

U.S. Department of State Appoints Dr. Frank Talbot as new National Chairman of U.S. MAB

Mr. E. U. Curtis Bohlen, Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs, has appointed Dr. Frank H. Talbot to chair the U.S. National Committee for MAB for three years, 1993–1995. Dr. Talbot is the Director of the National Museum of Natural History at the Smithsonian Institution.

Mr. Bohlen, in making this appointment, noted that the Department of State had been very pleased with the leadership provided by Dr. Thomas Lovejoy of the Smithsonian Institution and that the Department and agencies of the U.S. MAB Program hoped that through Dr. Talbot's appointment the Smithsonian Institution would continue to play a critical leadership role in U.S. MAB. Mr. Bohlen noted that Dr. Talbot's impressive record of scientific leadership in the field of marine biology and his administrative skills are an outstanding combination which will well serve the U.S. MAB program in the coming years. Mr. Bohlen also noted that with this appointment he anticipated that U.S. MAB's momentum toward excellence will continue to increase under Dr. Talbot's leadership in the years ahead.

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National Committee Chairman's Message

I am very pleased to be joining the U.S. MAB team and especially to be working in a time we can call "Post Rio," and, for us in the United States, the Clinton/Gore period. The United Nations Conference on Environment and Development (UNCED), in spite of its occurring at a time when so much of the world was involved in serious restructuring, in territorial wars, and an international downturn, was very important. It awakened political awareness of the fundamental point that there is an imbalance between human demands and the health of Planet Earth, and that no development can be sustained for long without concomitant care of the environment. Rio made us face once again the uncomfortable facts that we are changing our atmosphere, waters, and soils for the worse, and species are being lost and translocated at an alarming rate. The tough questions involved in how we can live harmoniously with the biosphere need urgent attention in virtually every environment and in every community, and, from global to local scale. We are not immune in the United States, and we do have powerful research capability to study human interactions with the environment. We should be able to set goals to develop social structures and behaviors that can sustain natural systems.

My remarkable predecessor, Thomas Lovejoy, has reshaped U.S. MAB. The new streamlined and focussed directorates are beginning to forge ahead, and are using biosphere reserves and their surroundings to research some of these questions. While cross-disciplinary work such as these U.S. MAB programs is complex, it is research that is needed now more than ever. Practical models at the community level may be one of the outcomes.

The new administration is clearly very aware of human/environment issues, and Vice President Gore's recent book *Earth in the Balance* shows great intellectual grasp of

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Man and Biosphere Video Series

N.B. — We wish to apologize for providing an incorrect telephone number to those readers interested in purchasing or renting one or several of the 12 videos produced by a French film company in cooperation with UNESCO. The video series is based on UNESCO's Man and the Biosphere program and looks at the interrelationship between human beings and the places they inhabit, and the effects of burgeoning populations on those surroundings.

The videos cost \$149 each to purchase and \$75 each to rent. For further information write to:

Films for the Humanities and Science
P.O. Box 2053
Princeton, NJ 08543

The correct phone numbers to order the videos are:
Tel: 1-800-257-5126; FAX 1-609-452-1602



U.S. MAB BULLETIN

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"The mission of the United States Man and the Biosphere Program (U.S. MAB) is to foster harmonious relationships between humans and the biosphere through an international program of policy-relevant research which integrates the social, physical, and biological sciences to address actual problems. These activities—broadly interpreted—include catalytic conferences and meetings, education and training, and the establishment and use of biosphere reserves as research and monitoring sites." Adopted by the U.S. National Committee for the Man and the Biosphere Program, January 6, 1989.

U.S. MAB is supported by the Department of Agriculture-Forest Service, the Department of Energy, the Department of the Interior-National Park Service, the Department of State, the Agency for International Development, the Environmental Protection Agency, the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration, the National Science Foundation, the Peace Corps, and the Smithsonian Institution.

The program is organized into five directorates: High Latitude Ecosystems; Human Dominated Systems; Marine and Coastal Ecosystems; Temperate Ecosystems; and Tropical Ecosystems.

Comments From the Executive Director

As we welcome a new national chairman to U.S. MAB, it does indeed seem that U.S. MAB is poised to enter a new era. Dr. Lovejoy brought the most significant reorganization to U.S. MAB. His policies of concentrating MAB upon interdisciplinary research efforts between the social and biological/natural science disciplines has indeed placed us far out into the forefront on this often sought after, but rarely implemented, integrated scientific research methodology. While the results are early and tentative, under the chairmanship of Dr. Frank Talbot, the U.S. MAB National Committee is already setting its sights on sharing the results of this MAB methodology with the wider scientific and policy communities.

The international MAB program of UNESCO also appears about to set a new course for itself of concentrated action as noted elsewhere in this *Bulletin*. A combined panel from the International Council of Scientific Unions and the Special Committee on Problems of the Environment (ICSU/SCOPE) recently evaluated the International MAB program. A major part of their resulting recommendations emphasized concentrating the international efforts. The international MAB Bureau, under the leadership of Dr. Tomas Azcarate Y Bang of Spain, is determined to implement this concentration of the program and we look forward to developing appropriate partnerships with them in their efforts.

Also, the long sought after implementation of integrating an international network of biosphere reserves may soon become a functioning reality. The UNESCO Advisory Committee on Biosphere Reserves, on which Dr. Paul Risser, formerly of the U.S. MAB National Committee, served has produced its first report. Many of its recommendations were adopted by the International Coordinating Council of UNESCO MAB which called for the development of collaborative research projects on sustainable development, cooperative information sharing, and, in general, linking the reserves to other international efforts to implement Agenda 21 and link environmental protection and developmental advancements.

Additional impetus for the formation of the international network of biosphere reserves comes from the EuroMAB efforts. An initial draft directory of the 176 biosphere reserves in Europe and North America describing the scientific data bases available at these sites is now being circulated for comment prior to its publication later this summer, and the European and North American programs

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International MAB

Adopts New Program Priorities

The 12th session of the International Coordinating Council (ICC) of the Man and the Biosphere program elected a new MAB Bureau for the UNESCO MAB program. It is composed of:

Chairperson	Tomas AZCARATE Y BANG Spain
Vice-chairpersons	Khalaf ALOKLAH Jordan Alicja BREYMEYER Poland Gonzalo HALFFTER Mexico ZHAO Xianying China
Rapporteur	MANKOTO Ma Mbelele Zaire

Acting upon the general recommendations of an evaluation by the International Council of Scientific Unions and the Special Committee on Problems of the Environment (ICSU/SCOPE) and by the previous MAB Bureau, the 12th session of the International Coordinating Council for MAB recommended that UNESCO concentrate the focus of their MAB program on a few priority themes. These themes are recommended to replace the historical MAB "biome approach."

Among the new themes are:

1. Conserving and sustainably using biodiversity. UNESCO MAB is planning to take a vigorous role in mobilizing the scientific community to contribute to the scientific underpinnings of the Convention on Biological Diversity.
2. Exploring approaches to sustainable development in regional units. MAB will promote establishing "laboratory-regions" of sustainable development which would involve a mix of structural and functional units, such as, forests, lakes, intensive agriculture, urban, and industrial areas within large geo-ecological regions; develop comparative analyses of approaches and issues related to sustainable development; and conduct comparative field studies for designing sustainable ecological systems in different socio-cultural contexts.
3. Communicating information on environment and development. MAB will generate information on ecology and sustainable development, emphasizing the dissemination of synthesized information to policy makers responsible for land-use decisions.

4. Contributing to the Global Terrestrial Observing System being developed by the United Nations Environmental Program (UNEP). Through the international network of biosphere reserves, MAB will contribute to the collaborative efforts designed to detect the responses of terrestrial systems to global change.

The ICC called for the development within the UNESCO headquarters of a central data base on biosphere reserve information in close coordination with the World Conservation Monitoring Center while also taking advantage of the EuroMAB Biosphere Reserve Integrated Monitoring (BRIM) initiative.

The ICC encouraged MAB National Committees to work with concerned government authorities to integrate biosphere reserves into their national biological diversity strategies; and to ensure a good information flow between the Advisory Committee on Biosphere Reserves and the UNESCO MAB Bureau. The ICC also emphasized that MAB National Committees and the UNESCO MAB Secretariat should give attention to the interactions between urban/industrial systems and their rural/natural hinterlands.

The Council also encouraged MAB National Committees to study the report of the first meeting of the Advisory Committee on Biosphere Reserves (available from the U.S. MAB Secretariat) and implement the appropriate recommendations; conduct a review of their current biosphere reserve network and analyze and share successes and failures. The Council agreed to study further the legal status of biosphere reserves.

The Council specifically encouraged EuroMAB to continue its work, notably on the EuroMAB/BRIM initiative, meetings of biosphere reserve managers, and other cooperative activities.

.... and Proposes a New Management Structure

The delegates to the ICC also recognized that "to be effective, MAB should speak with one voice, should have a concise work plan and an associated budget."

To ensure that scarce UNESCO MAB resources are allocated in such a way as to implement the new priority areas, the ICC delegates amended a draft report to read, "Within the concentrated future MAB program areas, the UNESCO MAB Secretariat is instructed to prepare alternative framework documents and suggested alternative financial allocations for the ultimate decision making by the MAB Bureau on an appropriate basis."

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Comments from Thomas E. Lovejoy, Former U.S. MAB Chairman

Five years pass rapidly: it scarcely seems like yesterday that I moved from outside of MAB into its chairmanship. That period has seen substantial revision from a structure with 14 directorates to one with 5, and the initiation of an experiment with directorate core projects. This has not been attained easily, and I would like to thank all involved: the U.S. MAB Executive Committee, the Vice-chair Mike Little, directorate members, plus Roger Soles and his undaunted staff.

We enter an era of government in which the concern with environment is greater than ever before. This is both a challenge and an opportunity for U.S. MAB: how to be even more effective with still highly limited resources. We need to seek the participation of more agencies and at higher levels of funding, the latter no mean trick in a time of constrained resources.

In the recent period of restructuring it was made clear time and time again that the greatest assets of U.S. MAB are the biosphere reserves themselves. A model for rational use and management of the planet's resources, we have yet to come successfully to grips with how we can capitalize on this impressive network over which many agencies, united through MAB, hold responsibility. The U.S. MAB/biosphere reserve managers workshop currently being organized will be a significant step in that important direction.

As I contemplate the future, perhaps the greatest challenge for all of us concerned with the environment is to chart a course commensurate with the scale and urgency of the environmental crisis. The press of everyday concerns conspires with human nature to lower our focus to the everyday, to business as usual. The ability to keep a bead on the horizon is one of the great strengths of U.S. MAB. I know that the new chairman, Frank Talbot, will help U.S. MAB to do so.

Tropical Ecosystems Directorate Initiates Work on Core Project

In February 1993, U.S. MAB's Tropical Ecosystems Directorate (TED), as a function of its core project, jointly sponsored a meeting with the Central American Commission on Environment and Development (CCAD) in Flores, Peten, Guatemala, which was attended by more than 50 representatives of Mayan indigenous groups, governmental and donor agencies, nongovernmental organizations

(NGOs), and scientific research organizations to increase intraregional communications and develop a process to identify priority areas for potential funding of projects under the Forests for the Future Initiative (FFI).

The directorate's previous work had identified a large number of groups, scientists, and organizations which were working in relative isolation from each other; yet all had a similar goal: to protect the Mayan rain forest. This Mayan forest region encompassing southern Mexico, the Peten of Guatemala, and western Belize, is the largest tropical rain forest area north of Colombia. A Mayan biosphere reserve was established in the region by the Guatemalan Government and is recognized by UNESCO. The entire "Mayan reserve" area is approximately the size of El Salvador.

The U.S. MAB Tropical Ecosystems Directorate proposes to strengthen communications among all of these regional actors. Concurrently, based upon an analysis of critical needs and gaps, the Tropical Ecosystems Directorate's core program will support "gap filling" action and research projects.

A broader context for the TED/CCAD meeting was ensured by the Central American Presidents' 1992 signing of the biodiversity protection treaty at UNCED and their establishment in 1989 of a Central American Commission on Environment and Development. Also, the Forests for the Future Initiative (FFI) identified the U.S. MAB Tropical Ecosystems Directorate's project along with ongoing A.I.D. projects in the region, as the base upon which to build the FFI's "MAYAFOR (Mayan Forest) . . . initiative to seek to support cooperative partnerships among the U.S., Mexico, Guatemala, and Belize in order to strengthen integrated management of the shared ecosystems through closer collaboration among researchers and managers."

The participants in the TED/CCAD meeting agreed to establish a collaborative, consultative mechanism to further develop a strategy for investments in both development and the environment of the region. They identified priority areas for consideration for any future investments which might be made in the region through the Forests for the Future Initiative. They also agreed to develop a Peten regional projects inventory, mailing list, and newsletter.

Persons interested in receiving the newsletter should contact the U.S. MAB Tropical Ecosystems Directorate via Dr. Richard Primack, Biology Department, 5 Cummington Street, Boston University, Boston, MA 02215; Tel: (617) 353-2454; FAX: (617) 353-6340.



New Book on Tropical Deforestation *Development or Destruction?*

One of the most dramatic changes in landscape that has evolved over the past years has been the conversion of Latin American forest to pasture land. The driving force behind this destruction of Latin American forests is the expansion of cattle production into seemingly under utilized areas. The conversion of forests into grasslands and pasture extracts very high ecological, economic, and human costs. The United States Man and the Biosphere (U.S. MAB) workshop in Oaxaca, Mexico, in October 1988, brought together leading scholars and consultants from Latin America, Europe, and the United States to consider this deforestation problem from multiple perspectives including anthropology, animal science, climatology, environmental science, ecology, geography, range management, government donors, and the livestock and forest industries. They examined the dynamics of this complex and destructive process in an effort to identify alternatives. The goal was to identify options which could simultaneously conserve natural resources and enhance human welfare for both the short and long term.

A new publication, *Development or Destruction—The Conversion of Tropical Forest to Pasture in Latin America*, edited by Theodore E. Downing, Susanna B. Hecht, Henry A. Pearson, and Carmen Garcia-Downing was compiled from the 25 papers presented at the workshop and the 14 papers that were extensively revised for this book. In the words of our U.S. MAB National Chairman, Thomas E. Lovejoy, "The problem is too vast and complex for a simple consensus to have emerged or for the problem just simply to have been solved. But clearly, the chapters which follow, authored by various authorities, represent the continuing discussion which is the necessary precursor to more sensible treatment of shrinking tropical resources."

Development or Destruction is available from Westview Press, 5500 Central Avenue, Boulder, Colorado, 80301-2877 U.S.A.; and 36 Lonsdale Road, Summertown, Oxford OX2 7EW, U.K. ISBN 0-8133-7824-9

EuroMAB Update

Meetings of the EuroMAB Biosphere Reserve Integrated Monitoring (BRIM) working group were held in Paris prior to and during free periods of the meetings of the International Coordinating Council of the Man and the Biosphere Program. The EuroMAB/BRIM meetings were attended by representatives of a number of countries including the core working group composed of the United

States, Canada, Czech Republic, France, Germany, United Kingdom, Russian Federation, and Spain. The U.S. representatives provided information and presented the draft, ACCESS, the Directory and Summary of Scientific Databases of EuroMAB Biosphere Reserves; and on the EuroMAB Bioinventory Project, a pilot project to enable the exchange and consolidation of species information among biosphere reserves and across biomes. The U.S. representative also presented a proposal for its expansion beyond the pilot bioinventory project.

Corrections for the draft ACCESS are to be received by the U.S. MAB Secretariat by March 1. Corrections will be made and ACCESS should be ready for distribution by early summer. Information on the 176 biosphere reserves in the 32 nations within the region of EuroMAB is included in the directory. The EuroMAB working group also agreed to provide comments on the pilot bioinventory project and the proposal for its expansion by March 1. Decisions on a future course of action will be based on those comments.

In addition, EuroMAB member countries agreed to develop projects on permanent vegetation plots (Germany, Denmark), social science (Canada), and global change research (Russian Federation, Poland) over the next few months. A follow-up meeting of the EuroMAB/BRIM working group is scheduled to be held in conjunction with the EuroMAB IV Congress to be held in Poland in September 1993.

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The delegates took this action because they noted that heavy, and frequently competing, demands for funding special projects are imposed upon the UNESCO MAB staff. The delegates noted that only the MAB Bureau (consisting of the ICC President, 4 regional vice-presidents, and a rapporteur) is elected to provide inter-ICC sessional guidance to the UNESCO MAB program. Therefore, only the Bureau can effectively decide on behalf of the MAB program how to maintain an appropriate balance between the numerous competing requests and funding essential internal program development measures.

Members of the MAB Bureau stated that they looked forward to more intensively serving the MAB program in their capacity as an elected executive decision making committee. The members of the Bureau, also noted that they would attempt to ensure that more frequent meetings of the MAB Bureau would be held so that the MAB Bureau could exercise its executive decision making duties in a timely manner as would be appropriate to developing the new MAB priority program areas.



Why FFI? The Importance of Conserving and Sustainably Managing Forests

Forests around the planet are under stress. The latest estimates of the Food and Agriculture Organization of the United Nations show that by 1990 tropical forests were being cleared at over 17 million hectares annually, more than 35% higher than the 11 million hectares lost in 1980. Boreal and temperate forests, many cleared and regrown over the past several centuries, are being fragmented. In Europe and elsewhere, air pollution is thought to be responsible for significant forest degradation.

These losses are not predictions of a far-off crisis or the outputs of computer models, they are observed and measured today. Every minute an area of forest the size of a football field is lost. If the world fails to step up its efforts in the next decade, there may be little healthy forest left on the planet.

Slowing this decline through conservation and sustainable management can provide important ecological and economic gains while, at the same time, benefiting both present and future generations. Rapid forest clearing often turns out to be the result of government policies and subsidies that encourage the waste of valuable forest assets. Studies of the economic loss from forest conversion suggest that in some countries forest depletion is substantially diminishing national wealth and sharply cutting the annual growth of real national income.

Forests provide economically important goods and services. Sustainably harvesting products like wood, nuts, oils, fibers from standing forests can in many areas provide more income than the same land cleared for grazing or shifting agriculture. Forests also filter water supplies and hold back erosion that can clog rivers or lead to inundating of towns. Forests are the home of many native people who sustain the traditions of ancient cultures.

Forests harbor much of the Earth's precious biodiversity. Although they cover less than a tenth of the globe's surface, tropical forests contain over half of its species. Species are becoming extinct today far faster than the historical rate. The genetic diversity of forest organisms has already provided more than a third of the medicines in use today, and new biotechnological methods could make these genetic resources more valuable than ever for a variety of uses.

Forests also act as a "sink" for greenhouse gases that would otherwise linger in the atmosphere. Forests are estimated to remove about one-half to two-thirds of the carbon dioxide that humans add to the atmosphere each

year. Forest clearing and burning contribute from a tenth to a third of annual anthropogenic greenhouse gas emissions. Conserving and sustainably managing forests can be a cost-effective means of protecting and enhancing this crucial greenhouse gas sink.

The Forests for the Future Initiative (FFI), announced by the United States in June 1992, invites interested countries and organizations to join in partnerships for conservation of all types of forests.

An important feature of the initiative has been to bring together all U.S. agencies involved in forest conservation and management, both domestic and international, to share ideas and to develop collaborative activities.

A key element of FFI is conservation of U.S. forests. As part of FFI, in June 1992, the USDA Forest Service and the DOI Bureau of Land Management announced that each would adopt a new "ecosystem approach" to managing the nation's Federally owned forests. The ecosystem approach means that Federal forests will be managed to sustain the integrated ecological resources of the forest, including biological diversity. Both agencies have agreed to phase out clear-cutting as a standard timber-harvesting method for Federal forests, restricting its use to exceptional circumstances, such as controlling disease.

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environmental problems and dedication to working on solutions. This suggests a strengthening of environmental research during this administration.

U.S. MAB can act as a catalyst in cross-disciplinary work, and in cooperation with the agencies we shall try to make it be.

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have agreed to try to develop common biological inventory protocols. Projects describing permanent research plots on biosphere reserves and the social science/demographic and technological pressures affecting biosphere reserves are underway.

In sum, MAB, both in the U.S. and internationally, appears to be well positioned to make significant contributions to a range of international and domestic environmental science and policy interests.



MAB VIDEOS FOR SALE OR RENT

"Biosphere Reserves in Tropical America" -

Video produced by UNESCO and Conservation International

UNESCO and Conservation International have produced a 25-minute video documentary in English, Spanish, French, and Portuguese showing that "... we can fulfill the economic needs of people and still protect the earth's ecosystems."

By a tour through six biosphere reserves: La Amistad Biosphere Reserve in Costa Rica, Maya Biosphere Reserve in Guatemala, Beni Biosphere Reserve in Bolivia, Montes Azules Biosphere Reserve in Mexico, and Atlantic Forest Biosphere Reserve in Brazil, the documentary attempts to expand the public's awareness of what can be the biosphere reserves' contributions to conservation, scientific research, and sustainable economic development.

These videos are available at a cost of \$14.95 each plus \$3.50 for handling and shipping from: Conservation International, 1015 18th Street, N.W., Suite 1000, Washington, DC 20036. Tel. 202/429-5660, Fax: 202/887-5188. Outside of the United States, send money orders only and an additional \$2.00 for shipping. Please allow 4-6 weeks for delivery.

Note: See announcement on *Man and The Biosphere* video series on page 2.

ANNOUNCEMENTS

Biodiversity Support Program's 1993 Research Grants Competition

The Biodiversity Support Program, a consortium of the World Wildlife Fund, The Nature Conservancy, and World Resources Institute, funded by the U.S. Agency for International Development (A.I.D.) is soliciting proposals for biodiversity research in A.I.D. assisted countries. Research may be ecological, economic, anthropological, or socio-political in focus or may utilize an interdisciplinary methodology. The deadline for proposals is April 15, 1993.

Proposals must demonstrate substantial involvement of host-country researchers and/or institutions; priority will be given to those proposals in which a principal investigator is from a developing country. To be most competitive, research proposals should demonstrate some degree of policy relevance. The maximum grant awarded will be \$15,000. For further information and a copy of the Request for Proposals (RFP), contact:

Research Grants Competition
Biodiversity Support Program
c/o World Wildlife Fund
1250 24th Street, N.W.
Washington, D.C. 20037
U.S.A.
Tel: (202) 778-9795
Fax: (202) 293-9211 (routine correspondence only)

Organization For Tropical Studies, Inc. Announces New Course

The Organization for Tropical Studies, Inc. announces a course on Tropical Diversity, OTS 93-10, An Intensive Field-Oriented Introduction to Tropical Diversity in Rainforest, Seasonally Dry Forest, and Cloud Forest Ecosystems to be held in Costa Rica from August 2-26, 1993. Participants will learn about these tropical environments and their conservation through orientation walks, faculty-led field research projects, discussions, and lectures.

Application Deadline: April 15, 1993
Selections: May 15, 1993

For further information contact:

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