



BULLETIN

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MISSION STATEMENT OF THE UNITED STATES MAN AND THE BIOSPHERE PROGRAM

"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 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

Comments by the U.S. MAB Chairman

Over the past year the National Committee has dealt with increased understanding of the need, and indeed the opportunity, to redirect our efforts and to sharpen and reinvigorate our program focus. I note my deep appreciation to the members of the National Committee and others for their thoughtful contributions and considered deliberations during the restructuring process. Our single guiding objective was not only to identify and retain the best of MAB, but also to augment it. Throughout the process we were mindful, on the one hand, of the need to concentrate our scarce resources more effectively on selected key areas of program focus. On the other, we recognized that a broad, integrative approach was necessary in order to deal effectively with today's pressing environmental problems.

Although MAB has been known generally as a "terrestrial ecology" program, most people live near coastal areas where they affect and are effected by marine and coastal systems. I think that the decision to establish a Marine and Coastal Ecosystems Directorate signals our commitment to move MAB into broad areas of public policy concern. At the same time it should be noted that MAB scientists have been active in matters dealing with the land/sea interface for some time. Also, U.S. MAB is supporting a symposium this summer (to be held in Toronto at the August meetings of the

Ecological Society of America) on Coastal Barrier Biosphere Reserves on the U.S. Atlantic Coast. Later in August, U.S. MAB scientists will participate in a San Francisco symposium (co-sponsored by UNESCO/MAB, UNESCO's Coastal Marine Program and the International Union for the Conservation of Nature) which will further examine the application of the biosphere reserve concept to marine and coastal areas.

Thomas E. Lovejoy

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NATIONAL COMMITTEE RESTRUCTURES U.S. MAB

At the January 6, 1989 meeting, the U.S. National Committee moved to restructure MAB along lines designed to encourage a more effective focus on today's pressing environmental policy issues in a global trans-disciplinary context.

The MAB Program was consolidated into five new ecosystem based Directorates to provide increased opportunities for cross disciplinary collaboration among scientists while maintaining much of MAB's traditional "biome approach." The new MAB Directorates are:

- Temperate Ecosystems;
- Tropical Ecosystems;
- High Latitude Ecosystems;
- Marine and Coastal Ecosystems; and
- Human Settlements.

In order to invigorate and further stimulate greater inter-Directorate programs and activities, the Committee identified and established seven priority program areas to be addressed by the new Directorates. The priorities are:

- Aquatic Areas and Wetlands;
- Arid Lands/Desertification;
- Biological Diversity;
- Biosphere Reserves;
- Cultural Diversity;
- Global Change; and
- Sustainable Use/Development.

The Committee appointed scientists to draft mission statements for the new Directorates that reflect this increased focus and at the same time take into account the priority program areas. These mission statements will be reviewed at Executive Committee meetings and then presented to the National Committee for discussion, modification and adoption at the July meeting. Upon approval, the mission statements will be published in the Federal Register.

The U.S. National Committee also adopted a policy designed to ensure that the appointment of scientists to the new Directorates reflects an appropriate balance between social and biological/physical scientists as well as between federal and private sector scientists and individuals.

Dr. Lovejoy, Chairman of the National Committee, stated that the Directorates' mission statements, which will also incorporate and integrate the priority program areas, will form the core of the U.S. MAB National Program. Members of the newly formed Directorates will work cooperatively to implement the approved missions. He stressed that the National Committee will continue to reach out to the general scientific community through competitive peer-reviewed grants to attain and complement the continuing goals of U.S. MAB.

Notes From The Executive Director

U.S. MAB is going through its most significant reorganization since its inception some 15 years ago.

How can U.S. MAB deal effectively with the spectrum of environmental issues which span from global climate changes through greenhouse effects that threaten our planet's biological diversity, to land use and management issues stemming from increasing tourism in our parks and land reserves?

From my perspective, I see the U.S. National Committee and the Directorates restructuring as a necessary means to meet these pressing needs in a way which will produce accurate information to shape the development of enlightened environmental policies.

Throughout MAB's history we have heard of the need for cooperative "trans-disciplinary research efforts." MAB's "Ecology in Action" poster exhibit even has a nice multi-colored convincing explanation of the need for, and differences between, "interdisciplinary" and "trans-disciplinary" approaches to ecological research and action. Yet, when MAB was established, much of our scientific and ecological understandings and policies were directed at local issues and problems. Additionally, most of MAB's Directorate and program structure was adopted from the biome approach of the predecessor International Biological Program. With some notable exceptions, it seems that even MAB scientists tended to stay and study pretty much within their own biomes and disciplines.

Now, as we begin to understand the integrative workings of our global complex, the need to work across biomes and issues takes on new relevancy and greater urgency. Additionally, to vigorously encourage further cooperation across and between the disciplines, the new U.S. MAB Directorates will be structured purposefully to balance and integrate the interest and concerns of both social and biological scientists. The program areas will call similarly for scientists to work together on programs and projects. Hopefully, all of this will indeed lead us to new insights to foster our long sought after "...harmonious relationships between humans and the biosphere..."

In another look to the future, the U.S. Executive Committee also decided that while MAB is a policy oriented program, its sponsors need not be exclusively federal agencies. Consequently, we will be approaching various private foundations to invite them to join and support the policy relevant environmental research, education and training program: U.S. MAB. Volunteer foundations are welcomed!

Roger E. Soles

Professor Henry Caulfield Honored

Former Chairman of U.S. MAB Directorate on Arid and Semi Arid Lands (1982-1987)

Editor's note: The U.S. MAB Bulletin is proud to reprint the following article from HYDATA, The Newsletter of the American Water Resource Association (AWRA) 7/11/88)

Henry P. Caulfield, Jr. Medal Established for Exemplary Contributions to National Water Policy

The American Water Resources Association has established the Henry P. Caulfield, Jr., Medal for Exemplary Contributions to Water Policy in honor of Henry P. Caulfield, Jr., retired Professor of Political Science at Colorado State University and current President of the City of Ft. Collins Water Board.

The first presentation of this Award was made to Caulfield on November 9, 1988, during the Association's Annual Conference in Milwaukee, Wisconsin, by AWRA President Raymond Herrmann. Herrmann stated that "this medal was established to honor an individual whose record of achievements and contributions in setting, designing, and implementing water resources policies at the national level have been extraordinary."

"Caulfield's achievements have been numerous: He has served in various capacities in the office of Secretary of the U.S. Department of Interior, was a former Director of the U.S. Water Resources Council, staff leader in drafting the Water Resources Planning Act of 1965, and he was instrumental in drafting and putting through Congress the Land and Water Conservation Act of 1964, the Federal Water Projects Recreation Act of 1965, and the Wild and Scenic Rivers Act of 1968."

Caulfield stated in his acceptance remarks, "I hope the establishment of this Award will help focus the attention of AWRA members in the years to come on national water policy problems, their solution, and implementation. Participation in the multi-disciplinary community of AWRA should enable and encourage members to come up with significant professional proposals and achieve their adoption through public service."

This Award was established by the AWRA Board of Directors in 1987 for presentation in 1988. It will be presented each year to an individual who has achieved status of eminence in shaping national water policy.

U.S. MAB SUPPORTS FORUM ON GLOBAL CHANGE

The U.S. National Committee for the Man and the Biosphere Program, in association with the Smithsonian Institution, together with the National Academy of Sciences, the American Association for the Advancement of Sciences and Sigma Xi, have combined efforts to support a Forum on Global Change and Our Common Future.

Its purpose is to set forth the science of global change, its impact on society and the implications for public policy.

The meeting, will be held at the Smithsonian Institution and the National Academy of Sciences in Washington on May 2 and 3, 1989.

The Forum's keynote address will be delivered by Mme. Gro Harlem Brundtland, Prime Minister of Norway and the Chair of the United Nations Commission on Environment and Development.

The Forum is an exceptional opportunity for experts to present for public discussion, a scientifically balanced view of these issues and their implications for public policy. Global Change and its implications throughout the Americas is a special focus of the Forum.

Admission is free, but registration is required. Registration forms are available from the Office of Conference Services, S. Dillon Ripley Center, Suite 3123, Smithsonian Institution, Washington, D. C. 20560.

MAB PROJECT PROGRESS NOTED

The U.S. MAB funded project "Diversity of Tropical Forest Canopy Species and an Integrated Conservation Strategy" (see July 1988 issue of this BULLETIN), organized by the Integrated Conservation Research Group, has now also received support from the UNESCO MAB Program and from other governmental and private sources.

The project proposed to organize parallel studies at two sites (Malaysia and China) to compare the fauna and flora of the forest canopy with those on the ground, with access to the forest canopy by use of a unique method of canopy walkways. Coinciding with basic scientific research, the project intends to develop economically viable alternatives to destructive forest exploitation. These alternatives focus on agroforestry, domestication of new species, development of traditional medicines from empiricism to scientific validation, and the promotion of internationally and locally based natural history oriented tourism.

Beyond what was planned in the original project, Malaysia Airline System (MAS) has already provided free air transportation for supplies to the project. MAS has also promised that as natural history tourism develops, it will fly participating scientists into the project free of charge in an agreed upon ratio to tourists flying their airline. In addition, Diethelm Malaysia, Bhd. the private manufactures of aluminum ladders used in the forest canopy walkways, donated sufficient footage of aluminum ladders to install 100 meters of additional walkways for the natural history tourism program. Entry receipts collected by Sabah Parks will be used to maintain and expand the walkway system and for training of staff. Sabah Parks is supplying all the labor and transportation for the project.

This project is described in detail in the January 1989 issue of the UNESCO COURIER, under the title "Use Them or Lose Them: A recipe for sustainable use of tropical forests."

U.S. DEPARTMENT OF STATE SUPPORTS GLOBAL CHANGE PROGRAM THROUGH UNESCO/MAB

The Department of State, through an exchange of letters between Assistant Secretary Richard S. Williamson of the Bureau for International Organization Affairs and the Director General of UNESCO, Dr. Federico Mayor, made a voluntary contribution of \$125,000 to help support the development of UNESCO's biosphere reserves into global geosphere-biosphere observatories (GBOs).

Under the agreement, MAB's biosphere reserves and other appropriate sites will be developed as part of a network of GBOs of the International Geosphere-Biosphere Program (IGBP) of the International Council of Scientific Unions (ICSU).

Dr. Mayor directed that UNESCO contribute an equal amount of money for this purpose. He established a UNESCO/ICSU steering group to foster cooperation between the intergovernmental and private scientific organizations. The steering group will determine and monitor the specific allocations of these funds, and report to the U.S. and UNESCO by January, 1990.

The first meeting of the steering committee took place in February. UNESCO was represented by the Directors of the science sector's divisions of Ecological Sciences, Earth Science, Marine Sciences, Water Sciences and the Secretary of the Inter-governmental Oceanographic Commission. A joint memorandum concerning co-operative activities on global change was approved which set out two fundamental objectives. They are, "To enrich the International Geosphere-Biosphere Program with the contribution of UNESCO's major environmental science programmes;" and "To bring to bear the particular strengths of...UNESCO to the overall international scientific research effort in the field of global change." The agreement noted that activities funded under this agreement "...in no way exclude contributions on the part of UNESCO to the IGBP through other ongoing or potential activities with UNESCO's environmental science programs. This additional dimension of interaction between ICSU-IGBP and UNESCO is indeed sought and encouraged."

SO LONG, ITS BEEN GOOD TO KNOW YOU

As required by federal law, periodically we have to purge our mailing lists of those no longer interested in receiving the U.S. MAB BULLETIN. Last year we sent out two notices with postage paid return mail forms. We believe that we have now incorporated all of those returned forms into our mailing list. If your address label does NOT have an astrick (*) in your address, this will be the last U.S. MAB BULLETIN that you receive -- unless you inform the Secretariat that you wish to continue to receive this BULLETIN.

(NEW VERSION OF) BIOSPHERE RE- SERVE BROCHURE BEING ORDERED MANAGERS: PLACE YOUR ORDERS NOW

The U.S. MAB Secretariat is now gathering orders to print a new version of the Biosphere Reserve Brochure/ and map. The new version will be updated to contain the new U.S. biosphere reserves designated through April 1989. It will also have a new code to the location of the world's biosphere reserves. We hope that by gathering together enough orders that we can obtain a price break from the publishers and obtain them for approximately \$300 per thousand copies. Please notify the Secretariat if you would be interested in purchasing copies in units of 1,000. We intend to place the order on May 1, 1989.

Announcing a New Journal: ECOLOGICAL ECO- NOMICS The Journal of the International Society for Ecological Economics.

As noted in their brochure: "Aims and Scope:

Ecological Economics is concerned with extending and integrating the study and management of "nature's household (ecology) and "mankind's household" (economics). This integration is necessary because conceptual and professional isolation have led to economic and environmental policies which are mutually destructive rather than reinforcing in the long run. The Journal is transdisciplinary in spirit and methodologically open..."

For a free brochure describing this new journal write to: Elsevier Science Publishers, Journal Information Center, 655 Avenue of the Americas, New York, New York, 10010. The first issue may be now available.

MAB YOUNG SCIENTISTS RESEARCH GRANTS

At the 10th International Coordinating Council (ICC) meeting of MAB held at UNESCO in Paris last year, the MAB Young Scientists Research Grant program was launched. It is designed to facilitate research work of young scientists in MAB field projects, comparative studies and biosphere reserves. Applicants should not be older than 35 years.

UNESCO/MAB intends to provide at least 10 awards per year, but no more than two (2) awards will be made to young scientists from the same country. The application form notes, "Individual research grants will be made available up to an amount of US\$5,000. Smaller requests have greater chances of approval." MAB research fellows will be selected by the UNESCO MAB Bureau (Executive Committee) of the ICC based on information provided in application forms. The next bureau meeting will be in early 1990. For U.S. candidates, application forms are available from the U.S. MAB Secretariat and must be returned to the U.S. MAB Secretariat by October 31, 1989 for review and endorsement by the U.S. MAB Executive Committee.

NEWS OF U.S. BIOSPHERE RESERVES

During the 10th session of the MAB Council meeting at UNESCO in Paris in November 1988, the MAB Bureau approved the following proposals for new U.S. biosphere reserves.

Central California Coast Biosphere Reserve

This new biosphere reserve is north of San Francisco, covers over 404,800 hectares of lands in national and three state parks and a municipal water conservation district. It also encompasses an area of open ocean down to a depth of 1,300 meters with marine islands (the Farallones), to the coastal zone up to the coastal ranges at an altitude of 730 meters. The biosphere reserve contains diverse habitats in the natural and near natural state, going from benthic vegetation, coastal salt marshes and grasslands, chaparral scrub and on the higher elevations mixed broadleaf and needleleaf forests with typical redwoods. There is a well established monitoring program at the Point Reyes Bird Observatory. The site is made of up six different administrative areas whose activities are coordinated through cooperative agreements.

Actions on the New Jersey Pinelands and Southern Appalachian Biosphere Reserve Cluster

The MAB Bureau approved designating the New Jersey Pinelands as a separate biosphere reserve (no longer a unit of the South Atlantic Coastal Plain Biosphere Reserve). The Bureau also approved the creation of the Southern Appalachian Biosphere Reserve which is a cluster made of up the Great Smokey Mountains National Park, the Coweeta Hydrological Laboratory (these units were already designated separately as units of the Southern Appalachian cluster) and the Oak Ridge Environmental Research Park.

Lake Champlain Basin - Adirondack Mountains Nominated

The U.S. National Committee for MAB approved a report by a panel of scientists and resource managers convened under the auspices of the U.S. and Canadian National Committees for MAB. The panel identified sites within the Lake Forest Biogeographical Province which qualify for nomination by the U.S. to the international network of biosphere reserves.

All formal nomination papers for the establishment of this biosphere reserve have now been forwarded by U.S. MAB to the UNESCO MAB Secretariat for consideration at the next meeting of the MAB Bureau.

MORE ACTIVITIES ON U.S. BIOSPHERE RESERVES

The U.S. MAB Directorate on Biosphere reserves has received status reports from MAB panels on the Virginia-Mid-Atlantic Region (Cape Cod to Cape Hatteras) and on the Acadian-Boreal Region (Cape Cod to the Gulf of St. Lawrence). All are under review by the U.S. MAB Directorate on Biosphere Reserves.

MAB has funded feasibility studies for proposed biosphere reserves in southern Florida, southern Arizona, and the Acadian-Maine archipelago region. These studies also will include suggested mechanisms for institutionalizing MAB activities in these regions.

An update of the 1985 bibliography on biosphere reserves is under review. This includes general papers on the concept and its application, and on major research or education programs that demonstrate biosphere reserve objectives anywhere in the world (but not papers on specific research projects). Copies may be obtained from: Dr. William P. Gregg, MAB Coordinator, National Park Service (490), Department of the Interior, P.O. Box 37127, Washington, D.C. 20013-7127.

BACKYARD BIOSPHERE RESERVES ???

The MAB program is the focal topic of an environmental study guide developed by Ohio State University and Great Smoky Mountains National Park for use in schools around the park. Titled "Our Backyard Biosphere Reserve," it contains lessons and activities for kindergarten through 8th grade. Other topics, all related to the biosphere reserve idea, are air quality, native species, exotic species, biodiversity and cultural heritage. Slide sets or videotapes are available to accompany some modules.

For further information contact Dr. Gary Mullins, Ohio State University, School of Natural Resources, Division of Environmental Education, 2021 Coffey Road, Columbus, Ohio 43210.

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PUBLICATIONS

NEW PUBLICATIONS FREE FROM U.S. MAB

Remember: enclose your self-addressed mailing label (s).

☐ **MAN BELONGS TO THE EARTH, International Cooperation in Environmental Research**, UNESCO's Man and the Biosphere Programme (MAB), Unesco 1989.

☐ **THE MARINE CONNECTION**, Vol. 3, No. 1, October 1988. A Newsletter of the International Marine Protected Area Network. News of cooperative reef management in Australia, marine reserves in Belize, Thailand, Colombia and elsewhere; plus updates on related programs, projects, meetings and "re:sources."

☐ **CONNECT: UNESCO-UNEP Environmental Education Newsletter**, Vol. XIII, No. 4, December 1988. "Natural Disasters and Environmental Education."

Also limited copies of the following previous issues of CONNECT are available from U.S. MAB:

"Urban Problems and Environmental Education,"

Vol. XIII, No. 3, September 1988;

"Sustainable Development via Environmental Education," Vol. XIII, No. 2, June 1988;

"The Message for the Media: Environmental Education," Vol. XIII, No. 1, March 1988.

☐ **InfoMAB, UNESCO/MAB Newsletter, No. 11, 1988.**

Includes items about MAB National Committees, most MAB project areas, and MAB calendar through April-May 1991.

☐ **PARK SCIENCE, A Resource Management Bulletin**, Vol. 9 No. 2, Winter 1989. Published by U.S. Department of the Interior, National Park Service.

PUBLICATIONS STILL AVAILABLE FROM MAB

GUIDELINES FOR ENVIRONMENTAL SPECIMEN BANKING WITH SPECIAL REFERENCE TO THE FEDERAL REPUBLIC OF GERMANY: ECOLOGICAL AND MANAGERIAL ASPECTS, Robert A. Lewis, Editor and Principal Author, U.S. MAB Report # 12, 1987.

WE DID THIS OURSELVES: A Case Study of the INA-

FOR/CARE Peace Corps Soil Conservation and Forest Management Program, December 1987. Republic of Guatemala, Produced under the AID/PC Forest Resources Management Project.

WHAT IS A BIOSPHERE RESERVE? Poster/Map (based on a classification by Miklos Udvardy, 1975) with listing of international biosphere reserves as of January 1987.

PUBLICATIONS AVAILABLE FROM OTHERS:

THE JOURNAL OF ARCHITECTURAL AND PLANNING RESEARCH has published a special issue (V. 5, No. 3, Autumn, 1988) on the results of a MAB workshop on U.S./Mexico Border Environmental and Social Issues. The articles discuss such topics as perception of the environment, behaviour implications of urban growth, problems of development, de facto rules for migration, the experience of environmental change and cross-national environmental planning. Copies may be obtained for \$15.00 each from: Locke Science Publishing Company, P.O. Box 146413, Chicago, Illinois 60614 (Bulk discounts available).

CIRCULAR BIOLAT Smithsonian Institution - El Hombre y La Biosfera - Programa de Diversidad Biologica, Diciembre 1988. Escribe: Programa BIOLAT, NHB - 169, Smithsonian Institution, Washington, D.C. 20560 (Telex:264729).

MARINE AND TERRESTRIAL ECOSYSTEMS OF THE VIRGIN ISLANDS NATIONAL PARK AND BIOSPHERE RESERVE: Biosphere Reserve Report No. 29, U.S. Department of the Interior/National Park Service and the Virgin Islands Resource Management Cooperative. Prepared by Caroline S. Rogers and Robert Teytaud. Available for \$10.00 from: Island Resources Foundation, Suite T-4, 1718 P Street, NW, Washington, D.C. 20036.

PHYTOPRACTICES IN TROPICAL REGIONS: A Preliminary Survey of Traditional Crop Improvement Techniques, by Y. Aumeeruddy and F. Pingo. A limited number of copies for review and comment are available from: UNESCO/MAB Secretariat, UNESCO, 7 place de Fontenoy, 75700 Paris, France.

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