

# Alternatives to Growth '77

Second of Five Biennial World Conferences

October 2-4, 1977, The Woodlands, Texas

**Theme: The Nature of Growth in Equitable and Sustainable Societies**

**Sponsored by:** The Club of Rome    University of Houston    Mitchell Energy & Development Corp.

**Organized by:** The Society for International Development

## Conference Programme

### Sunday October 2

11:00 a.m.    Registration begins.

Lake Room    3:00 p.m.    Film on the Origin and Establishment of the Club of Rome  
4:00 p.m.    Second Film Showing

Dining Areas 5:30 p.m.    Dinner

Auditorium    7:00 p.m.    OPENING PLENARY.    Master of Ceremonies: David Sternlight,  
Chief Economist, Atlantic Richfield Company

WELCOME ADDRESS: Philip G. Hoffman, President, University of Houston

INTRODUCTORY REMARKS:

Aurelio Peccei, Chairman, The Club of Rome  
Paul-Marc Henry, Secretary-General, Society for International  
Development, and Chairman, ATG Steering Committee

"    8:00 p.m.    PRESENTATION OF 1977 MITCHELL PRIZES: George and Cynthia Mitchell

"    8:20 p.m.    KEYNOTE ADDRESSES:

Thomas P. O'Neill, Speaker of the United States House  
of Representatives  
Ivor Richard, United Kingdom Ambassador to the United Nations

2nd Floor    9:15 p.m.    Reception for the 1977 Mitchell Prize Finalists

# Conference Programme

## Monday October

- Auditorium 8:45 a.m. PLENARY WORKSHOP: Mihajlo Mesarovic, Director, Systems Research Center, Case Western Reserve University, and his associates will present an International Program for Implementation of the Assessment of Policies Tool System for Long-term Global Development Analysis. They will also propose initiatives to help achieve the desirable scenarios projected.
- As Scheduled 10:45 a.m. CONCURRENT WORKSHOPS
- Auditorium 1:00 p.m. Luncheon. ADDRESS: James Wright, Majority Leader of the United States House of Representatives
- As Scheduled 2:30 p.m. CONCURRENT WORKSHOPS
- Auditorium 4:45 p.m. PLENARY WORKSHOP: Herman Kahn, Director, Hudson Institute; Barry Hughes, Systems Research Center, Case Western Reserve University  
4:45--Mr. Kahn will (1) assess in the context of 'The Next 200 Years' such crucial issues as population growth, economic development, energy, raw materials, food and the environment; (2) discuss events he believes will take place in and of themselves, and (3) proffer concrete policy recommendations for reaching suggested objectives.  
5:30--Mr. Hughes and his associates will use the World Integrated Model and Assessment of Policies Tool (APT) to evaluate assumptions and conclusions of 'The Next 200 Years.' The session will involve direct interaction with the computer model and on-the-spot testing of scenarios and display of results.  
6:15--Rejoinder and colloquy, Mr. Kahn and Mr. Hughes.
- Dining Areas 7:00 p.m. Dinner
- Auditorium 8:45 p.m. PLENARY ROUNDTABLE: TRANSITION TOWARDS THE 21st CENTURY

Alexander King (Moderator), Chairman, International Federation of Institutes for Advanced Study  
Willis W. Harman, Associate Director, Center for the Study of Social Policy, Stanford Research Institute  
Herman Kahn, Director, Hudson Institute  
Paul-Marc Henry, Secretary-General, Society for International Development  
Franklin A. Lindsay, Chairman, Itek Corporation, and Chairman, Research and Policy Committee, Committee for Economic Development  
Mihajlo Mesarovic, Director, Systems Research Center, Case Western Reserve University

## Tuesday October 4

- As Scheduled 8:45 a.m. CONCURRENT WORKSHOPS
- Auditorium 11:15 a.m. PLENARY ROUNDTABLE: Is it possible for a nation to achieve a sustainable society in the context of global interdependence? Is there a basis of international solidarity for a just and sustainable world community?
- Moeen A. Qureshi (Moderator), Executive Vice President, International Finance Corporation/World Bank

Wilfrid de Souza, Former Dahomey Ambassador to the United States,  
United Nations and France  
Ervin Laszlo, Visiting Scholar, United Nations Institute for  
Training and Research (UNITAR)  
Jahangir Amuzegar, Iranian Ambassador-at-Large and Principal Repre-  
sentative of Iran to the International Monetary Fund & World Bank  
Victor Urquidi, Presidente, El Colegio de México  
Monroe Spaght, Director, Royal Dutch Shell Companies  
Lester R. Brown, President, Worldwatch Institute

Dining Areas 1:00 p.m. Luncheon  
As Scheduled 2:30 p.m. CONCURRENT WORKSHOPS  
Dining Areas 6:00 p.m. Dinner  
Auditorium 8:00 p.m. CLOSING ADDRESSES:

Moeen A. Qureshi, Executive Vice President, International Finance  
Corporation/World Bank  
Russell W. Peterson, President, New Directions; former Chairman,  
Council on Environmental Quality, United States  
Government and former Governor of Delaware

PIANO RECITAL: Alan Wingard

**Wednesday** 9:30 a.m. Visit to the Houston Space Center--Optional specially arranged tour  
**October 5**

#### ACKNOWLEDGEMENTS

Generous financial assistance in support of broadened conference participation was provided by:

- o The Netherlands Ministry for Development Cooperation
- o Unilever
- o M. A. Wright
- o The Harris and Eliza Kempner Fund
- o The Alvin and Lucy Owsley Foundation
- o Dresser Industries, Inc.

In addition, many Conference speakers and Mitchell Prize Finalists demonstrated their personal and institutional support for the Alternatives to Growth Programme by paying all or part of their Conference and travel expenses.

These contributions are all gratefully acknowledged and applauded.

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The shape and quality of the Alternatives to Growth '77 Conference owe a great deal to the intellectual and moral contributions of those members of the ATG Steering Committee, so ably chaired by Paul-Marc Henry, who gave unstintingly of their personal and professional time and effort. Numerous other individuals extended extraordinary cooperation and assistance in identifying and helping to secure the outstanding roster of Conference speakers and panelists. Though space precludes naming them, they have the lasting gratitude of the Conference organizers. Special thanks are due to four persons who have provided invaluable and continuing assistance and support from the outset of the Second Phase of the ATG Programme: Anne Bolduan, Margery Boichel, Dennis Meadows and Alexander King.

--Willem P. J. Boichel, ATG Programme Coordinator

# Workshops

MONDAY MORNING, OCTOBER 3, 10:45 A.M. - 12:45 P.M.

Lakeside Room Workshop #1: SOCIAL STRUCTURES IN A SUSTAINABLE STATE

Dennis L. Meadows (Chairman), Director, Research Program on Technology and Public Policy, Thayer School of Engineering, Dartmouth College, Hanover, New Hampshire

What can we learn from the nature of traditional sustainable societies? What sort of socio-economic indicators are needed to facilitate the transition to a sustainable world community? What are the policy and research implications for the transition to a sustainable society?

Benjamin Zablocki, Professor of Sociology, Columbia University, New York  
Robert D. Hamrin, Economist, Joint Economic Committee, United States Congress  
Gregory Williams, Mitchell Prize Finalist, Mechanical Engineer, Dayton, Ohio  
Herman E. Daly, Professor of Economics, Louisiana State University

Houston Room Workshop #2: ENERGY ALTERNATIVES

David E. White (Chairman), Director, Energy Laboratory, Massachusetts Institute of Technology

A) What set of energy vectors is needed in a sustainable society?  
How much electricity do we really need?

Niels I. Meyer, Professor, The Technical University of Denmark, Lyngby  
Joel Darmstadter, Economist and Fellow, Resources for the Future, Washington, DC

B) What kind of energy systems and policies are needed in a sustainable society?

Malcolm Slesser, Joint Research Centre, Euratom, Italy  
Jerome M. Weingart, Mitchell Prize Finalist, Head, Scientific Communications, International Institute for Applied Systems Analysis, Laxenburg, Austria

French Room Workshop #3: THE POPULATION QUESTION

Lester R. Brown (Chairman), President, Worldwatch Institute, Washington, DC

A) How is it possible to accelerate the shift to zero population growth in the developed world?

Rodney Shaw, President, The Population Institute, Washington, DC  
Roy Morgan, Executive Director, Zero Population Growth, Washington, DC  
Peters Wilson, ZPG Political Representative

B) What are the implications of migration policies and practices for population stabilization?

John H. Tanton, 1975 Mitchell Prize Winner, Ophthalmologist, The Burns Clinic, Petoskey, Michigan  
Elsa Chaney, Deputy Coordinator, Women in Development, United States Agency for International Development

Spanish Room Workshop #4: HUMAN ETHICS

Georg Picht (Chairman), Director, Interdisciplinary Protestant Research Institute, Heidelberg, Germany

- A) What ethical determinations and value priorities are required in the transition to a sustainable society?

Soedjatmoko, Former Indonesian Ambassador to the United States  
Peter J. Henriot, Staff Associate, Center of Concern, Washington, DC  
Dom Helder Camara, Archbishop of Olinda-Recife, Brazil

- B) What kinds of policies are needed to foster a planetary ecological ethic?

Thomas Evan Jones, Mitchell Prize Finalist, Adjunct Associate Professor, Graduate School of Management, Polytechnic Institute of New York  
Ali A. Mazrui, Professor of Political Science, University of Michigan

MONDAY AFTERNOON, OCTOBER 3, 2:30 P.M. - 4:30 P.M.

French Room Workshop #5: LABOUR SUPPLY AND DEMAND IN A SUSTAINABLE SOCIETY

Victor Urquidi (Chairman), Presidente, El Colegio de México

- A) What are the implications for employment and manpower planning when zero population growth is reached?

Albert Tévoédjrè, Director, International Institute for Labour Studies, Geneva

- B) How can there be low unemployment under conditions of a sustainable economy? Is full employment possible? Or even desirable?

Jane Boyer King, Manpower Specialist, UNESCO, Paris  
Howard Young, Special Consultant to the President, United Auto Workers  
Bruce E. Sundquist, Mitchell Prize Finalist, Senior Scientist, Westinghouse Advanced Reactors Division, Madison, Pennsylvania

Houston Room Workshop #6: ENERGY ALTERNATIVES (Continuation of Workshop #2)

David E. White (Chairman), Director, MIT Energy Laboratory

- C) What are the economic implications of a sustainable energy society?

William Nordhaus (invited), Member, Council of Economic Advisers to President Carter, Washington, DC  
Brian Johnson, Senior Fellow, International Institute for Environment and Development, London

- D) What are the cost consequences of increased energy consumption? Will energy be available at a cost allowing global development?

S. M. Lambert, Manager, Energy, Economics and Forecasting, Shell Oil Company, Houston  
David Sternlight, Chief Economist, Atlantic Richfield Company, Los Angeles

CONCURRENT WORKSHOPS

Lakeside Room Workshop #7: INFORMATION SYSTEMS AND DECISION-MAKING PROCESSES FOR THE TRANSITION TO A SUSTAINABLE SOCIETY

David Gottlieb (Chairman), Dean, College of Social Sciences, University of Houston

- A) What kind of information systems are needed to bring about change? How should people be educated to understand the new conditions and novel emerging issues?

Donald M. Jansky, Assistant Director, Government Communications, Office of Telecommunications Policy, Executive Office of the President of the United States

Egbert Boeker and Harrie Eijkelhof, Mitchell Prize Finalists, Physics Department, Free University of Amsterdam, The Netherlands

- B) How is it possible to convince decision makers to make basic policy changes essential for the transition to a sustainable society? How is it possible to influence long-term policy? What kind of data is needed to convince people that change is necessary? What kind of institutional innovations are required? What are the most effective means of planning for a sustainable society?

C. R. Nixon, Deputy Minister for National Defence, Government of Canada, Ottawa  
Samuel Schwartz, Mitchell Prize Finalist, Research Professor, Department of Medicine, University of Minnesota School of Medicine, Minneapolis

Spanish Room Workshop #8: MEETING HUMAN NEEDS IN A SUSTAINABLE SOCIETY

Harlan Cleveland (Chairman), Director, Program in International Affairs, Aspen Institute, Princeton, New Jersey

- A) How should the world's physical, financial and human resources be mobilized to meet basic human needs?

Albert Bressand, Consultant, Policy, Planning and Programme Review Department, World Bank

John and Magda Cordell McHale, Director and Senior Research Associate, Center for Integrative Studies, University of Houston

- B) How will a sustainable world community contribute to the improvement of the quality of life and meeting basic human needs, especially in the Third World?

Soedjatmoko, Former Indonesian Ambassador to the United States  
Willis W. Harman, Associate Director, Center for the Study of Social Policy, Stanford Research Institute

TUESDAY MORNING, OCTOBER 4, 8:45 A.M. - 11:00 A.M.

Spanish Room Workshop #9: ECOLOGICAL THRESHOLDS

Arvid Pardo (Chairman), Research Associate, Institute for Marine and Coastal Studies, and Professor of Political Science, University of Southern California

- A) What environmental standards should exist in the transition to a sustainable society? What are some of the pressing ecological thresholds? What are the research priorities regarding as yet unknown environmental effects?

Lynn Margulis, Professor of Biology, Boston University  
Robert Cahn, Former Member, President's Council on Environmental  
 Quality

- B) What new ventures in environmental protection and land-use planning are required? How can companies be brought to stop polluting?

Uri Marinov, Director, Environmental Protection Service, Government of Israel  
Joanna Underwood, Director, Inform, New York  
Frederic O. Sargent, Mitchell Prize Finalist, Professor of Resource  
 Economics, University of Vermont, Burlington

French  
 Room

Workshop #10: RESOURCE MANAGEMENT AND CONSUMPTION

Wilfrid de Souza (Chairman), Former Dahomey Ambassador to the United Nations,  
 the United States and France

- A) What needs to be done to achieve an optimal level of renewability and recycling as an alternative to growth in material consumption?

Brian Johnson, Senior Fellow, International Institute for Environment  
 and Development, London  
Talbot Page, Senior Research Associate, Resources for the Future/California  
 Institute of Technology

- B) What will be the effects, on Third World development, of stabilized material consumption in the developed countries? How can harmful effects be averted or countered?

Nicholas Carter, Division Chief, Comparative Analysis & Projections, World Bank  
Firouz Vakil, Deputy Managing Director, Plan and Budget Organisation of Iran

Houston  
 Room

Workshop #11: THE ROLE OF TRANSNATIONAL ENTERPRISES IN  
 THE TRANSITION TO A SUSTAINABLE SOCIETY

Monroe Spaght (Chairman), Director, Royal Dutch Shell Companies, London

What adjustments will transnational enterprises have to make in the transition to a sustainable world community?

Donald L. Guertin, Senior Planning Adviser, Public Affairs Department,  
 Exxon Corporation, New York  
André van Dam, Dutch Economist and Corporate Planner associated with  
 Refinerías de Maiz, Buenos Aires, Argentina  
James F. Bell, Retired Corporation Executive, Connecticut  
Rudolf Knoepfel, President, North American Solvay Corporation, New York

Lakeside  
 Room

Workshop #12: SCIENTIFIC AND TECHNOLOGICAL IMPERATIVES FOR A SUSTAINABLE STATE SOCIETY

Umberto Colombo (Chairman), General Manager, Research & Development Division,  
 Montedison, Milan; President, European Industrial Research Management Association

What is the promise and what are the limitations of science and technology in facilitating the transition to a sustainable society?

Alexander King, Chairman, The International Federation of Institutes for  
 Advanced Study (IFIAS), Stockholm  
J. Rennie Whitehead, Science Policy Consultant and Chairman, Canadian  
 Association for the Club of Rome, Ottawa  
Denos C. Gazis, Member, Research Review Board, IBM Research Division, New York

CONCURRENT WORKSHOPS

TUESDAY AFTERNOON, OCTOBER 4, 2:30 P.M. - 4:45 P.M.

Spanish Room Workshop #13: MODERN CORPORATIONS IN A SUSTAINABLE SOCIETY

Aurelio Peccei (Chairman), Chairman, The Club of Rome

- A) Can a modern corporation be viable in a sustainable society? What are the problems the state of equilibrium creates for business activity?

Joergen Randers, Project Director, Resource Policy Group, Oslo, Norway

William E. Halal, Mitchell Prize Finalist, Associate Professor of Management Sciences, American University School of Business Administration, Washington

- B) What will be the effects on the corporate system of consumers foregoing further increases in material standards?

Dag Gjestland, Assistant Professor, University of Oslo, Norway

Noel Tichy, Professor, Columbia University Graduate School of Business, New York

Houston Room Workshop #14: SUSTAINABLE AGRICULTURAL PRACTICES

Robert Rodale (Chairman), President, Rodale Press Inc., Emmaus, Pennsylvania

- A) How much global interdependence and how much local self-sufficiency exist in an equitable and sustainable agricultural system?

Fawzy Mansour, African Institute for Economic Development and Planning, Dakar, Senegal, and Member, Third World Forum

Wendell Berry, Practicing Farmer and Writer, Port Royal, Kentucky

- B) What is the nature of a sustainable agriculture in a high energy cost world?

Gordon Millar, Vice President for Engineering, Deere and Company, Moline, Illinois

Malcolm J. Blackie, Mitchell Prize Finalist, Lecturer in Farm Management, Lincoln College, New Zealand

Lakeside Room Workshop #15: SOCIAL AND POLITICAL ASPECTS OF A SUSTAINABLE SOCIETY

Herman E. Daly (Chairman), Professor of Economics, Louisiana State University

- A) Can a sustainable society be a free society?

Adam Schaff, President, International Social Sciences Council, Vienna

Dennis Pirages, Associate Professor of Political Science, University of Maryland

- B) What are the social and political bases for future transformation?

Paul-Marc Henry, Secretary-General, Society for International Development, Rome

William B. Fergusson, Mitchell Prize Finalist, Graduate Student in Political Science, University of California, Berkeley

- C) What is the role of law in the transition to a sustainable society?

Patricia J. Youngblood, Mitchell Prize Finalist, Law Student, Willamette University, Salem, Oregon



LATE CHANGES IN ATG CONFERENCE PROGRAMME:

- p. 3 Change Wilfrid de Souza to M. T. DIAWARA, Minister of Planning, Ivory Coast.
- p. 4 Change Rodney Shaw to GEORGE CRAWFORD, also of the Population Institute.
- p. 5 The paper submitted by Dom Helder Camara (who was not, as it turned out, able to attend the Conference) was nonetheless read by Sister Amata Miller of Michigan and formed an important part of the discussions of Workshop #4.
- p. 5 Change William Nordhaus to TALBOT PAGE (see Workshop #10).
- p. 7 Change Wilfrid de Souza to M.T. Diawara.  
Delete Nicholas Carter.
- p. 8 Change Adam Schaff to Alexander King.  
Add Timothy McGarry, Mitchell Prize Finalist, who shared presentation with Patricia Youngblood of their jointly authored paper.