



BULLETIN

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April 1988

REPORTS FROM THE U.S. MAB CHAIRMAN...

I am honored to serve as the new chairman of the U.S. Man and the Biosphere Program. I have been involved with the MAB Program for a number of years both in the United States and in Paris. In 1980 I received a U.S. MAB research grant which provided some of the critical seed money to start the Minimum Critical Size of Ecosystems project in Brazil. Among other involvements, in 1986 I served with the ad hoc advisory group on the MAB Program for the State Department.

Working with our capable and energetic Executive Director, Roger E. Soles, I am happy to announce the appointment of five new members to the U.S. National Committee for MAB. They are: STEPHEN B. BRUSH, Administrator, International Agricultural Development Program, University of California, Davis; ARTHUR W. COOPER, Head, Department of Forestry, College of Forest Resources, North Carolina State University, Raleigh; NORMAN E. JOHNSON, Vice President, Research and Engineering, Weyerhaeuser Company, Tacoma; GILBERT F. WHITE, Institute of Behavioral Science, University of Colorado, Boulder; and ROBERT G. WOODMANSEE, Natural Resource Ecology Laboratory, Colorado State University, Fort Collins.

I look forward to working with these new members and the full committee in guiding the future of the U.S. MAB Program. (Committee listed on pages 9 and 10.)

At the forthcoming June U.S. MAB Directorate Chairmen and National Committee Meeting in Washington, D.C., the first Chairman's Lecture will be held. I have asked Eneas Salati of Brazil to lecture on his important work on the hydrological cycle of the Amazon. You are all invited to attend. The lecture will take place at the Smithsonian Institution on June 28 at 4:00 p.m. Please make your reservation by calling the MAB Secretariat, (202) 632-7571. Space is limited, so call as soon as possible.

Thomas E. Lovejoy

...AND FROM THE EXECUTIVE DIRECTOR:

The U.S. MAB Program's Executive Committee has awarded three grants to organize symposia and workshops on the elaboration of the new research orientations of MAB. Summaries of the activities appear elsewhere in this issue. The organizers of these symposia/workshops will present detailed plans for their projects to the National Committee and Directorate Chairmen in June. It is expected that the ensuing dialogue will help to further orient the workshops and symposia to the U.S. MAB Program.

The final step of the current fiscal year's proposal review and funding cycle (described on pages 2-3) will take place at the June meeting of the U.S. National Committee for MAB. This has been a "learning year" for U.S. MAB as we implemented the 1986 ad hoc advisory group's recommendations for structural changes and for revision of the proposal review process. We believe U.S. MAB now has a more open structure. We believe it will make possible the production of rigorous scientific information relevant to environmental policy analysis and application of the supporting agencies of the U.S. MAB Program.

This issue also contains news of changes within several U.S. MAB Directorates. A number of longtime Directorate Chairmen have stepped down in recent months in order to give others on their Directorates the opportunity to serve in that capacity. We especially want to express our thanks and gratitude to: DR. PETER F. FFOLLIOTT, of the University of Arizona, for his many years of productive and faithful service, both as a member and as Chairman of the Directorate on Temperate Forests; DR. EDWARD FERNALD, of The Florida State University, for his guidance and leadership of our Directorate on Fresh Water Resources; PROFESSOR HENRY CAULFIELD, of Colorado State University, for having led our Directorate on Arid and Semi-arid Lands; and DR. WILLIAM P. GREGG, JR., National Park Service, and DR. STAN KRUGMAN, U.S.D.A. Forest Service, for their combined leadership skills in the Directorate on Biosphere Reserves. All of these gentlemen will continue to contribute their special talents to the U.S. MAB Program through their continued participation and interest in specific ongoing projects.

Roger E. Soles

THE U.S. MAB PROPOSAL SELECTION PROCESS:

U.S. MAB--an interagency environmental research, education and training program--employs a multilevel selection process to ensure that the Program achieves, through the granting of its funds, results of significant benefit to sponsoring and participating United States federal agencies.

What are these levels, and how does each level participate in this process? See Fig. 1.

1. The U.S. National Committee for MAB establishes the focus, goals and priorities for U.S. MAB. This Committee is composed of (1) representatives of federal science, land management, and other agencies concerned with environmental policy, and (2) private sector scientists. It meets once or twice a year to review current environmental issues, the development of the international MAB research orientations, agency policy interests, and the concerns of the scientific community.

The National Committee decides on program and research priorities and establishes criteria for the current year's projects. The Committee issues its request, or call, for research proposals to the U.S. MAB Directorates. Calls for organizing symposia and for other purposes are published in the U.S. MAB BULLETIN which goes out to some 3,000 readers, many of whom are scientists. Other environmental newsletters/scientific journals may also publicize MAB's requests for proposals (RFP).

2. There are eleven Directorates in today's U.S. MAB Program; they are listed on page 7. These Directorates are comprised of scientists, land managers, and administrators from federal agencies, academia and the private sector. They are organized around ecosystems or biomes (e.g., tropical forests, arid lands, grazing lands) or program concerns (e.g., urban ecosystems, biosphere reserves). Each group designates a Chairman and meets once or twice each year.

Directorates may also publicize MAB's calls for research proposals and program activities to other scientists. When they receive proposals, the Directorates provide initial screenings based on the proposals' responsiveness to the RFP, the capabilities of the principal investigators and institutions to carry out the activities, and their relevance to the Directorates' own programs and activities. All proposals for program and research activities go through this Directorate screening process. A Directorate may also initiate and seek funding for its

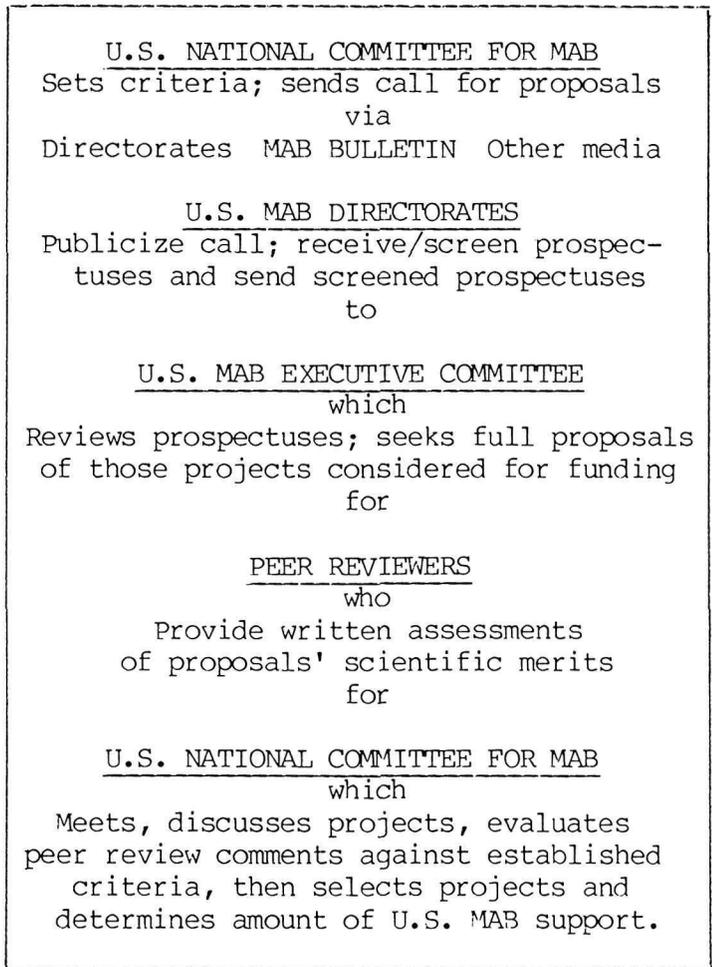


Fig. 1. Proposal selection process outlined

own programs and project activities. Directorates are encouraged to cooperate with each other in projects on the UNESCO and U.S. MAB general research orientations in order to increase the interdisciplinary and policy relevancy aspects of U.S. MAB research activities. When a Directorate approves a project prospectus, it sends the prospectus to U.S. MAB's Executive Committee for further consideration.

3. The U.S. MAB Executive Committee is composed of private sector scientists, and of representatives from federal agencies which contribute a minimum of \$50,000 to U.S. MAB's annual budget. It regularly provides guidance on more immediate day-to-day matters of the U.S. MAB Program, and it meets often throughout the year.

The U.S. MAB Executive Committee's role in the selection process is to review all proposed activities for their responsiveness to the original call for proposals and their relevancy to the federal agencies' missions and policies. After the Executive Committee approves a research activity for funding consideration--on the basis of the brief prospectus--the relevant Directorate and principal investigator(s) are notified to fully develop the proposal.

THE MAB SELECTION PROCESS (Continued):

4. Full proposals are then sent to the U.S. MAB Secretariat where they are redistributed for peer review. The reviewers provide written assessments of the proposed projects' scientific quality, merit and relevancy. A general policy is that each project be reviewed by at least three non-MAB peer scientists and at least one member of the National Committee.

5. Project proposals and accompanying peer review comments are then circulated to all U.S. National Committee members who meet, discuss and, in executive session, make the final decisions for U.S. MAB support. The Secretariat then allocates the funds through the U.S. Department of State's procurement channels.

FY-1988 MAB grants resulting from the above process will be announced in a future MAB BULLETIN.

RESULTS OF U.S. MAB'S REQUEST FOR PROPOSALS TO ORGANIZE SYMPOSIA ON MAB RESEARCH THEMES AND THE ACTION PLAN FOR BIOSPHERE RESERVES:

The National Committee called for proposals via the November 1987 BULLETIN to support symposia on the MAB themes: (1) ecosystems functioning under different intensities of human impact; (2) management and restoration of human-impacted resources; (3) human investment and resource use; (4) human response to environmental stress; and (5) the Action Plan for Biosphere Reserves.

The objective of all of these workshops/symposia is to provide U.S. MAB with specific recommendations as to how to orient MAB's future research toward the above themes.

Brief summaries of projects selected by the National Committee for funding follow:

I. WORKSHOP: Traditional Resource Use in Neotropical Forests

Tentative schedule: late 1988 or early 1989 in Gainesville, Florida.

Principal organizers: Dr. Kent Hubbard Redford and Dr. Marianne Schmink, both of the Center for Latin American Studies, University of Florida, Gainesville, Florida, and Dr. Christine Paddock of the Institute of Economic Botany, The New York Botanical Garden, Bronx, New York.

Summary: The disappearance of tropical forests is one of today's major environmental

concerns. Despite recent research efforts, the knowledge base for sound decision-making is still scant, but management decisions must be made as tropical forest is rapidly being destroyed. Of late, the major policy response has been to encourage protection of designated forest reserves. However, often human activities have been integrated into forest systems and these would continue. Also, productive human activity in adjacent areas has critical importance for the fate of the protected reserve. A better understanding of the dynamics of environmental-social interactions is urgently needed to guide these decisions and policies.

Compared to the biological aspects of tropical forests, less attention has been directed at these human aspects of resource use and the complex interactions between the social and physical environments. These issues are increasingly important as environmental planning moves from an earlier focus mainly on protection and preservation to an increasing emphasis on economically sustainable utilization patterns. Many traditional cultures have sophisticated and productive methods of interaction with the forests in which they live. In some cases these interactions extend into active, sustained management of native flora and fauna. The centuries of trial and error that have led to these management patterns have resulted in a highly developed understanding of how forest ecosystems function and how their resources can be used productively. As forests disappear, not only are biological resources and potential lost, but also this human knowledge of ecosystem functions and capacities. A critical analysis of the state of knowledge about these systems, their principles and the ways they are changing is an essential step toward the design and implementation of successful policies for sustainable resource management in tropical forests. U.S. MAB has a unique contribution to make to this task because of its interdisciplinary mandate and commitment to both scientific excellence and to the application of research findings to problems confronting policy makers.

The workshop will build on previous research of two U.S. MAB Directorates (Tropical Forests and Human Issues and Environmental Change) which have sponsored earlier baseline research related to the workshop topic.

The time is ripe for a critical evaluation of the case study research which now exists. The workshop will bring together a small interdisciplinary group of experts who will (1) review existing material describing patterns of traditional resource use by humans inhabiting the neotropical forests to

RESULTS OF U.S. MAB'S REQUEST FOR PROPOSALS (Continued):

identify gaps in research and promising conceptual and methodological approaches; and (2) develop strategies for linking the results of this research to key policy-making institutions, including managers of specific projects in the neotropics.

The workshop will focus on the neotropics because of the important areas of tropical forests in the New World and because of a relative lack of research there compared to other developing areas. This focus is appropriate given several new initiatives in the region that could benefit from the findings of the workshop.

Workshop objectives: to make specific recommendations to MAB as to areas in which further work must be done and to managers responsible for developing alternative forms of resource use in tropical forests. This will be accomplished through meetings and a state-of-the-art publication which will be published by U.S. MAB.

II. SYMPOSIUM AND WORKSHOP: Coastal Barrier Biosphere Reserves on the U.S. Atlantic Coast

Tentative schedule: a symposium followed immediately by an invitational workshop, at either the 1989 AIBS annual meeting or the 1989 annual meeting of the Society for Conservation Biology.

Principal organizers: Dr. G. Carleton Ray, University of Virginia, and Dr. William P. Gregg, Jr., National Park Service.

Summary: In 1980, the MAB-8 Directorate convened a workshop on identification and selection of coastal and marine biosphere reserves. In 1981, U.S. MAB published the findings and recommendations of the workshop as interim guidelines. The guidelines adopted a definition of the coastal zone which includes continental plains, coastal barriers and estuaries, and continental shelves following a method developed by Ketchum in 1972. Within this broad area, emphasis was placed on coastal barrier systems for several reasons. These areas illustrate diverse interactions between natural terrestrial and marine processes, and between these processes and diverse human needs. Many are already protected, and thus serve as potential core areas for biosphere reserves. Developing effective policies for conservation and management of coastal barriers continues to receive high priority from numerous federal and state agencies

and private sector organizations. This interest culminated in the enactment of the Coastal Barrier Resources Act of 1983, which established a national policy to encourage wise use of coastal barriers which takes into account the dynamic nature of these coastal systems. The Act contained provisions to eliminate a wide range of Federal subsidies for development on remaining undeveloped coastal barriers of the Atlantic and Gulf Coasts.

In 1984, the MAB-8 Directorate launched the world's first program for the systematic selection of coastal/marine biosphere reserves. Areas extending from Cape Hatteras to the Sea Islands (Carolinian Coastal Region), from Cape Hatteras to Cape Cod (Virginian Coastal Region), and including the Outer Banks (No. Carolina), the Santee Delta (So. Carolina) and the Sea Islands (Georgia) have been nominated and/or designated as biosphere reserves. Two areas within this complex have been designated Long-Term Ecological Research sites by the National Science Foundation, and other areas within the reserve are being managed for various purposes--public recreation, waterfowl management, strict nature protection. The network so far established provides an unprecedented opportunity to develop a regional--and even a global--model for coastal and marine biosphere reserves.

The symposium and workshop will generate specific recommendations for developing an interdisciplinary MAB pilot project for U.S. coastal barriers. This project will respond to the need to develop functional relationships among the reserve sites in carrying out the objectives of the Action Plan for Biosphere Reserves and the priority research orientations of MAB. It will also provide a basis for establishing programmatic linkages between these sites and the adjacent terrestrial and marine areas, as well as with other biosphere reserves in the international MAB network, and with ongoing research planning under the International Geosphere-Biosphere Programme. The Action Plan calls for development of a worldwide coastal/marine biosphere reserve network; international groups including IUCN (Marine Program), UNEP (Regional Seas Program), and the IUCN Commissions concerned with national parks and protected areas, species conservation, and legal issues will work closely with a series of IUCN regional task forces to integrate scientific and management activities in coastal and marine systems. By focusing the application of the biosphere reserve concept on coastal/marine systems, the symposium and workshop will make an important contribution to these international programs.

RESULTS OF U.S. MAB'S REQUEST FOR PROPOSALS (Continued):

The symposium will consist of six co-authored papers, each providing a synthesis of experience as well as future possibilities for expanding the network; strengthening and coordinating monitoring and research on MAB research themes; integrating research, educational, and management functions; and developing incentives for institutional and public involvement. These papers will serve as the background documents to guide discussion in the subsequent workshop. Papers are being invited from representatives of the University of Virginia, the National Park Service, principal investigators from the two marine/coastal area Long-Term Ecological Research sites, UNESCO, the Ecological Society of America, Ohio State University, The Georgia Conservancy, Clemson University, state representatives with broad experience in coastal zone management planning, and the Woods Hole Oceanographic Institution.

Invited workshop participants will include administrators of the areas included within the regional network, representatives of interested federal and state agencies and private voluntary organizations, public communication specialists, resource management specialists, and representatives of local interests, including traditional user groups.

Workshop publication: the proceedings will consist of two parts--the symposium papers and the workshop recommendations. It is planned that publication will be in either BioScience or Conservation Biology approximately one year after the activities. Reprints will then be offered in the BULLETIN.

Ketchum, B.H. - ed. 1972. The Water's Edge: Critical Problems of the Coastal Zone. The MIT Press, Cambridge, MA and London, England.

III. INTERNATIONAL SYMPOSIUM: The Role of Landscape Boundaries in the Management and Restoration of Changing Environments

Tentative schedule: August 1989 annual meetings of the American Institute of Biological Sciences & the Ecological Society of America.

Principal organizers: Dr. Marjorie M. Holland, Ecological Society of America, Dr. Robert J. Naiman, University of Minnesota, and Dr. Paul G. Risser, University of New Mexico.

Summary: Three current major scientific events make this symposium particularly compelling: 1) MAB is now organized around four themes articulating human-natural

system interactions, including the unique opportunities in the international network of biosphere reserves; 2) the International Geosphere-Biosphere Programme (IGBP) is just beginning the organizational phases of a ten year, major research program on global processes. This large program will be international in scope and will focus on geosphere-biosphere phenomena of time scales from decades to centuries; and 3) there is widespread renewed attention toward the need to understand the environmental processes occurring in the boundaries or "ecotones" between landscape units. This is evidenced by: the planning of two small conferences on the subject within the next year--one by MAB and one by SCOPE; IGBP's identification of these boundaries as important throughout all their early planning discussions; the National Science Foundation Division of Biotic Systems Resources' selection of boundaries as their only new 1988 initiative; and the scientific community's vigorous pursuit of this topic.

Much of the previous ecological research has dealt with processes within relatively homogeneous landscape units or even the collective characteristics of a composite landscape. Now, however, there is an appreciation that abiotic and biotic components move across heterogeneous landscapes and that the boundaries between these units take on important control functions in this dynamic spatial system. For example, these boundaries have been shown to operate as controls or filters as nutrients, sediment, and water move across the landscape. Also, ecotones are important not only in satisfying life cycle needs of many organisms, but generally are characterized by high biological diversity. Because these boundaries have such intense biotic-abiotic interactions, they may be particularly sensitive indicators of change in the global environment. Measurements of these boundaries and their changes during alteration in the global environment may be especially amenable to investigations in the biosphere reserves.

The proposed symposium will be the first opportunity for a large segment of the North American scientific community to discuss the scientific program on these boundaries. The MAB symposium itself, building on the several events of the current year, will include presentations on the characteristics of ecotones, how ecotones respond to environmental change, and the ways in which ecotones can be most appropriately managed. This symposium will serve as a comprehensive planning tool for MAB research, and will also ensure that MAB plays a catalytic role in the inevitable research efforts on landscape boundaries.

RESULTS OF U.S. MAB'S REQUEST FOR PROPOSALS (Continued):

The material to be discussed during the Symposium is timely and has the potential of influencing future work undertaken in various U.S. and Canadian governmental agencies such as the U.S. Environmental Protection Agency, Department of Energy, the National Park Service, and various branches of Environment Canada.

Workshop objectives: a publication, including papers presented during the Symposium, as well as a final list of specific recommendations to help guide future U.S. research.

LA SELVA BIOLOGICAL STATION DESIGNATED AS PART OF A CENTRAL VOLCANIC CORDILLERA BIOSPHERE RESERVE IN COSTA RICA:

One of the highlights of the recent IUCN General Assembly Meeting in San Jose, Costa Rica was a brief ceremony recognizing the designation by UNESCO of the Cordillera Volcanic Central Biosphere Reserve in Costa Rica. The new biosphere reserve includes the La Selva Biological Station as well as the Braulio Carrillo and Irazu National Parks, and the Central Volcanic Cordillera Forest Reserve. It encompasses three sizeable watersheds of the Rivers Sarapiquí, Sucio, and Chirripo, and several major volcanoes (a total of 144,363 hectares, 44,901 in the core zone). Its elevation runs from 37 to 3,432 meters; and it contains seven life zones. The La Selva Biological Station is at the heart of the Atlantic lowlands part of the biosphere reserve, and has been operated since 1968 by the Organization for Tropical Studies, an international consortium of universities for promoting research and education in tropical biology. It is a world center in these fields and has trained more than 1,500 students during its operational history. Dr. Rebecca Butterfield is the coordinator of their biosphere reserve program. Because of its extensive research program and binational institutional capability, this new biosphere reserve is expected to make its mark quickly on the international network.

<u>U.S. MAB SECRETARIAT STAFF:</u>	
Roger E. Soles/Exec. Director..	202-632-2786
Phylis N. Rubin/Program Officer...	632-2816
Joseph T. Butler/Budget Analyst...	632-7573
Mae Pickett/Secretary.....	632-7571

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REPORT ON THE JANUARY BULLETIN'S QUESTIONNAIRE

We are very pleased at the response of our readers who have provided us not only with updated names, addresses and replies to the questionnaire, but with many interesting comments as well.

Unfortunately, some forms were sent back without names and addresses--especially from abroad. This may be accounted for by the fact that BULLETINS mailed to "foreign" addresses are placed in envelopes bearing the mailing label. Unless the mailing label was returned with the form, or the name and address were written on the form, we have no idea who returned it. If you think this may have happened with your form, please submit another. (See last paragraph below.)

It will be a while before your new addresses are entered into our brand-new computer, so please bear with us--and the old addresses--a bit longer.

➔ IF YOU FORGOT to return the address correction sheet, but still want to get the BULLETIN, simply fill in as much of the attached questionnaire as you wish; include your name and address, and return it to the Secretariat.

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REPORT FROM OUR MAN IN PARIS, DR. MEL DYER:

The MAB Secretariat in Paris has been actively involved in organizing the new research orientations recommended by the last International Coordinating Council held in 1985. In March this year, a multinational group of experts met at the Paris Secretariat to study Human Investment and Resource Use (HIRU) (Orientation #3). A report will be issued soon on the first set of reflections. In late May another international group of experts will meet to study and make recommendations about future activities on Ecosystem Redevelopment (Orientation #2). In addition, Secretariat staff have met with the World Health Organization staff to start discussions on Human Stress effects in various environmental situations (Orientation #4).

Other new important issues in MAB/Paris revolve around the global change program developments and an upcoming meeting on ecotones slated for Sopron, Hungary in late May. Through the development of the Third Medium-Term Plan covering 1990-1995, UNESCO is starting to study its potential involvement in global change initiatives.

REPORT FROM PARIS (Continued):

A strong collaborative program with the International Geosphere-Biosphere Programme is commencing to emerge. Plans for MAB will be completed in the next six months and reported after the fall meetings of the International Coordinating Council. Ecotone research plans are expected to receive a big boost from the global change planning effort and the Sopron meeting.

WELCOME! NEW U.S. MAB DIRECTORATE CHAIRMEN:

Respecting suggestions from the U.S. MAB National Committee, a number of longtime Directorate Chairmen have stepped down recently in order to begin a rotation system within their Directorates. Directorates which elected new chairmen include: MAB-2 (Temperate Forests); MAB-4 (Arid and Semi-arid Lands); MAB-5 (Fresh Water Resources) and MAB-8 (Biosphere Reserves). Changes are reflected in the list which appears below.

U.S. MAB DIRECTORATES/CHAIRMEN AS OF APRIL 1988

MAB-1 TROPICAL FORESTS

Dr. Ariel Lugo, Project Leader
U.S.D.A. Forest Service
Institute of Tropical Forestry
Southern Forest Experiment Station
Call Box 25000
Rio Piedras, Puerto Rico 00928-2500
(809) 763-3939

MAB-2 TEMPERATE FORESTS

Dr. Robert G. Lee
Chairman, Div. of Forest Resources Mgmt.
College of Forest Resources
University of Washington
Seattle, Washington 98195
(206) 545-0879

MAB-3 GRAZING LANDS

Dr. Richard W. Rice
Animal Science Department
University of Arizona
Tucson, Arizona 85721
(602) 621-7244

MAB-4 ARID AND SEMIARID LANDS

Professor Frank Gregg
Director
School of Renewable Natural Resources
University of Arizona
Tucson, Arizona 85719
(602) 621-5647

MAB-5 FRESH WATER RESOURCES

Dr. Charles R. Goldman
Division of Environmental Studies
University of California/Davis
Davis, California 95616
(916) 752-1557/3939

MAB-6 ARCTIC ECOSYSTEMS

Dr. Charles W. Slaughter
Principal Watershed Scientist
U.S.D.A. Forest Service
Institute of Northern Forestry
Fairbanks, Alaska 99775
(907) 474-7443

MAB-7 ISLAND ECOSYSTEMS (CARIBBEAN)

Mr. William S. Beller
2701 Largo Place
Bowie, Maryland 20715
(301) 262-2701

MAB-8 BIOSPHERE RESERVES

Dr. Paul G. Risser
Vice President for Research
Scholes Hall 108
The University of New Mexico
Albuquerque, New Mexico 87131
(505) 277-5064

MAB-11 URBAN ECOSYSTEMS

Dr. Rowan A. Rowntree
Department of Forestry & Resource Mgmt.
145 Mulford Hall
University of California/Berkeley
Berkeley, California 94720
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MAB-13 HUMAN ISSUES/ENVIRONMENTAL CHANGE

Professor Vincent Covello
Division of Environmental Science
School of Public Health
Columbia University
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MAB-14 POLLUTION

Dr. G. Bruce Wiersma
EG&G Idaho, Inc.
Idaho National Engineering Laboratory
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Idaho Falls, Idaho 83415
(208) 526-1590

NOTE: If you would like a particular directorate membership list, please write: Ms. Mae Pickett, U.S. MAB Secretariat, OES/ENR/MAB, Washington, D.C. 20520.

PLEASE ENCLOSE A SELF-ADDRESSED MAILING LABEL WITH YOUR REQUEST.

WELCOME TO NEW CHAIRMEN (Continued):

We welcome the following new U.S. MAB Directorate Chairmen:

MAB-2 -- DR. ROBERT G. LEE:

Dr. Lee received a BS in Forestry from the University of California/Berkeley (1964), Master of Forest Science from Yale (1969), and Ph.D. from UC/Berkeley in 1973. He is Chairman of the Division of Forest Resources Management, College of Forest Resources, University of Washington. At present he is on sabbatical and in May will be participating in a Symposium on Urban Issues and Opportunities (sponsored by The Conservation Foundation in cooperation with USDA Forest Service) in Milford, Pennsylvania. In June he will attend the 7th World Congress of Rural Sociology, Bologna, Italy, and in July he will go to Denmark where he will examine forests structured for recreation and amenity services. Dr. Lee has been on the University of Washington's faculty since 1978; prior to that he spent six years on the faculty of the Univ. of California/Berkeley.

MAB-4 -- PROF. FRANK GREGG:

Prof. Gregg received a BA in Journalism from the University of Colorado in 1949. He is currently Professor in the School of Renewable Natural Resources at the University of Arizona. Between 1983-87 Prof. Gregg was Director of the School of Renewable Natural Resources. Past non-academic positions held by Prof. Gregg include: Director of the U.S. Bureau of Land Management from 1978-81 under President Carter; a presidential appointment in 1967 by Pres. Johnson to Chairman of the New England River Basin Commission, a joint federal-state water resources planning agency, where he continued to serve until 1978 under Presidents Nixon, Ford and Carter. He served also as Vice President of The Conservation Foundation, staff assistant to the Secretary of the Interior, and Executive Director of the Izaak Walton League.

MAB-5 - DR. CHARLES R. GOLDMAN:

Dr. Goldman received a BA in Geology in 1952 from the University of Illinois; a MS in Zoology in 1955 from the same school; and his Ph.D (Limnology-Fisheries) in 1958 from the University of Michigan. For the past 29 years he has been involved in research and teaching. Currently he is Professor of Limnology, and Chairman of the Division of Environmental Studies, at the University of California/Davis. Concurrently, he is Research Limnologist and Director of the Tahoe Research Group, Institute of Ecology, at UC/Davis. He has written four books and also 301 publications on limnology.

MAB-8 -- DR. PAUL G. RISSER:

Dr. Risser is Vice President for Research and Professor of Biology at The University of New Mexico. His research interests include nutrient cycling in grasslands, landscape ecology, and natural resource management. Dr. Risser currently serves as Chairman of the U.S. National Committee for SCOPE and is a member of the National Research Council's Committee on Global Change and the Board on Environmental Studies and Toxicology. His earlier activities in MAB included a book describing U.S. Biosphere Reserves.

Former Chairmen of the above directorates are still very involved in U.S. MAB.

DR. PETER F. FFOLLIOTT is co-editing with Dr. Wayne Swank, of MAB-2, a companion volume to the recently published People and the Tropical Forest. It will contain summaries of research done in temperate regions under the former U.S.MAB/Agency research consortium. Dr. Ffolliott is also engaged in preparing the proceedings of the meeting held in Harbin, Peoples' Republic of China, on Research in Forest Hydrology. (These publications will be offered in a future U.S. MAB BULLETIN.)

PROF. HENRY CAULFIELD is currently doing private consulting in projects involving water quality and resource preservation--two important U.S. MAB concerns.

DR. EDWARD FERNALD will be leading the U.S. delegation to the May, 1988 meeting in Sopron, Hungary on Land/Inland Water Ecosystems: Strategies for Research and Management. Members of the MAB-5 Directorate will participate in this international workshop, delivering papers and doing much of the administrative work involved.

Although DR. WILLIAM P. GREGG, JR. has stepped down as Co-Chairman of the MAB-8 group, he will continue to provide the very important services of Secretariat to MAB-8 in conjunction with his National Park Service position as MAB Coordinator for Biosphere Reserves.

DR. STAN KRUGMAN, former Co-Chairman of MAB-8, will continue to represent the U.S. Forest Service on the Biosphere Reserves Directorate. Also, he will co-chair the U.S./U.S.S.R. biosphere reserve information exchange, a project established in 1974 under the bilateral agreement on Cooperation in the Field of Environmental Protection.

FREE PUBLICATIONS FROM U.S. MAB (Continued):

U.S. NATIONAL COMMITTEE FOR MAB (Continued):

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- Special Issue 16, Biology International (IUBS News magazine). Geosphere-Biosphere Observatories: Their Definition and Design for Studying Global Change. Report of a UNESCO/SCOPE/IUBS and U.S. MAB meeting, Paris, January 1987. Edited by M.I. Dyer, F. di Castri and A. J. Hansen. 1988.
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- Final Report #59. Programme on Man and the Biosphere General Scientific Advisory Panel (established in cooperation with ICSU). Banff/Calgary, August 1985 and Paris, April 1986. 1986.

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- A Practical Guide to MAB - What is MAB? How does it work? How does one get involved? Who is responsible for what? Published by UNESCO. 1987. (Photocopies, 40 pages.)
- CONNECT, UNESCO-UNEP Environmental Education Newsletter. Vol. XII, No. 4, December 1987. The International Environmental Education Programme 1988-1989.
- INFOMAB No. 9. January-March 1988. UNESCO/MAB Newsletter. Includes articles on: UNESCO General Conference; Geosphere-Biosphere Observatories; Urban Systems (Progress Report on the Rome Project); Conservation; Tropical Forests and Savannas; Arid and Semiarid Zones; MAB Calendar through August 1990; etc.
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Check, in the boxes below, the area which interests you. If more than one, please write "1," "2," etc. in the boxes, according to your priority.

Four major research themes of the Man and the Biosphere Program:

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- Ecosystem functioning under different intensities of human impact
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(Questionnaire continues on next page.)

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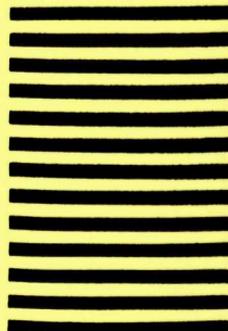
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QUESTIONNAIRE (Continued):

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- Tropical forests Temperate forests Grazinglands Arid/Semiarid Lands
- Fresh water Arctic ecosystems Caribbean islands Biosphere Reserves
- Urban ecosystems Human issues and environmental change Pollution

III. Originally the U.S. MAB BULLETIN was directed to a very small group of readers-- those who were active in the U.S. MAB Program through directorates, committee membership, program activities, grants, previous connections, etc. We knew pretty much who our readers were and what might interest them. Over the past decade, many more have asked to receive this publication, and many names have been suggested to us by others who have found the BULLETIN useful. In order to serve our readers in the best manner possible, it would be helpful if we could learn more about our current readership. If you would like to help us, please fill in the blocks below. We will appreciate your responses very much.

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