had to be delivered nonetheless. We believe that the study's rigorous recitation of facts—presented against the backdrop of the other studies I have alluded to—will enable the issues to be elevated to a more prominent position on the agenda of North-South deliberations. However, I must also concede that there is a body of opinion that holds that emphasizing these issues will increase the acrimony of the North-South dialogue, and be used by the developing world to support its contention that only by major restructuring of the international economic system can these future challenges be avoided. I can only assure you that we will exert every effort to avoid having Global 2000 emerge as a divisive element, but rather attempt to use it as a positive, constructive contribution to the North-South dialogue.

Later this month in Belgrade, we intend to draw heavily on Global 2000 to support U.S. positions at the 21st UNESCO General Conference—and we will be utilizing it in a similar fashion in other international forums over the next year.

In coming months we will be challenged to be creative and forthcoming—in terms of designing and mounting effective responses to the problems and issues we have posed in the Global 2000 study. At a time of extremely tight budgets at home, and fiscal austerity throughout the international community, the U.S. has, in effect, called for a new attack on a complex and difficult series of key global problems. As I have noted, our willingness and commitment to respond is likely to be met by skepticism (and possibly cynicism) in some quarters of the world. We must, however, proceed vigorously and in good faith; sustained in our conviction that the issues are the right ones, and that we will ignore or neglect them at our peril.

In addition to the steps recited earlier, we have within the State Department formed a task group on Global 2000 follow-up with representatives from all major components of the Department. It is being chaired by my Deputy Assistant Secretary for Environment, Health and Natural Resources. This task group will prepare the State's Department's contributions for the Presidential Task Force on Global Resources and Environment. It will also design and coordinate a broad-based strategy that the State Department will use to guide its own efforts to expand the international dialogue on Global 2000 type issues, and to increase

the Department's capabilities for integrating these issues in U.S. foreign policy planning.

Mr. Chairman, undertaking significant international initiatives on these issues will eventually require funding which may be difficult to sell to the hard-pressed American taxpayer. One of our objectives must therefore be to highlight the significance of Global 2000 for people in this country.

We must do a better job in explaining that air and water pollution respect no boundaries (a truism with which our citizens living near the Mexican and Canadian borders are especially well acquainted); that the loss of forests in far-off regions in the tropics affects our economic and ecological interests here at home; that the expanding immigration into the U.S. is being triggered by the degradation of the natural resource base of certain countries as much as it is by political oppression; and that the overall health and vitality of the developing world is vital to this country's economic and security interests. I could expand the list; but the important issue is not how long the list is today, but how much longer it is going to be in the year 2000 if we do not take action now.

The consequences for our country's economic interests of the scenario sketched by Global 2000 are at this point more implicit than explicit. It is, I think, self-evident that neglecting these problems will cause unneeded scarcity of resources which will reduce supply and increase cost. And this Committee is well aware of how much our industrial base depends on imported raw materials over which we have no direct control. Moreover, with the increasing importance of the export sector of our economy, it certainly behooves us to take note of Global 2000's conclusion that the world will be even more impoverished in the year 2000 than it is today. And impoverished nations do not make good customers.

Mr. Chairman, I would like to close with a few remarks on other steps we must take within the Government, and especially within the State Department, to organize ourselves to address the Global 2000 issues. We must begin now to ensure that U.S. foreign policy analysis and planning is responsive to the types of long-term issues raised in Global 2000. To do this we must examine and upgrade our institutional capacity to projected trends in population, resources and environment; and then to assess their likely economic, social and political consequences for specific countries and regions. We must find new and improved techniques for integrating a broader range of variables into our decision-making process, and for sensitizing and training both senior officials and staff to deal with these issues. Further, we must be creative and sensitive in our approaches to other countries, recognizing that many may not share our vision of emerging problems and needs.

Another important need that emerges from Global 2000 is for the development of improved capabilities for modeling the global future. We must be able to analyze problem interrelations and "feed-back" mechanisms with a higher degree of detail, accuracy and confidence. Just who should develop and maintain such capabilities—whether the U.S. Government should establish a new entity, or whether we should look to the private sector, or perhaps an international body—is an issue that deserves serious attention.

Mr. Chairman, we are planning to build into the U.S. Government's response to Global 2000—and, indeed, the follow-up by my Department—mechanisms and programs to respond to these needs. We hope that the very favorable reactions we have received from the general public, the Congress and the international community will be sustained and expanded as we move into the difficult follow-up phase.

Clearly, Congressional support for the new U.S. policy and program directions which will undoubtedly be called for by the Administration in response to Global 2000 will be central to our collective success. We, therefore, greatly appreciate the Committee's interest in the study, and the opportunity this hearing has provided us to describe our plans for utilizing it in support of long-term U.S. economic, humanitarian and foreign policy interests.

Representative REUSS. Mr. Speth, you are chairman of the task force, is that right?

Mr. SPETH. Yes, Mr. Chairman.

Representative REUSS. I would like to inquire about your terms of reference. For instance, I see that one member of the task force is the Office of Management and Budget. Now, I'm not one of those who have a thing about the OMB. They do their job.

Mr. SPETH. Unlike Secretary Pickering and myself. [Laughter.]

Representative REUSS. But I would hope that the terms of reference of the task force would not be trammled by nickel-and-dime, line-item, budgetary considerations. We are dealing with something much broader here.

Can you assure me that while the OMB may well be a necessary component of your task force, that you aren't going to be concerned with whether the farm price support program is upped a nickel for this or that commodity?

Mr. SPETH. Mr. Chairman, let me respond in three ways to that.

First, it has been my experience that one has to bring the Office of Management and Budget on board on policy development at some point. It is much better that they be a member of the task force at the early stages, I am delighted to have them.

Second, in my conversations with the leadership of OMB—Jim McIntyre and John White, and others—they have thus far been very supportive. And I anticipate that support will continue.

The third point—the assurance that I can give you—is that my agency, and I suspect other agencies, is deeply committed to raising a program that is, indeed, fully responsive to these problems and to bring them to the attention of the President.

There may be other agencies which will take a different perspective and will present their views to the President. I don't know that the Office of Management and Budget will do that; I hope they won't. But the President will ultimately decide what recommendations he wants to make to the public.

I can assure you that this task force will be a fully responsive effort and one committed to presenting to the President a program which will, in fact, be a major step forward in enhancing our response.

I have had an opportunity, also, if you would like me to, to think more along somewhat different lines, as you suggested at the outset.

Representative REUSS. Before doing that, maybe we should button up the subject of the composition and the goals of the task force. And I do have a couple of questions that need to be answered.

Mr. SPETH. OK.

I do have one other thing to add about that. While the task force is composed principally of EOP—Executive Office of the President—agencies and the State Department, which was the cooperating agency with us in developing the report, there is a second tier of agencies, composed of IDCA, EPA, and all of the other agencies that have expertise and interest in this issue.

They have been directed by the President to cooperate with us and to make resources available to us. And we are committed to consulting with them and using their expertise in this process.

Mr. PICKERING. Could I add just a word or two?

I know you are anxious to get on to other things, but I think I should say, from the State Department's perspective, we, too, welcome the early participation of the OMB, rather than late participation. It's always much better to be in on the takeoffs when you have to face the inevitable process of avoiding crash landings.

I think it's very important to have the OMB in there all the way.

Second, I'd like just to refer to a few words that Secretary Muskie said on this very issue: "Are we going to focus in on minor budget line items, or are we going to deal with the major issues?" "

In his statement, delivered at the time the report was received by the President, he said even a modest commitment to the world's future comes under regular attack. Opponents have succeeded too often in recent years. This year we do not have a foreign aid bill at all.

We're operating at a 30 percent below budget. Our commitment ought to be a national embarrassment, whatever the motive of the opponents.

So I think he is coming from a very broad perspective with his strong experience up here in the Budget Committee. And as expressed in this very strong statement, I can assure you that our approach to this will be very much along those lines.

Representative REUSS. I want to inquire a bit into the exact terms of reference.

First, however, I think we should have in the record at this point the various pieces of paper from the President setting you up. There is a piece of paper, issued several years ago, setting up the action which produced the Global 2000 Report, was there not?

Mr. SPETH. That's correct, Mr. Chairman.

Representative REUSS. Would you submit that for us so that in our printed hearing we will have all of the documents together?

Mr. SPETH. Yes, sir.

Representative REUSS. Then, there must have been a piece of paper, issued recently, setting up the task force and telling the task force to implement—

Mr. SPETH. Mr. Chairman, I can indicate what those are, and I will submit them for the record. The President issued two directives at the time he received the report: One to the task force proper, and one to the group of cooperating agencies that I mentioned earlier.

In addition to the two directives, he issued a statement which we will also submit for the record.

Secretary Muskie and I also made statements on the occasion of the release; we could also submit those for the record.

Representative REUSS. Without objection, they will be included in the record, in full, at this point.

[The following information was subsequently supplied for the record:]

PRESIDENT CARTER'S DIRECTIVE

Environmental problems do not stop at national boundaries. In the past decade, we and other nations have come to recognize the urgency of international efforts to protect our common environment.

As part of this process, I am directing the Council on Environmental Quality and the Department of State, working in cooperation with the Environmental Protection Agency, the National Science Foundation, the National Oceanic and Atmospheric Administration, and other appropriate agencies, to make a one-year study of the probable changes in the world's population, natural resources, and environment through the end of the century. This study will serve as the foundation of our longer-term planning.

President Carter issued this directive in his Environmental Message to the Congress on May 23, 1977. It marked the beginning of what became a three-year effort to discover the long-term implications of present world trends in population, natural resources, and the environment and to assess the Government's foundation for long-range planning.

Government concern with trends in population, resources, and environment is not new. Indeed, study of these issues by Federal commissions and planning boards extends back at least 70 years. The earlier studies, however, tended to view each issue without relation to the others, to limit their inquiries to the

borders of this nation and the short-term future, and to have relatively little effect on policy. What is new in more recent studies is a growing awareness of the interdependence of population, resources, and environment. The Global 2000 Study is the first U.S. Government effort to look at all three issues from a long-term global perspective that recognizes their interrelationships and attempts to make connections among them.

The Global 2000 Study is reported in three volumes. This Summary is the first volume. Volume II, the Technical Report, presents the Study in further detail and is referenced extensively in this Summary. The third volume provides technical documentation on the Government's global models. All three volumes are available from the U.S. Government Printing Office.

GLOBAL 2000 STUDY

STATEMENT ON THE REPORT BY PRESIDENT CARTER, JULY 24, 1980

Shortly after assuming office in 1977, I directed the Council on Environmental Quality, the Department of State, and other Government agencies to study the profound changes that may take place in our world's population, natural resources, and environment through the end of the century. Never before had our government or any government attempted to take such a comprehensive, long-range look at interrelated global issues such as world population, agriculture, water resources, forest resources, energy needs, and the overall environmental quality of the Earth we live on.

The Global 2000 study is now complete. Its report projects global conditions which could develop by the end of this century; assuming that present trends and patterns around the world continue. Many of the report's findings must be of great concern to all of us. These findings point to developments related to the world's peoples and resources that our prompt attention can begin to alleviate. We will make use of the information from the Global 2000 report in carrying out public policy wherever possible. In addition, we must continue to analyze the serious issues it raises.

It is important to understand that the conditions the report projects are by no means inevitable. In fact, its projections can and should be timely warnings which will alert the nations of the world to the need for vigorous, determined action at both the national and international levels.

The United States is not alone in responding to global population, natural resource, and environmental issues. The recent Venice summit declaration committed the Western industrial nations to cooperate with developing countries in addressing global food, energy, and population problems. The summit nations agreed on the need for a better understanding of the implications of resource availability and population growth for economic development. In the United Nations many of the key issues raised in the Global 2000 report are being included in the formulation of a new international development strategy.

A number of U.S. and international responses to critical global issues are already underway. For example, since the United Nations Conference on the Human Environment in 1972, our Government has contributed actively to a series of world conferences on these issues, and to followup actions.

Nonetheless, given the importance, scope, and complexity of the challenges set forth in the report, I believe America must provide special leadership in addressing global conditions. I am therefore today appointing a Presidential Task Force on Global Resources and Environment, to be chaired by the Chairman of the Council on Environmental Quality and to include the Secretary of State, the Assistant to the President for Domestic Affairs and Policy, the Director of the Office of Science and Technology Policy, and the Director of the Office of Management and Budget. The Task Force will report to me as soon as possible with recommendations for action in problem areas needing priority attention. I am directing other Federal agencies to cooperate with and support the Task Force's efforts.

I am also directing the State Department to raise the issues and problems identified in the Global 2000 report in all appropriate international meetings, and I myself will raise them as well. For example, in my second environmental message last August, I expressed my concern about the loss of tropical forests. For immediate action on this critical problem, I am directing all relevant Federal agencies to respond within 60 days to the Interagency Task Force Report on Tropical Forests, which was submitted to me last month. In their responses, agencies will

detail the steps they will take to carry out the report's recommendations. In receiving these reports, the Interagency Task Force on Tropical Forests will operate as an arm of the Presidential Task Force on Global Resources and the Environment. Finally, I am requesting the Commission of the Eighties to give careful attention to these global issues.

There are less than 20 years left in our 20th century. The time to look forward to the world we want to have in the year 2000 and leave to succeeding generations is now. It is my firm belief that we can build a future in which all people lead full, decent lives in harmony with a healthy and habitable planet. And I believe that the skill, experience, vision, and courage of the American people today make the United States a natural leader in charting and guiding humanity's course towards a better world tomorrow.

NOTE.—The report is entitled "The Global Report to the President: Entering the Twenty-First Century" (Government Printing Office, 3 volumes—Volume One, The Summary Report; Volume Two, The Technical Report; Volume Three, The Government's Global Model).

TASK FORCE ON GLOBAL RESOURCES AND ENVIRONMENT

MEMORANDUMS FROM PRESIDENT CARTER, JULY 24, 1980

Memorandum for the Secretary of State, Director, Office of Management and Budget, Chairman, Council on Environmental Quality, Assistant to the President for Domestic Affairs and Policy, Director, Office of Science and Technology Policy

Among the most urgent and complex challenges before the world today is the projected deterioration of the global environmental and resource base. Unless nations of the world take prompt, decisive action to halt the current trends, the next 20 years may see a continuation of serious food and population problems, steady loss of croplands, forests plant and animal species, fisheries, and degradation of the earth's water and atmosphere.

To increase our capability to respond to these problems, I am establishing a Presidential Task Force on Global Resources and Environment. I am asking you to serve as members of this Task Force and am asking the Chairman of the Council on Environmental Quality to serve as Chairman.

The objectives of this Task Force will be: to ensure that high priority attention is given to important global resource, population, and environment problems; to assess the effectiveness of Federal efforts in these areas; and to assess ways to improve the Federal government's ability to project and analyze long-term resource, population, and environment trends.

The Task Force will report to me as soon as possible with recommendations for problem areas needing priority attention by the Task Force. It will report to me within six months and periodically thereafter on its progress and on ways in which Federal programs in these areas can be strengthened and improved.

The Task Force will carry out its responsibilities in consultation with and with the assistance of the Department of Agriculture, the Department of Commerce, the Department of Defense, the Department of Energy, the Department of Health and Human Services, the Department of the Interior, the Department of Transportation, the Department of Justice, the Central Intelligence Agency, the Development Cooperation Agency, the National Science Foundation, the Environmental Protection Agency, the National Aeronautics and Space Administration, and my Assistant for National Security Affairs.

JIMMY CARTER.

Among the most urgent and complex challenges before the world today is the projected deterioration of the global environmental and resource base. Unless nations of the world take prompt, decisive action to halt the current trends, the next 20 years may see a continuation of serious food and population problems, steady loss of croplands, forests, plant and animal species, fisheries, and degradation of the earth's water and atmosphere.

To increase our capability to respond to these problems, I have established a Task Force on Global Resources and Environment consisting of the Chairman of the Council on Environmental Quality as chair, the Secretary of State, the Director of the Office of Management and Budget, the Assistant to the President for Domestic Affairs and Policy, and the Director of the Office of Science and Technology Policy.

Memorandum for the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Defense, the Secretary of Energy, the Secretary of Health and Human Services, the Secretary of the Interior, the Secretary of Transportation, the Attorney General, Department of Justice, the Director, Central Intelligence Agency, the Director, International Development Cooperation Agency, the Director, National Science Foundation, the Administrator, Environmental Protection Agency, the Administrator, National Aeronautics and Space Administration, the Assistant to the President for National Security Affairs

I have directed the Task Force to work closely with you in carrying out its responsibilities, which will be: to ensure that high priority attention is given to important global resource, population, and environment problems; to assess the effectiveness of federal efforts in these areas; and to assess ways to improve the federal government's ability to project and analyze long-term resource, population, and environment trends.

Each of your agencies shall cooperate with and support this important Task Force. The Task Force will report to me as soon as possible with recommendations for problem areas needing priority attention by the Task Force. It will report to me within six months and periodically thereafter on its progress and on ways in which federal programs in these areas can be strengthened and improved.

JIMMY CARTER.

STATEMENT BY
 THE HONORABLE EDMUND S. MUSKIE
 SECRETARY OF STATE
 ON THE PUBLIC RELEASE OF THE GLOBAL 2000
 REPORT TO THE PRESIDENT
 WASHINGTON, D. C.
 JULY 24, 1980

WORLD POPULATION GROWTH, THE DEGRADATION OF THE EARTH'S NATURAL RESOURCE BASE AND THE SPREAD OF ENVIRONMENTAL POLLUTION COLLECTIVELY THREATEN THE WELFARE OF MANKIND. IF THESE CHALLENGES ARE IGNORED, THEY WILL OVERWHELM OUR EFFORTS TO IMPROVE THE QUALITY OF LIFE AND SOCIAL OPPORTUNITIES FOR THE WORLD'S PEOPLE, INCLUDING OUR OWN. IF THEY ARE MET AND SUCCESSFULLY OVERCOME, WE WILL FACE THE TWENTY-FIRST CENTURY WITH RENEWED HOPE AND SECURITY.

THIS IS THE ESSENTIAL MESSAGE OF GLOBAL 2000.

GLOBAL 2000 IS NOT A PREDICTION. IT IS MERELY ONE VISION OF THE CONSEQUENCES OF PRESENT TRENDS:

EVEN WITH A DECLINE IN THE RATE OF POPULATION GROWTH, WORLD POPULATION IS EXPECTED TO EXCEED 6 BILLION BY THE TURN OF THE CENTURY. EVEN WITH MAJOR ADVANCES, IT WILL BE AN ENORMOUS CHALLENGE TO FEED THESE BILLIONS, HOUSE THEM IN OUR CITIES, AND PROVIDE EVEN MODEST SOCIAL AND ECONOMIC OPPORTUNITY.

THIS SOCIAL CHALLENGE IS MATCHED BY THE CHALLENGE TO OUR RESOURCES, PARTICULARLY OUR SUPPLIES OF FUEL. PRESSURE WILL INCREASE ON OUR FORESTS; OUR COAL, OIL, AND NATURAL GAS; OUR STORES OF BASIC METALS; AND OUR SUPPLY OF THE MOST FUNDAMENTAL OF ALL RESOURCES -- AIR, WATER AND LAND.

THE WORLD COMMUNITY WILL HAVE DIFFICULTY COPING WITH THESE CHALLENGES. MANY REFLECT LONG-STANDING SOCIAL, CULTURAL AND ECONOMIC PREFERENCES AND LIFE STYLES, INCLUDING OUR OWN. IN ADDITION, THE FINANCIAL AND TECHNOLOGICAL RESOURCES AVAILABLE TO GOVERNMENTS TO FASHION REMEDIES ARE LIMITED, HERE AS WELL AS ELSEWHERE.

BUT THE GLOBAL 2000 REPORT IS NOT A FATAL PROPHECY MERELY WAITING TO BE PLAYED OUT. PROMPT ACTION CAN CHANGE THE PACE AND DIRECTION OF PRESENT TRENDS.

OUR OWN RECORD IS FRANKLY MIXED. WE REMAIN, IN OVERALL DOLLAR TERMS, THE LARGEST CONTRIBUTOR TO INTERNATIONAL PROGRAMS ON FAMILY PLANNING, FOOD PRODUCTION, ENVIRONMENTAL PROTECTION, DISASTER RELIEF, HEALTH SERVICES. . . AND OTHERS. YET EVEN OUR CONTRIBUTION IS PITIFULLY SMALL WHEN MEASURED AGAINST THE NEED.

AND EVEN THIS MODEST COMMITMENT TO THE WORLD'S FUTURE COMES UNDER REGULAR ATTACK, AND OPPONENTS HAVE SUCCEEDED TOO OFTEN IN RECENT YEARS. THIS YEAR WE DO NOT HAVE A FOREIGN AID BILL AT ALL. WE ARE OPERATING AT 30 PER CENT BELOW BUDGET. OUR COMMITMENT OUGHT TO BE A NATIONAL EMBARRASSMENT, WHATEVER THE MOTIVE OF THE OPPONENTS. GLOBAL 2000 DEMONSTRATES, I THINK, JUST HOW IMPORTANT OUR INVESTMENT IN THE WELFARE OF OUR NEIGHBORS CAN BE, AND JUST HOW GREAT ARE THE HUMAN COSTS OF SHORTSIGHTED POLICIES.

THE STUDY CONCLUDES THAT, IF PRESENT TRENDS CONTINUE, THE WORLD IN 2000 WILL BE MORE CROWDED, MORE POLLUTED, LESS STABLE ECOLOGICALLY AND MORE VULNERABLE TO DISRUPTIONS THAN THE WORLD TODAY. BARRING REVOLUTIONARY ADVANCES IN TECHNOLOGY, LIFE FOR MOST PEOPLE ON EARTH WILL BE MORE PRECARIOUS IN 2000 THAN IT IS NOW -- UNLESS THE NATIONS OF THE WORLD ACT DECISIVELY TO ALTER CURRENT TRENDS.

TO AVOID SUCH A WORLD, PEOPLE, THROUGH THEIR GOVERNMENTS, MUST REDEDICATE THEMSELVES TO THE FIGHT AGAINST THREE FUNDAMENTAL ENEMIES: OVERPOPULATION, HUNGER, AND THE SUPPLY OF ENERGY.

FIRST AND FOREMOST, WE MUST COME TO GRIPS WITH THE TREMENDOUS GROWTH IN WORLD POPULATION. WITH A PROJECTED 55 PER CENT INCREASE IN WORLD POPULATION BY THE END OF THE CENTURY -- 90 PER CENT OF IT IN DEVELOPING COUNTRIES -- THE PROSPECTS FOR INCREASED HUNGER AND SOCIAL DISRUPTION ARE HIGH. WE IN THE U.S. ARE THE LARGEST CONTRIBUTOR, BY FAR, TO INTERNATIONAL PROGRAMS TO ADDRESS IT. WE NOW CONTRIBUTE ABOUT \$200 MILLION A YEAR TO FAMILY PLANNING IN THE DEVELOPING COUNTRIES. IF WE DOUBLED THAT CONTRIBUTION BY 1985 . . . AND IF OTHERS JOINED US. . . THERE MIGHT BE THREE BILLION FEWER PEOPLE ON EARTH WHEN POPULATION FINALLY STABILIZES. AND STABILITY MIGHT COME TWENTY YEARS SOONER. THAT WOULD BE QUITE A RETURN ON OUR INVESTMENT.

A SECOND MAJOR TARGET ILLUMINATED BY GLOBAL 2000 IS WORLD FOOD SUPPLY. DESPITE SIGNIFICANT INCREASES IN PRODUCTION, THE FOOD SUPPLY WILL BE UNCHANGED OR WORSE FOR THE POOREST OF THE WORLD'S PEOPLE IN LARGE REGIONS OF AFRICA, ASIA, AND LATIN AMERICA. THE UNITED STATES HAS BEEN A WORLD LEADER IN THIS AREA. WE HAVE SHARED OUR KNOWLEDGE -- AS WELL AS OUR FOOD AID -- FREELY AND EFFECTIVELY. WHERE WE HAVE BEEN GENEROUS WE CAN POINT TO STARTLING SUCCESS.

INDIA, FOR EXAMPLE, IS NOW ABLE TO MEET ITS OWN FOOD NEEDS IN NO SMALL PART DUE TO U.S. ASSISTANCE IN THE 1950'S AND '60'S.

YET EVEN IF WE KEEP UP WITH POPULATION GROWTH AND MAINTAIN CURRENT DIETARY LEVELS TO THE YEAR 2000, THERE WILL STILL BE AN ESTIMATED 800 MILLION PEOPLE WITH NOT ENOUGH TO EAT. CLEARLY THE COST TO MEET THEIR NEEDS DOES NOT EXCEED OUR RESOURCES. IT MUST NOT EXCEED OUR WILL.

ENERGY HAS BEEN A DOMINANT CONCERN HERE AT HOME. PEOPLE IN OTHER PARTS OF THE WORLD, PARTICULARLY IN THE DEVELOPING NATIONS, HAVE ALSO FACED SEVERE DIFFICULTIES AS ENERGY PRICES HAVE RISEN. AND THE GLOBAL 2000 PROGNOSIS FOR THE POOREST TWO-THIRDS OF HUMANITY IS BLEAK. THE INTRODUCTION OF SMALL, LOW-COST ENERGY ALTERNATIVES HAS BECOME A HIGH PRIORITY NEED NOT ONLY IN THE UNITED STATES, BUT FOR ALL MANKIND. WE HAVE BEGUN THIS WORK. WE MUST DO MORE.

THE ISSUES OF GLOBAL RESOURCES AND ENVIRONMENTAL PROTECTION HAVE BEEN A FUNDAMENTAL CONCERN OF MINE AS LONG AS I HAVE BEEN IN PUBLIC LIFE. THEY ARE A FUNDAMENTAL CONCERN OF THE CARTER ADMINISTRATION AS WELL.

PRESIDENT CARTER ASKED FOR GLOBAL 2000 IN ONE OF HIS FIRST DIRECTIVES. UNDER HIS LEADERSHIP, POLICIES AND PROGRAMS ARE CHANGING. BUT HE NEEDS THE SUPPORT OF THE CONGRESS. HE NEEDS THE SUPPORT OF THE AMERICAN PEOPLE. AFTER ALL, FOOD PROGRAMS MAKE SENSE TO OUR OWN FARMERS AS WELL AS TO HUNGRY PEOPLE AROUND THE WORLD. ENERGY ALTERNATIVES ARE JUST AS VALUABLE TO US AS TO OUR NEIGHBORS. OUR STAKE IN THESE PROGRAMS IS FUNDAMENTAL. IT OUGHT TO BE OBVIOUS AS WELL.

A GREAT DEAL MORE NEEDS TO BE DONE, AND THE UNITED STATES HAS A SPECIAL ROLE TO PLAY. WE OUGHT TO ACKNOWLEDGE OUR RESPONSIBILITIES AND COMMIT OURSELVES TO CARRY OUR FULL SHARE OF THE INTERNATIONAL BURDEN. WE OUGHT TO ASK OTHER NATIONS TO JOIN US.

WHAT WE CANNOT DO IS BACK AWAY FROM THE CONCLUSIONS OF GLOBAL 2000. THE STAKES ARE TOO HIGH . . . FOR THE UNITED STATES, AND FOR MANKIND.

THESE ARE NOT PROBLEMS WHICH WILL YIELD TO SIMPLISTIC RESPONSE. THEY CANNOT BE IGNORED DESPITE OUR VERY REAL PROBLEMS HERE AT HOME.

BUT THEY ARE PROBLEMS WHICH WILL YIELD TO THE BEST EFFORTS OF MANKIND. SINCE THE DAYS OF MALTHUS, THOSE WHO PREDICTED DOOM FOR HUMANITY HAVE BEEN WRONG. THEY HAVE BEEN WRONG BECAUSE THEY DISCOUNTED THE VISION OF NATIONS AND THE WILLINGNESS OF THE EARTH'S PEOPLE TO RESPOND TO THE NEED FOR CHANGE.

IF WE BEGIN OUR WORK NOW, WE WILL SAY IN TWENTY YEARS THAT THE GLOBAL 2000 WAS ALSO WRONG. AND WE WILL CONGRATULATE OURSELVES FOR HAVING THE FORESIGHT TO BUILD A BETTER FUTURE.

STATEMENT BY
GUS SPETH, CHAIRMAN
COUNCIL ON ENVIRONMENTAL QUALITY
ON THE PUBLIC RELEASE OF THE GLOBAL 2000
REPORT TO THE PRESIDENT
WASHINGTON, D.C.
JULY 24, 1980

I am very pleased to join Secretary Muskie today in releasing to the public the results of the Global 2000 Report -- an intense and wide-ranging interagency effort, initiated by President Carter in 1977, to examine the long-term implications of present global population, natural resource and environmental trends.

The Global 2000 Report is unprecedented. It is the first attempt by the U.S. Government -- or any government -- to make long-term quantitative projections across the range of population, resource and environmental concerns. Given the obvious limitations of such projections, the Global 2000 Report can best be seen as a reconnaissance of the future. And the results of that reconnaissance are disturbing.

The conclusions of the Global 2000 Report indicate the potential for deepening global problems over the next two decades if policies and practices around the world continue as they are today. The next 20 years may see an increasingly crowded world, containing over 6 billion human beings by 2000, where growing numbers of people are suffering hunger and privation; where losses of croplands and forests are mounting while human numbers and needs increase; where there are fewer per capita supplies of fresh water, timber, and fish; where degradation of the earth's air and water is accelerating; and where plant and animal species are vanishing at rates without precedent. Even

- 2 -

now, 800 million people live in conditions of absolute poverty, their lives dominated by hunger, ill health, and the absence of hope, and the earth's carrying capacity -- the ability of biological systems to meet human needs -- is eroding. By 2000, matters may be considerably worse.

The effect of rapid population growth and poverty on the productivity of renewable natural resource systems is certainly one of the most troubling of the Report's findings. We have become accustomed in recent years to warnings about the need to conserve non-renewable resources, but the Global 2000 Report points to serious stresses that threaten our renewable resources, such as our croplands, forests and fisheries, as well.

We must recognize the Global 2000 conclusions for what they are: not predictions of what will occur, but projections of what could occur if we do not respond. The Global 2000 Report's projections should serve as effective warnings that vigorous, determined new initiatives will be required worldwide to meet human needs while protecting and restoring the earth's capacity to support life. If there was doubt before, there should be little doubt now -- the nations of the world, industrialized and less developed alike, must act in concert to secure sustainable economic development, to control population growth and to protect the earth's resources and environment before the trends depicted in the Global 2000 Report become realities.

I should add here that one conclusion reached by those of us who worked on the Report is that the frequently mentioned conflict between development and environmental protection is in large part

- 3 -

a myth. Instead of an obstacle to development, protection of resources and environment is an essential aspect of development. Many of the resource problems outlined in the Global 2000 Report stem from a lack of sound, sustainable development, and will be effectively addressed only by economic progress.

I am optimistic that as people here and abroad come to realize the full dimensions of the challenge before us, a positive and ultimately powerful response will be forthcoming. The humanitarian reasons for action are strong enough by themselves, but we must be aware of the Report's implications for our security as well. Secretary Muskie made the point well in his recent defense of the U.S. foreign aid program before the Foreign Policy Association: "It is in our interest to do all we can now to counter the conditions that are likely to drive people to desperation later: ...We would rather send technicians abroad to help grow crops than send soldiers to fight the wars that can result when people are hungry and susceptible to exploitation by others."

We have already made a good start in addressing many global problems. Our government has contributed importantly to a series of United Nations conferences on population, food and hunger, the human environment, and other issues, and we sponsored the work of the Federal interagency task force on tropical deforestation and the U.S. initiative on long-range analysis and planning at last month's Economic Summit in Venice. The United States is a world leader in wildlife conservation and the assessment of environmental effects of government actions.

The President's Executive Order of January 5, 1979, ordering U.S. government agencies to consider the effects of their actions abroad is another example of this leadership.

Other nations have also begun to respond to the problems noted in the Global 2000 Report. They are beginning to replant deforested areas, conserve energy, make family planning measures widely available, take actions to reduce soil losses and desertification, explore alternatives to oil use, and reduce the use of harmful pesticides.

In bringing about the changes needed, the United States has both the ability and the obligation to continue its strong leadership role. Even though many of the problems identified in the report seem remote from us, they are not, and we must turn our attention, ingenuity and generosity increasingly to them.

We must cope with these global demands in part by laying a sound foundation at home. For example, by relying increasingly on energy conservation and renewable resources here at home, the United States is enhancing its ability to provide leadership abroad as countries search for sustainable energy futures. We must also move to protect our domestic agricultural base; if we continue to lose productive farmland at current rates, our position as a major food exporter -- and our ability to feed people of other nations -- will be jeopardized.

To provide the basis for a strengthened, sustained response to the problems identified in the Global 2000 Report, President Carter has today created a Presidential Task Force on Global

- 5 -

Resources and Environment and has asked that it report back to him with a plan of action within six months. I am honored to chair this effort, and believe it is the most important assignment someone in my position could have at this time. I am looking forward to working with Secretary Muskie, the other Task Force members, and the many other federal agencies that made such valuable contributions to the Global 2000 Report to develop specific proposals for ensuring that our government does what is necessary to address these urgent problems.

In developing our follow-up to the Global 2000 Report, the Task Force will have a number of other studies and reports to draw upon: the World Conservation Strategy announced earlier this year by the International Union for Conservation of Nature and Natural Resources, the UN Environment Program and the World Wildlife Fund; the work of the World Bank under the able leadership of Robert McNamara, who will be sorely missed when he retires from the Bank next year; the papers of the Worldwatch Institute, which first brought these issues to wide public attention; and the contributions of many other national, international and private organizations. I look forward to working with all of these groups in forging a strong, effective response to the Global 2000 Report. My principal deputy at the Council on Environmental Quality for this effort will be Nicholas Yost, CEQ's General Counsel. One of Nick's priorities will be to ensure that non-governmental organizations have every opportunity to work closely with the Task Force in the coming months.



PRESS RELEASE

EXECUTIVE OFFICE OF THE PRESIDENT
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FOR RELEASE AT 10:00 AM EDT JULY 24, 1980

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WASHINGTON -- U.S. Government projections show that unless the nations of the world act quickly and decisively to change current policies, life for most of the world's people will be more difficult and more precarious in the year 2000 than it is today.

The Government's projections of global population, natural resources and environmental trends are reported and analyzed in The Global 2000 Report to the President: Entering the Twenty-First Century. The report, released today, was prepared by the President's Council on Environmental Quality (CEQ) and the U.S. Department of State.

"If present trends continue," the report says, "the world in 2000 will be more crowded, more polluted, less stable ecologically, and more vulnerable to disruption than the world we live in now."

"For hundreds of millions of the desperately poor, the outlook for food and other necessities of life will be no better," the report says. "For many it will be worse."

The report's projections are not predictions. Instead, the report says, they depict conditions that are "likely to develop" if there are no changes in public policies around the world.

President Carter directed the three-year study in his 1977 Environmental Message to Congress in order to establish a foundation for the Government's longer-term planning. In a statement issued by the White House today, the President said many of the report's findings "must be of great concern to all of us. These findings point to developments related to the world's peoples and resources that our prompt attention can begin to alleviate."

-2-

The report's projections, the President said, "can and should be timely warnings which will alert the nations of the world to the need for vigorous, determined action, at both the national and international levels."

Along with a number of programs already begun by the Administration to address the global problems noted in the report, the President announced that he is appointing a Presidential Task Force on Global Resources and Environment, to be headed by CEQ Chairman Gus Speth, which will develop recommendations for strengthening and improving federal efforts to deal with these problems.

In addition, the President directed the State Department to arrange an international meeting of environmental and economic experts in Washington next year to discuss the interrelated questions of population, natural resources, environment, and economic development. He also directed the Department to "raise the issues and problems identified in the Global 2000 report in all appropriate international meetings," and said he would raise them himself as well.

The Global 2000 report is the first attempt by the U.S. Government -- or any government -- to make long-term quantitative projections across the range of population, resource and environmental concerns. Although the report found gaps and inconsistencies in its projections, its conclusions are the most fully documented and richly detailed of all the recent efforts to project future global conditions and trends. They are also supported by five long-term global analyses carried out by UN agencies and private organizations.

At a reception and press conference releasing the Global 2000 report, Secretary of State Edmund S. Muskie said the world's people, through their governments, must join to battle the "fundamental enemies" of overpopulation, hunger and energy shortages in order to alter the trends depicted in the report.

"World population growth, the degradation of the earth's natural resource base and the spread of environmental pollution collectively threaten the welfare of mankind," Muskie said. "If these challenges are ignored, they will overwhelm our efforts to improve the quality of life and social opportunities for the world's people, including our own. If they are met and successfully overcome, we will face the twenty-first century with renewed hope and security."

Muskie said the United States has a "special role to play" in addressing these problems. "We ought to acknowledge our responsibilities and commit ourselves to carry our full share of the international burden. We ought to ask other nations to join us.

"Global 2000 demonstrates, I think, just how important our investment in the welfare of our neighbors can be, and just how great are the human costs of shortsighted policies."

CEQ Chairman Speth said the report could best be seen as a "reconnaissance of the future" -- a reconnaissance that has produced "disturbing" results.

- 3 -

"The conclusions of the Global 2000 report," he said, "indicate the potential for deepening global problems over the next two decades if policies and practices around the world continue as they are today."

But, Speth added, the report's projections "should serve as effective warnings that vigorous, determined new initiatives will be required worldwide to meet human needs while protecting and restoring the earth's capacity to support life.

"In bringing about the changes needed, the United States has both the ability and the obligation to continue its strong leadership role," Speth said. "Even though many of the problems identified in the report seem remote from us, they are not, and we must turn our attention, ingenuity and generosity increasingly to them."

In a letter transmitting the report to the President, Speth and Assistant Secretary of State Thomas Pickering stress the importance of sound economic development in the poorer nations of the world. "Hundreds of millions of the world's people are now trapped in a condition of abject poverty," the letter notes. "People at the margin of existence must take cropland, grazing land, and fuel where they can find it, regardless of the effects upon the earth's resource base. Sustainable economic development, coupled with environmental protection, resource management, and family planning is essential."

CEQ and the State Department were joined by 12 other agencies in preparing the massive Global 2000 report. Dozens of experts from inside and outside the government served as advisors to the study, which was directed by Dr. Gerald O. Barney.

Among the report's major findings and conclusions:

Population

World population will grow from 4.5 billion today to more than 6 billion in 2000. Although the annual percentage rate of growth will slow marginally, population will actually be growing faster, in terms of numbers of people, in 2000 than it is today. Most of the 100 million people added to the world's population each year will live in the poorest countries, which will contain about four-fifths of the human race by the end of the century.

Income

The income gap between rich and poor nations will widen, and the per capita gross national product of the less-developed countries will remain at generally low levels. For example, gross national product in the populous nations of South Asia -- India, Bangladesh and Pakistan -- will still be less than \$200 per capita (in 1975 dollars) by 2000, despite considerable increases in production and national income. Some 800 million people now live in absolute poverty; if current policies remain unchanged, their number could grow to more than one billion.

Food

While world food production will increase 90 percent in the 30 years from 1970 to 2000, a global per capita increase of less than 15 percent is projected over the same period. Most of the increase will go to countries that are already comparatively well-fed. In South Asia, the Middle East and the poorer countries of Africa, per capita food consumption will increase marginally at best and in some areas may actually decline below present inadequate levels. Real prices of food are expected to double during the same 30-year period.

Cropland

The land on which food is grown will become less productive in many parts of the world. The spread of desert-like conditions now claims an area the size of Maine each year. Croplands are lost to production as soils deteriorate because of erosion, compaction, and waterlogging and salinization on irrigated lands. Meanwhile, cropland in the United States and other industrialized countries is being converted rapidly to other uses -- residential development, highways, shopping centers and reservoirs. In poorer countries as well, villages and cities are expanding at the expense of cropland.

Energy

The increases in world food production projected by the study are based on continued improvements in crop yields per acre -- improvements which depend heavily on energy-intensive technologies like fertilizer, pesticides, fuel for tractors and power for irrigation. Yet the study's projections show no early relief from the world's tight energy situation. World oil production is expected to level off by the 1990s. Many less developed countries will have difficulty meeting their energy needs because of rapidly increasing prices. Projected needs for wood for fuel will exceed available supplies by about 25 percent before the turn of the century. "A rapid escalation of fossil fuel prices or a sudden interruption of supply," the report says, "could severely disturb world agricultural production, raise food prices, and deprive larger numbers of people of adequate food."

Forests

The conversion of forested land to agricultural use and the demand for fuelwood and forest products will continue to deplete the world's forests, which are now disappearing at the rate of 18-20 million hectares -- an area half the size of California -- a year. As much as 40 percent of the remaining forests in poor countries may be gone by 2000. Most of the loss will be in tropical and subtropical areas.

Genetic Resources

The loss of tropical forests, along with the impact of pollution and other pressures on habitats, will cause massive destruction of the planet's genetic resource base. Between 500,000 and two million plant and animal species -- 15 to 20 percent of all species on earth -- could be extinguished by 2000. One-half to two-thirds of the extinctions will result from the clearing or degradation of tropical forests.

Water Resources

Deforestation will also contribute to severe regional water shortages and the deterioration of water quality. Deforestation destabilizes water supplies, aggravates water shortages in dry seasons and intensifies flooding, soil erosion and siltation of rivers and reservoirs in rainy seasons. Population growth alone will cause demands for water to at least double from 1971 levels; still greater increases would be needed to improve standards of living. Competition for water resources will also exacerbate international tensions. The report notes that 148 of the world's major river basins are shared by two countries and 52 are shared by three to ten countries. "Long-standing conflicts over shared rivers ... could easily intensify," the report says.

Air Quality

Industrial growth is also likely to worsen air quality. Air pollution in some cities in less-developed countries is already far above levels considered safe by the World Health Organization. Increased burning of fossil fuels, especially coal, may contribute to acid rain damage to lakes, plants and building materials and to the increasing concentration of carbon dioxide in

- 6 -

the earth's atmosphere, possibly leading to climatic changes that could have highly disruptive effects on world agriculture. Depletion of the stratospheric ozone layer, attributed partly to chlorofluorocarbon emissions from aerosol cans and refrigeration equipment, could also have an adverse effect on food crops and human health.

The report points out that some nations have already begun to respond to the problems identified during the study. The United States is placing increased emphasis on natural resource management and environmental protection in its foreign aid programs, and has instituted an international effort to gain agreement on a comprehensive program to encourage conservation and wise management of forests. More and more nations are beginning to replant deforested areas, conserve energy, make family planning measures widely available, take actions to reduce soil losses and desertification, explore alternatives to oil use, and reduce the use of harmful pesticides.

But, the report adds, "Encouraging as these developments are, they are far from adequate to meet the global challenges projected in this Study. Vigorous, determined new initiatives are needed if worsening poverty and human suffering, environmental degradation, and international tension and conflicts are to be prevented."

Besides CEQ and the State Department, agencies contributing to the Global 2000 report were the Departments of Agriculture, Energy, and Interior, the Bureau of the Census, the Agency for International Development, the Central Intelligence Agency, the Environmental Protection Agency, the Federal Emergency Management Agency, the National Aeronautics and Space Administration, the National Science Foundation, the National Oceanic and Atmospheric Administration, and the Office of Science and Technology Policy.

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NOTE: Copies of the Global 2000 report are available from the U.S. Government Printing Office, Washington, D.C. 20402. Stock numbers and prices are:

Volume 1, the Summary Report	S/N 041-011-00037-8	\$3.50
Volume 2, The Technical Report	S/N 041-011-00038-6	\$13.00
Volume 3, The Government's		
Global Model	S/N 041-011-00051-3	\$8.00

The report is also available from Pergamon Press, Maxwell House, Fairview Park, Elmsford, NY 10523.

Representative REUSS. Now, a couple of words on the question of where we go from here.

Is there anything in the President's directive to the task force which requires unanimity?

Mr. SPETH. No, Mr. Chairman.

Representative REUSS. I'm glad to hear that, because so often the committee approach results in the least common denominator. And I would hope that those who, by nature, are disposed to be more daring—the State Department, for instance—would not be inhibited.

Mr. SPETH. Yes.

Representative REUSS. Second, this report is due when? Early next year?

Mr. SPETH. The President has asked us to get information to him on at least two occasions.

First, he would like to hear from us immediately on what we think the main priority areas of concern are, based on the report.

I think I have indicated at least some of those in my testimony, and in a moment I will indicate what some of the others are.

Second, he has asked that we make our report and our recommendations available to him, with the agency views, within 6 months of the issuance of the report.

We anticipate having this available to the President in December.

Representative REUSS. Very good.

Another question: You have made clear that part of the report will be concerned with governmental action—new laws, new regulations, and new initiatives. And that certainly must be part of the report. But, obviously, the apocalypse of the year 2000 is not going to be avoided simply by the governmental actions undertaken by the United States.

What about two other important aspects: Namely, what the rest of the Governments of the world are supposed to be doing, collectively or individually; and second, what are private persons and businesses supposed to be doing?

Will your report—and I hope it will—concern itself with an across-the-board approach?

Mr. SPETH. Yes, Mr. Chairman, I'm sure it will. But let me mention two things about that.

First, I don't think we will ever address these problems effectively unless we have the cooperation and support of the private sector—of multinational corporations and others who carry on activities abroad, in addition to the Governments involved.

We are soliciting suggestions and recommendations from the business community. We have sent letters to some 600 experts and constituency group leaders and business leaders in this country. We have asked the question, "What can our Government do to enhance its capability or work with the private sector to better address these problems?"

Mr. Pickering has touched upon the role of foreign governments in his testimony. We recognize that while we can play a major role and can exercise tremendous leadership internationally, ultimately many of these problems are problems in other countries, as well as in our own. And they are not going to be solved without the cooperation of

foreign governments. Mr. Pickering is now outlining, and has begun to implement a plan for addressing these problems with other countries.

Representative REUSS. Your report will discuss things that countries other than ourselves, developed and developing, ought to be doing, will it not?

Mr. SPETH. Yes, it will.

Representative REUSS. Well, I'm delighted at your response.

Now, Mr. Speth, why don't you ad lib a bit about some of the things that could be done, using the speculative approach that I earlier suggested to you. You haven't yet written the report—

Mr. SPETH. That's the biggest problem, Mr. Chairman, as you might imagine.

Let me talk about three things in particular. One is the question of public awareness and public support. By "public," I guess I should include this Congress and the executive branch agencies as well.

First, we are faced with a situation in which there is a tremendous need for leadership on these questions. The commitments that we had in the early 1960's to development abroad have waned.

Our contribution to international aid has declined as a percentage of GNP. We are now way down the list of countries in terms of our per GNP contribution to international assistance, and we're very much focused inward on our own domestic problems.

If there is one thing this report says and one thing we want to do in this effort, it is to carry on public awareness and public education function.

We recognize that this is a difficult time economically for our own country, that we have problems. But we are never going to solve those problems or the problems identified in the report if we create a "fortress American" mentality. We cannot shut ourselves in and think that the best thing to do is to try to focus on our own problems and solve them first and forget about the rest of the world. World problems will come out to haunt us in a much more serious form, as the report says, if we take that approach.

So we need a new sense of national commitment. We need a sense of internationalism that we haven't had on these issues for some time.

If we can convince people that that's necessary, both for humanitarian reasons and for pragmatic reasons of our own global security; if we can begin to convince a larger audience of that need, we will have made a significant contribution.

We welcome your help and the help of Congress in doing that.

I think we also must be aware of how the actions of the United States can contribute to the problems that we have identified in the report.

We in this country are a major source of hazardous chemicals. The chemical industry produces tremendous benefits, but some unfortunate byproducts and side effects can affect the global environment and environments of other countries, as well as our own.

Our energy consumption is such that we are not only a source of tremendous demand for increasingly scarce fuels, but we are also a source of global pollution in the form of carbon dioxide and acid rain. And those are problems that we must concern ourselves with.

And last, of course, U.S. businesses and U.S. agencies cooperating with those businesses or cooperating with foreign governments can take ill-considered actions as well as very well-considered actions.

We must be sure that our aid programs, our Export-Import Bank programs, and other programs of that type contribute to the solution of these problems and recognize the long-term implications.

So, in general, we have to think in terms of three types of solutions. And filling in the subheadings under these three categories is what we must do in the next few months, or contribute to doing.

The first is that we have to insure ways for these issues to receive a continuing priority in the Federal Government. We have to establish mechanisms in all the Federal agencies that will insure that these issues are not forgotten in the rush of more immediate concerns, using the various means that this Government has used over the years for giving issues priority concern.

We have a scheme for doing that in the human rights area, and we have other programs in other areas. The exact model for doing that with regard to these problems is one that we are going to be grappling with, and we seek your assistance.

We must also insure that our analytical capability for addressing these issues is improved. We recognize that this is a first-of-a-kind effort, that it is flawed, and that the Government's capability to do this type of long-term projection and analysis is inadequate and has to be enhanced.

The third area is the area of specific program modifications, enhancements, and policy changes. We have already touched upon the domestic issues of farmland, preservation and energy conservation and upon the foreign issues of international aid and trade and assistance programs.

Much of the work that we want to focus on, and many of the issues that we want to address, have already been addressed by others. I think we should stress the importance of the Brandt Commission report, the dialog that is now occurring at the United Nations, and Secretary Muskie's speech to the United Nations last week.

Last, I would like to stress as strongly as I can, as chairman of the task force, the fact that we solicit, encourage, indeed beg for the advice and recommendations of the Congress and of its associated arms, such as the Office of Technology Assessment, with which we have had some contacts already. OTA may be sponsoring a symposium to help us pull together recommendations for the President.

So, Mr. Chairman, I would just encourage you to think of how this committee and the other committees on which the members of this committee serve can get your staffs working on letting us know your views in terms of what you would like to see this administration do in response to these problems.

Thank you.

Representative REUSS. Thank you, Mr. Speth. Now, Mr. Pickering, did you have something to add right now before we get to the questions? If so, fine.

Mr. PICKERING. I would, Mr. Chairman, if you will. It strikes me in a personal sense that all of the issues that we have to deal with in

Global 2000 are extremely important. But looking at this from an international point of view, if one had to pick out a few and forcing thought along that line, I would say that food, population, and energy certainly are among the three most important ones that we have to deal with. And while one would not like to see some singled out for priority over the others, it does seem to me that those three are kind of driving force issues that we have to deal with, and they are ones in which we have traditionally focused a great deal of our attention.

But as you may know, we are the world's largest contributor of foreign aid funds in the population field yet there is probably for the first time now more absorptive capacity in the developing world for more in that direction, and that looks like a likely way to go. Secretary Muskie a week ago proposed that we participate with the rest of the world in doubling our commitment in this area.

In the food area, we are perhaps, in terms of agriculture research, the preeminent power in the world, yet we have not focused a great deal of our time and attention to tropical areas for reasons that are well-known to you. We have only a tiny national stake in the tropics, yet it's in the tropics that perhaps four-fifths of the people will live in the underdeveloped world and where food production increase, through the enormous application of the kind of resources we have, could make a great deal of difference.

Energy problems have struck us all, but nowhere more importantly than in the developing world where increasing prices have had an enormous effect. We clearly need to move in the area of renewables and discovery of new energy, following up Bob McNamara's initiative in the World Bank, developing an energy program in that institution, and developing our own bilateral programs of work in the energy area.

These have all been focused, as I said, in the areas of both aid and in terms of technology, and we have enormous resources in our research and development capacity in this country to begin to deal with those programs. And I believe and hope Gus Speth's task force will help us to find ways to mobilize those sorts of resources.

International cooperation is certainly essential, and we can't in any way, I think, carry the rest of the world on our shoulders without their strong cooperation. Again, this speech which we have submitted for the record from Secretary Muskie made very clear that the program of cooperation in dealing with these issues had important facets of contributions from the developed countries, from the oil-producing countries which have a new and, I think, remarkably important role to play in what's to be done for the future, and in the developing countries themselves.

The specifics are set out there. I won't go into those in detail. But we've already begun to set some of the framework for the response to this in his, I think, remarkably important speech just a week ago.

Another important facet of what we have to deal with in taking on these problems is the fact that in many of the areas, as Gus Speth mentioned, the renewable resources are themselves subject to severe pressures and that the days are not long, if we don't do something about it, when we can count on inexhaustible supplies of such renewable resources as wood from the tropical forests of the world, which are important for both energy and industrial production.

The interrelationship of that issue is extremely important in the sense that the depletion of such resources as the world's tropical forests—40 percent will be left in the year 2000 if we don't do something about it—show the interrelationship of that loss and the clear effects that it will have on the water resources in those areas.

And I think if energy is a severe problem for this decade, for maybe the next two beyond that, water problems will, if not take the place of the energy crunch, certainly be preeminent among the issues with which we have to deal on a kind of life-and-death basis. So we need to spend a serious amount of time looking at these interrelated renewable resource questions where the quality of the environment, the quality of the genetic bank with which we have to work for the future can be rapidly depleted, if such things as tropical deforestation continue at such a rapid rate. The quality of land, the quality of water will all be depleted as part of that same process. And clearly we have to design efforts to do this.

In the President's statement setting up this task force, he recognized this particular issue and some of the work that we're already done as being an important part of the response to the Global 2000 Report. I would just lay those things before you as suggestions of the ways in which we can make a very positive impact in dealing with these problems, even in the next 6 months, which is a terribly short deadline to deal with such long-term and important issues.

Representative REUSS. Thanks to both of you. And now Chairman Long and I would like to take this opportunity to explore some of the implications of what Mr. Speth and Mr. Pickering have said. At the outset, Mr. Speth, let me accept your kind invitation to give your task force some advice. And I will begin by asking Mr. Speth this question: In his prepared statement, Mr. Pickering talks about foreign interest in Global 2000, which is very gratifying, but later says that the Russian press has not been as generous, "With Izvestia calling attention * * * to the Report's failure to address 'the main problem facing humanity' which Izvestia has defined as an end to the arms race."

Well, Izvestia is not necessarily my favorite newspaper, but couldn't they be right? [Laughter.]

Mr. SPETH. Mr. Chairman, one point I did make in my statement which I didn't read was that this complex of problems that we have identified—development of resources, poverty, and soon—is a comparable threat to that of the arms race. In the report the Brandt Commission made that point as well, and I quoted that passage. I think we must come to view this complex of problems as one that is as serious to the world as the arms race problem and the threat of nuclear holocaust, and we certainly don't have that appreciation today. I hope that we can build it.

Representative REUSS. What I'm trying to do, though, is to get the task force to see the connection between the two. It certainly exists in my mind.

Mr. SPETH. Certainly, the financial aspect is there, and it's very real.

Representative REUSS. If we stopped, for example, the insane arms race—and in my judgment, it's insane—would we not then be able to better perform the role that the Soviet Union, the United States and

the rest of the nations ought to be performing—of seeing that apocalypse 2000 is averted?

Mr. SPETH. I don't think there's any question but that the mass of funds that are being spent on the arms race could be put to good use to solve these problems.

Representative REUSS. For example, just look at this morning's headlines, and at the stories that describe the convulsion which has seized Poland in the wake of the trade union matter. The United States is very fearful of new Soviet credits to Poland, and of an expanded Soviet influence in Poland. The Soviet Union is very fearful, indeed, of aid by the United States, through commercial banks or through official channels or through union channels, which the paranoid rulers of that country see as a threat to their hegemony in Eastern Europe.

Instead of going our separate ways, wouldn't it be a good idea if we took a lead from what the Marshall plan, in its original incarnation, attempted to do? The Marshall plan, before it got torpedoed by Stalin, was to be a cooperative East-West venture involving Poland, Czechoslovakia, and other countries, and it almost worked on that basis. And 33 years of tension might have been lessened if, in that case, the Soviet Union had not torpedoed it.

Wouldn't it be a good idea, and quite relevant to the subject you are discussing, if tomorrow we made an overture to the Soviet Union, pointing out that we have no desire to make Poland a military bastion, a threat to the security of the Soviet Union, but rather that that country needs peaceful evolution and development which, if properly done, need not be a threat to the Soviet Union, and that we would like to discuss joint rather than hostile efforts of easing Poland into the new situation into which she has been propelled.

Does that bother you, Mr. Speth?

Mr. SPETH. Mr. Chairman, I think it's more appropriate for the Department of State to respond to that question.

Mr. PICKERING. I think what you've had to say, Mr. Chairman, has been the tenor of those public statements that we have made on the situation. We have no desire to see conflict break out on this issue, and we have clearly a sense that change is taking place there and that there are situations of great delicacy and great uncertainty.

We have no wish to add to the uncertainty or to add to anything that might in any way at all react in a negative fashion to the sort of quiet, important, and significant change that does seem to be taking place and which you reflect in your own statement.

On the broader issue of disarmament or the end of the arms race, you will appreciate the nature of the Soviet statement as clearly one that is one we join in and are trying to deal with. I've been working for many years in the disarmament area, hope to continue with it, have a great deal of familiarity with the problems. It's a very difficult issue, but one I think this country's record is second to none on.

The Soviet statement itself, as you well understand in the connection you make, doesn't solve the problems that we face in Global 2000. It may present a significant instrument for savings, which over some time one way or another, may be diverted or used in dealing with that problem. And I think that's the important aspect of what statements we've made here today—that it would be clearly advan-

tageous to all of us, if we were able to realize large savings in any program which could be devoted to these problems. And disarmament is certainly one which we hope for progress in, although as you well know up until now, it hasn't been possible to make the sort of rapid progress that would produce the kind of savings that I think are in the necessary ballpark to deal with the kinds of issues we have before us in Global 2000.

Would that we had, and would that Izvestia would have recognized there are two sides of this issue—the negative but very important one of dealing with the arms race as rapidly as we can and the positive and extremely important one, where, unfortunately, the Soviets have not been in the forefront, of trying to deal with in a significant way—with the issues presented by Global 2000.

Representative REUSS. Before yielding to my colleague—Representative Long, who has been very patient, I would like to put a wrap-up question to you both.

Is there any reason why the upcoming task force report could not, in understandable and commonsense terms, state how much could be done about Third World food, forest, fish, energy, population, and other problems with the resources released under various arms reduction scenarios?

Wouldn't that be a meaningful exercise?

Mr. SEPTH. Mr. Chairman, I think it would be a meaningful exercise. I have to be frank with you. We don't have any plans at this time to carry out such an exercise, though something of that order may become necessary and indeed essential as the activities progress.

Representative REUSS. Will you accept it as the urgent suggestion of one Member of the Congress—that you change your plans at once and undertake such an exercise?

Mr. SEPTH. Certainly.

Mr. PICKERING. Could I say, I think your suggestion is a significant and important one, and I share with you the notion that this is a problem that we need to move on as expeditiously as we can to deal with it.

I would hope, however, that our past record—and that's a record where it takes two to tango on these issues, as you well know—would not be such as to make projections so overly pessimistic that we don't get around to dealing with the Global 2000 problem. And I think that that comparison might be illustrative and might be useful, but I hope it is not the sole answer, because I feel myself that there are many things we can do short of ending the arms race and in the significant sort of way that I think your question postulates to deal with these problems. We have to face up to those as live issues now, as well.

Representative REUSS. Well, it's very important that you do this, because if your report indicates that Armageddon can, indeed, be averted without ending the arms race, I would like to know about it. If so, I might become more militarist than I have recently been. I think it's very important; I think to have a report worth reading, in addition to all the excellent thoughts you're going to have about the leaching of tropical soils and so on, you ought really to look at what the arms race is costing the people of the world.

Mr. SPETH. Mr. Chairman, as you know, there have been several private studies which have addressed that issue, directly and indirectly, including the Brandt Commission report. It will be something we will have to pay some attention to. We would appreciate your suggestions on what would be a realistic way of addressing that.

Representative REUSS. I think you have just made my suggestion. In effect, the existence of these private studies, including that of the Brandt Commission, saves you a lot of work. All you need do is put your mind to them and decide whether they are right or not. You know, the public is awfully teed off at us governmental types skirting the crucial decisions which have to be made.

So let those members of the task force who feel this is important put it in writing, and then we can have the basis for debate and dialog in the next Congress. And I'm sure you will.

Mr. SPETH. Mr. Chairman, while we're on the subject of editorials, let me mention one thing that has been extremely gratifying and reassuring.

The editorial response in the United States to the report, and to the statements that have been made about it, has been overwhelmingly positive. Hundreds of small and large metropolitan dailies around the country have considered the report and editorialized on it. And overwhelmingly they have said, "We are extremely thankful that someone did this report, that the Government and others are looking at these issues, and that we're going to try to do something about it."

Those who were concerned about the report having a counterproductive effect—of which there were a few—I think have been proven wrong. The overwhelming response has been gratifying.

Representative REUSS. Yes; I am equally euphoric. All I'm saying is, we've got a great thing here; let's not louse it up.

Congressman Long.

Representative LONG. Thank you, Mr. Chairman.

Mr. Speth and Mr. Pickering, I apologize for not being here earlier. I did have an opportunity to review the report over the recent recess and also read the Club of Rome's discussion of it. Both of them were very interesting, but also most alarming.

The many young people that we have at this hearing is very gratifying in a way, and yet in a way it's frightening, too. I think perhaps it may signify the attitude of American business toward this problem: "It's tomorrow's problem, it's the young people's problem; it's not really our problem."

I get an opportunity to look at many groups, and this one is considerably younger by far than most of the audiences that attend congressional hearings. As I say, while it's encouraging in a way, it's still discouraging in a way.

What plans do you have to bring this whole matter to the international front burner? It's not at the international front burner. It's not even at our national front burner, and it needs to be.

One of the things that you might consider is that so often we seem to need a bogeyman out there somewhere to get the country moving. If we could get the world to make this problem, a very real problem, our international bogeyman, we might be able to direct some attention to it. What do you or the administration have in mind with respect to bringing it to the international front burner?

Mr. SPETH. Congressman Long, let me respond to a couple of things that you said. We do want to have the participation of the business community in formulating recommendations, and we are trying to stimulate as much interest on the part of the business community in telling us how to respond to these problems as we possibly can. We've had some communications with the chamber of commerce, and I will be going to New York shortly to discuss these issues with a group that the Council on Foreign Relations is putting together. I just want to second what you said in that regard.

We are also doing everything that we can within our resources to elevate the attention that is given to these problems domestically. We have tried—and I think with some success so far—to focus the media's attention on these problems, and we intend to continue to do that through every means available.

I would like to ask Mr. Pickering to indicate how the State Department intends to raise this issue at the international level and to move it onto the front burner internationally.

Mr. PICKERING. Congressman Long, I think you put your finger on a central question. It is clear that public awareness and public response to this issue is essential in what I think are two or three of the main facts of getting something done about it. One of those is what is the leadership going to do in the countries around the world about dealing with these problems?

Public response, as you and I well know, is central in getting leaderships to commit themselves to think about issues, to deal with the problems, to take steps. And it's clear that this is a global set of issues, and a global response is called for.

Second, I think there are things like parliamentary commitments, if I can call them that. They too are responsive to what the public is thinking and doing. They too play a significant role in the nexus of decisionmaking, of actually getting down and dealing with these problems. And there are what I call the private response: What is the business community going to do? What are the foundations going to do? What are all the organizations who are dealing either separately or severally with these problems in countries and in international bodies around the world going to do?

The question of public awareness thus is a motivating factor in this. And I think that public awareness has to come about through a long and difficult building exercise. If I thought there was one kind of apocalyptic thing you could say and could get everybody to jump on board and move like lemmings down the road more or less to deal with the problem, I haven't found it. I don't know that the best mind that have been working on the problems, certainly far better than we have been able to devolve on the problem, have come up with a single kind of easy solution to that.

I am convinced that it has to be a long and steady and hardworking process that almost has to be kind of the knife wearing out the grindstone on this issue to get the public more interested in it. But these are bread-and-butter kind of issues, and for the first time we are addressing the global issues as bread-and-butter issues for everybody. It's not the bread-and-butter issue of Louisiana, Wisconsin, or even the United States any longer; it's a kind of global bread-and-butter issue.

I think that and the real positive interest people have in their own survival and in their own betterment are the kinds of things we have to stress internationally to get this looked at more. We are doing that through a series of efforts, some of which are dealing with other diplomats which are slow and hard and tiresome, but necessarily effective.

Some of it is having the President and the Secretary of State dealing with their colleagues in the economic summits and in the U.N. and in other organizations to get those people generally aware. They are more generally aware. There are a number of places where Global 2000 has already become sort of required reading for foreign cabinets. And I think this is important. And they will talk to their people about these issues much more than I think we can, although we will be doing so. There is this long combination.

My Secretary feels very strongly that some easy way to illustrate the problem, whether it's film or video or television, is probably a very good step for us to take and we're looking into that to see if there isn't a way we cannot, in more simple terms, bring this complex problem home to people so that they understand we are talking about what is a projection of the real world in 2000 if we don't do something about it.

But that's the approach we are following. I don't see any magic solution to this, except very long, difficult, hard work. I wish I could preach an easier answer to the problem. But I think that's an effort, at least from my point, to address your question.

Representative LONG. Sometimes nongovernmental institutions can be as effective or more effective and move more rapidly in this regard than can governmental institutions.

Has any consideration been given to trying to get one of the major national or international foundations to make this their prime interest?

Mr. SPETH. I think that's an excellent suggestion, and it has been considered but not executed.

Representative LONG. I think it's worth your serious consideration.

Mr. SPETH. Yes; I agree completely. There are a number of major foundations in the United States which, based on their past history of interest, should be very interested in this problem. It is, in fact, something which I have thought about—making contact with them and discussing this—and perhaps giving a presentation to a group of foundations' executives. It might be pulled together.

Mr. PICKERING. We have a number who have already followed up, and I think that not only do we have one or two we might pick out, but, in a sense, there's almost an opportunity to get a consortium of important foundation and important private-sector influential bodies to begin to deal with this issue.

A number have already approached us for presentations. I think that provides the beginning of the followup that Gus Speth was talking about, and we are certainly intending to go ahead and talk to those foundations, to talk to those groups, to talk to those communities to see if we can't get them to make this a centerpiece of their efforts.

Representative LONG. One additional question, not so broad a policy question, but something I saw recently on television; I think it was on public television. It was of great interest to me. That was

the undertaking by Mr. Ludwig in the forests of the Amazon and the conversion of that into a massive agricultural project.

The first time I have an opportunity, I am going in and look at that project. I would be interested in your two expert views as to the overall implications of the Ludwig project. Just how do you react to it?

Mr. PICKERING. It's a fascinating project, I think one that needs to be better understood. I hope you do have an opportunity to go down and see it. I would like to join you.

Representative LONG. Congressman Reuss just indicated he wanted to go. [Laughter.]

Mr. PICKERING. I know a number of people who have visited. I think it's an important project in several ways. One is it has put a very heavy emphasis on the preservation of the soil and the productive use of that enormous land area in the Amazon Basin. So it gets to some of the problems I discussed earlier, perhaps before you came in, about the real question of preserving tropical forests. By that I don't mean preserving tropical forests in pristine state without any exploitation. I mean what we in effect have been able to do with forestry in this country is to have sufficient replanting to have a self-sustaining yield and at the same time preserve enough of a percentage of the forest so the genetic diversity which will be the bank for the future, the new strains, the new crops, the more pest-resistant trees, whatever we want to call them, are there.

That project, I understand, has taken two species of trees and made those a central focus of activity for the production of pulp and perhaps for timber down the road.

Representative LONG. They were pointing out in the television program I saw, which, of course, was just a cursory study of the project, how in one instance, in one area, it had worked pretty well, with a particular type of tree, and in another area they were having a great deal of difficulty.

Mr. PICKERING. That raises the final point I was going to make. We don't have, at least in this country and perhaps in other areas around the world, enough of a central focus, in my judgment, on the problems of tropical deforestation. How do we deal with it? What are the species that are going to do well? What will happen when we take a forest that is of multiple species, many different varieties, and we plant it with a single species; what will it do to the soil and the water?

I think the Ludwig effort is an attempt to try to deal with that. It seems to me to have begun at least along the proper lines and with the proper care and the proper effort. But one would like to go down there and see it and get a personal firsthand impression, I think, before you go further on it.

Representative LONG. Thank you, Mr. Chairman.

Representative REUSS. Thank you.

Changing the subject just a little, both Congressman Long and I recently had the pleasure of meeting with an author and economist named Jeremy Rivkin, who has written a book which is attracting a lot of attention, entitled "Entropy." In that book he concerns himself with the second law of thermodynamics, which, if I am not mistaken, says all matter and energy has a tendency to deteriorate and move from order to disorder, and that that's what's happening.

And he specifically cites the year 2000 Report as an indication of the validity of his thesis. Have either of you had a chance to read Rivkin's book, or at least familiarize yourself with his pitch?

Mr. SPETH. Mr. Chairman, I have it on my desk. I have skimmed it. I haven't read it.

Representative REUSS. Whether you've read it or not, I would like you to address the proposition he advances. I find it intriguing. I like new ideas. This is one. It may be too deterministic; I don't know.

Mr. SPETH. Well, Mr. Chairman, I don't think there's any question but that the second law works and applies to us. There is a pitfall here—and I don't intend this as a criticism of his book, particularly because I haven't read it. But there has been a tendency to associate the economists who have built on thermodynamic theory with a sort of "steady-state economy" philosophy.

One of the things we have tried to do in presenting this report is to stress that we don't think this report holds out a specter of limited or no growth. We have indicated that we are not going to solve these problems unless we have economic development, and that our economy can build in a positive way on that development and with that development.

So we are very conscious of not giving an impression—which I think has been associated with these issues, unfortunately, in the past—of suggesting that because we see these problems, we think the answer is no growth. That is, in our judgment, not the case at all.

Representative REUSS. Mr. Pickering.

Mr. PICKERING. I confess, with Gus Speth, to have only skimmed the issue. I think the question raises a very fundamental one for us in dealing with global problems for the decades ahead: Do we head into that set of issues with a no-growth economic philosophy; or do we head into that set of issues with a philosophy of some development, recognizing the pressures on renewable and nonrenewable resources? Will resources have to be contended with, recognizing the environmental cares which we have which are interrelated, have to be dealt with?

I would say there is another factor that has to be looked at, which I think is darn near central and fundamental, if not absolutely central and fundamental. And that is: population. Here we go back to one of the central determining factors of consumption, size, growth; and it has an enormous amount of inertia connected with it.

It seems to me one of the things we have to strive for is a more rational control over the population growth of the world, that that's self-evident in Global 2000. It was a basic premise on which it worked. And that in itself can begin to have some very real effects on what is the economic fallout—what's the economic fallout of that going to be? What's going to be the pressure on resources? We haven't looked at that very carefully.

So I would say that, of these issues, one that has a no-growth attachment, not in economic terms, not in Club of Rome terms, but in terms, I think, we can all visualize it, has to be a very careful look at population and what it will be doing in the decades and years ahead. Whether we can absolutely envisage a world leveling off at 8 billion, 10 billion, 12 billion or, as some have said, at the limits of the world's capability of 30 billion, and what that will mean.

These are very serious problems. Small amounts of increases in funds now, I think, show promise of demonstrating real effects in the next century, well beyond our lifetimes, but in terms of literally being able to reduce because of the inertia effect of population of young age groups now reproducing, but maybe in four decades reducing real stress on the world's population to the tune of several billion people. These are very important things.

I think the next two decades spent in that area alone will have very important effects. And as a result, I think, in the growth/no-growth syndrome, we have to look at population as a special case and perhaps as a special determinant.

Representative REUSS. If you are to avoid the no-growth trap of the Club of Rome study—and you've just got a few months to come to your conclusion on that because you've got to write your report—how are you going to do it? How do you counter the argument that growth involves more use of oil, more use of wood, more fish, more minerals, more of everything that we have been chewing up, until the geometry overwhelms us?

Mr. SPETH. Well, at some—

Representative REUSS. If you had to go to press tomorrow, what would you say? You've only got 3 months.

Mr. SPETH. Well, at some point, you know, we do run into nonrenewable resource limitations. And indeed, we have hit those limits, or are fast approaching them, in the area of fossil fuels. There is tremendous room for technological improvement, as we are witnessing right here today in the United States in terms of energy efficiency. We can do tremendous things to reduce our energy input, simply by using those inputs more effectively.

The point that we are trying to stress is this: take a situation in a less developed country, with a large population and small population settlements that are dependent on the renewable resource base in those areas—the agricultural base, the trees, the animal wastes. If that group or cluster continues to subsist on the renewable resource base alone, without economic development, striking patterns begin to develop in which the renewable resource base is depleted and destroyed. A family unit sends out a person each day, 365 person-days each year, roughly, simply to gather wood. A member of the family goes out in the morning to collect the wood, and returns in the evening.

And the circle of environmental destruction around the community increases. The fresh water runs out. If these pressures on renewable resources are not alleviated by development of a sound and sustained type, we are going to lose the renewable resource base at the rates that we discuss in the report, or at rates even exceeding those rates.

The population problem, as everyone knows, is intimately related to the economic development question. And if there is one variable—and I like what Mr. Pickering said on this—if there is one variable which is overwhelmingly critical, it is containing the population growth.

We seem to be almost committed now to an additional 2 billion people—roughly a 50-percent increase in the world's population. We may indeed be committed to more people than that, and I think that when we speak of more people, when we begin to approach 10 billion people, we are beginning to talk about the limits of habitability on the planet.

I recognize there are studies that have been made of absolute limits, running as high as 30 billion people, but I think, in fact, the sociological pressures and the resource pressures of populations much smaller than that are, in fact, going to define the real limits.

So it seems to me we are almost projecting out a situation which is rapidly approaching the limit. Unless fertility projections drop much more rapidly than we are projecting in the report, we have a most serious situation on our hands.

Representative REUSS. Let me address this population problem. After that, I may perhaps end my questioning.

Your 2000 report projects world population of 6.4 billion in the year 2000. That's an increase of 55 percent over today. That's an absolute increase unheard of in previous population histories in a 20-year span, is it not?

Mr. SPETH. It is, indeed, Mr. Chairman. Even though the rate of increase slackens in that period, the base on which that percentage increase is occurring is sufficiently large by the turn of the century that we will actually be adding to the world's population more people each year, each day, in the year 2000 than we are today.

Representative REUSS. Throughout your report, generally, it is repeated many times that all these projections about the year 2000 are based upon the prolongation of existing trends, and that if we pull up our socks and do something about them, we can change the results, which it seems to me is the only view one can take and retain sanity.

However, in the case of population, suppose that there were instituted tomorrow the best conceivable program of family limitation, with paraphernalia and equipment freely available in the remotest villages and religious, and with customary objections stilled, and everyone proceeding in a very gung ho fashion.

If that were done, what would the population projection be; how much less than 6.4 billion? I suspect no great relief would be in store. Let's hear it. Mr. Pickering.

Mr. PICKERING. I think that's probably right. I think there may be percentage increases which would be very favorable, because the shorter time period of the two decades is pretty much in the mold now, as you say. And it's very hard to change the shape, although there may be some decreases. I don't think that we need to be absolutely pessimistic on that, but the really important effects, I think, are likely to come in the decades beyond 2000.

After all, the world is still going to be here beyond 2000. We're thinking long range, and 2000 isn't the end of all of it.

The point I tried to make is some of the people who deal with this problem think we could end up with 3 or 4 billion less at a good turning point in the 21st century, bring closer the period when we would have a kind of steady state population on the Earth, and do so at a point where we haven't superstressed the Earth's carrying capacity to deal with that issue.

So subject to demographers' predictions about what the next decades will produce, I'm not sure about that. There may be good figures, and Gus Speth may have them here, but I think the really important contributions can be made in the period after 2000. That's very significant as we're casting our minds ahead here and looking at the future of things.

Mr. SPETH. Mr. Chairman, Mr. Pickering's recollection of page 29 of an 800-page volume was accurate. There was, in fact, a case study done for the analysis which projected out the results of an all-out population control effort, and it is on page 29.

The indication is that the world population at that point, in that case, would be, in the year 2000, about 5.7 billion people.

So that it all still rounds off at about the 6 billion level.

Representative REUSS. Every little half billion helps, though.
[Laughter.]

Mr. SPETH. It helps.

Mr. PICKERING. It sure does.

Representative REUSS. Well, if I had my way, I would keep you two fine public servants here forever, asking more questions, but then you wouldn't be able to get out your report in 3 months.

So I want to thank you both for a memorable contribution to our deliberations, and we will accept your invitation to be as helpful as we can on it.

The subcommittee will now stand adjourned.

[Whereupon, at 11:30 p.m., the subcommittee adjourned, subject to the call of the Chair.]

