



BULLETIN

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INTRODUCTION

To all who receive the Man and the Biosphere Bulletin, best wishes for a happy and successful New Year from the MAB Secretariat. To those who labor in the MAB vineyards, special thanks for your effective and selfless work. The past year was a year of progress for the MAB Program; and with your continuing effort, 1980 should be even better.

We apologize for the delay in getting this issue of the Bulletin out. We were aiming for December 1 but just have not had the staff time to complete it. We are going to try to produce the next issue by June 1. If you have contributions or suggestions as to ways it can be improved, please do communicate with us.

We of the MAB Secretariat, few in number though we are, stand ready to serve you, the MAB Constituency, in every appropriate way. The address and telephone number are:

Man and the Biosphere Program
U.S. Department of State, IO/UCS
Washington, D.C. 20520
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REPORT ON SIXTH SESSION OF INTERNATIONAL COORDINATING COUNCIL OF THE MAN AND THE BIOSPHERE PROGRAM, PARIS - November 19-28, 1979

U.S. MAB Chairman, Donald King, led a six member delegation which included Thomas Bartlett, Chairman of MAB Directorate 3, to the Sixth Session of the International Coordinating Council (ICC) of MAB Program in Paris at the UNESCO House, November 19-28.

All 30 nations which are members of the ICC were represented by delegations, and an additional 22 nations and international organizations sent observers to the session. The Soviet Union and the People's Republic of China were represented by strong delegations, as was the United States. As is traditional with MAB, the meeting was free of politics and the eight working days were devoted to a lively discussion of how to improve the MAB Program.

95 countries are now participating in the MAB program and 906 projects involving some 5,000 scientists are registered with the Secretariat. The expansion of the Program is straining the capacity of an already overtaxed Secretariat to properly coordinate the Program. In fact, the very size of the MAB Program engendered an intense discussion of its nature and direction. One representative suggested that there was too much emphasis given to simply registering any type of program in the MAB register and the ICC should focus on ways to link research projects of member nations rather than simply give three cheers when a new national project is launched. Donald King proposed that the Secretariat give special attention to those projects where the greatest prospects for linkages existed and that these projects would then form the core of the MAB Program.

MAB Secretary di Castri pointed out that MAB cannot be supranational and that by design it is based upon national projects which reflect the priorities and capacities of the member countries. This is the dilemma that results from attempting to homogenize heterogeneity. Secretary di Castri did pledge that the Secretariat would seek ways to improve and expand project linkages.

The theme that MAB as a program has now arrived in terms of national acceptance and consciousness and that the next step must be to internationalize it was constantly sounded throughout the session. The ICC meeting planned for 1981 to mark the 10th Anniversary of MAB will focus on this theme. One of the most stimulating discussions centered on how the MAB Program should be evaluated and projects selected. It was agreed that evaluation/selection should address the following criteria:

A. The project should address a concrete problem of resource management or land use.

B. The project should be based on a strong national commitment and interest in the problem and decision makers should be involved from the beginning.

C. Groups of projects should be linked to treat similar problems and situations.

D. The project should be based, potentially at least, on a problem of interest to more than one country.

The Council reaffirmed that the role of the Secretariat is to help countries on request to reinforce research projects and, more particularly, to help develop linkages between projects. The MAB information system is improving and expanding and basic information about the projects is in the computer with the completion of Phase I. Phase II of collecting more complete data about projects is now underway. (The U.S. has not responded to the request for information for Phase II of the Information System and Directorate Chairmen will be receiving the forms in the near future.)

Dr. Jeffers, the U.K. delegate, recommended that MAB should begin to produce abstracts and indices of projects for scientists; modeling and synthesis handbooks for resource managers; a series of interpretive, result-oriented publications for administrators. The latter proposal drew a very positive response from the Council members, although it is evident that the Secretariat is not staffed to accomplish this.

As an experiment, the Secretariat devoted a day each on the agenda to a discussion of tropical forests, arid lands, urban ecosystems and biosphere reserves. In general this experiment was not successful. The theme papers were not state-of-the-art reports and the discussions were not well directed. As a consequence, these sessions devolved into serial statements about national projects. The experiment will not be repeated in the same form although the concept has promise.

In sum, the Sixth Session of the ICC revealed that the MAB Program has healthy growing pains. The need to internationalize the program is evident and the themes for the next two years are: linkages of projects and harmonization of project designs and processes.

REPORT ON THE ANNUAL MEETING OF THE U.S. NATIONAL COMMITTEE FOR MAN AND THE BIOSPHERE

The annual meeting of the U.S. National Committee for MAB Program took place in Alexandria, Virginia, from October 22-24, 1979. Following tradition, Chairmen of MAB Projects met on the first day followed by the meeting of the full Committee on the second and third days.

The centerpiece of the 15th session of the Committee was the discussion of the National Plan for MAB which had been drafted in response to the March 9 memorandum from the Office of Management and Budget (OMB) and the Office of Science and Technology Policy of the Executive Office of the

President. This memo directs the Departments of Interior and Agriculture jointly to develop and coordinate domestic participation in the MAB Program and to promote participation with other concerned agencies. For several months a task force has been working on the Plan; the current draft is now being revised. With completion of a Plan, the prospects for obtaining enhanced funding support for MAB should improve.

Malcom Hadley, Senior Program Specialist from MAB Paris, brought the international dimension to the Committee meeting. In his remarks, Malcom utilized the many activities going on in other parts of the world in MAB Project 1, Tropical Forests, as a vehicle for demonstrating that MAB is indeed a framework for action at the international level. On October 25, Malcom journeyed to the Great Smoky mountains National Park to participate in a dedication ceremony of a bronze plaque designating the Park as an international Biosphere Reserve.

In the keynote address to the U.S. National Committee, the Honorable Robert L. Herbst, Assistant Secretary of Interior for Fish, Wildlife and Parks, stressed the importance of the Plan in the support of MAB. Secretary Herbst committed the Department of Interior to a heightened level of MAB support and outlined steps other agencies are prepared to take in this direction. Because of the real significance Mr. Herbst's words hold for the present and future of the U.S. MAB Program and believing that this will be of interest to readers of the BULLETIN, several excerpts from his speech are included here:

".....I will address myself this morning to the recent, solid pieces of evidence that tell us MAB is going to fly--that 'the system' is now ready to pay serious attention to programs like MAB that speak directly to our swollen needs and our shrunken resources....."

"You all know about the March 9 joint memorandum from OMB and the Office of Science and Technology Policy, directing the Departments of Interior and Agriculture, jointly, to develop and coordinate domestic participation in the MAB Program and stating that 'all other major natural resources and environmental management agencies should work with the Departments of State, Interior, and Agriculture and the MAB National Committee, as appropriate, in developing a plan for participating in the MAB Program.'"

"We have responded to this vastly supportive memorandum by preparing a plan which I personally have been urging. The plan we are developing is comprised of five elements which I understand you discussed yesterday. I urge that you each provide your input as we finalize it. In general:

"The first provides for an expansion of the traditional MAB interdisciplinary projects concerned with resource management and human impacts on the environment.

"The second calls for greater emphasis on biosphere reserves monitoring and research so we can start obtaining information on conditions and trends in the sentinel sites.

"The third introduces a new MAB concept in which the work will focus on specific geographic areas in the U.S., such as Lake Champlain. The objective will be to start an interchange between all of the entities that do research in such specific sites and the people who make the decisions there on resource management. Perhaps we can start a new wave of interdisciplinary dialogue that will provide better options for real management decisions. In any event, the exposure of such information interchanges to public light would, in itself, create subtle shifts in the machinery of decision-making. In my opinion, the result would have to weigh in on the side of wisdom, as opposed to greed or ignorance.

"The fourth element will consist of increased attention to international cooperation. We will benefit not only from the knowledge we can gain from such cooperation, but also from improved relations with other countries.

"The fifth element is the plan for management and implementation, which is well along. What we will now need is the capability to manage what we hope will be our full-fledged MAB Program.

"Some of you may not know that on September 17, Secretary Andrus stated to all his Assistant Secretaries his 'strong backing for this interdisciplinary, interagency program for its own scientific worth and for the wider vision it can bring to bear on the science we already are engaged in'.....

"We have established, within Interior, a fulltime, permanent position of MAB Coordinator. In addition, it is our hope to make the following support commitments to the U.S. MAB Secretariat: One professional environmental specialist and one secretary for the Washington office, one Biosphere Reserve specialist on a two-year appointment to the Paris office, and \$75,000 annually for operating needs.....

"Agriculture's response to the MAB call detailed a list of 55 domestic and at least one international project in six research areas directly related to MAB, and indicated that sources of funding for MAB are being pursued in three areas: (1) reprogramming agency resources; (2) line item for MAB in future USDA budget requests to OMB; and (3) support of new legislation authorizing direct funding of the MAB Program. Meanwhile, the Forest Service is working to develop a 5-year plan for financing USDA mission-oriented MAB research.

"Agriculture has contributed a co-chairman and Interior has furnished his counterpart to the MAB Project 8--World Biosphere Reserves. We are particularly pleased with the working relationship developed between the Forest Service and Interior in the course of this shared task, and we mean to continue this course. Agriculture has active members on 6 of 14 MAB Directorates and has provided continuous staff assistance at the U.S.MAB Secretariat. In 1979, Agriculture assigned a scientist for two years to the MAB Secretariat in Paris. Another signal contribution of Agriculture is establishment and funding (at \$300,000) of a MAB Consortium, specifically targeted at funding research proposals in three MAB Project areas: Tropical and Sub-tropical Forests, Temperate Forests, and Biosphere Reserves. It is Interior's intention to join this Consortium.

"The Navy has proposed naming representatives to 7 of the 14 MAB Projects; the Assistant Secretary for the Environment from the Department of Energy reiterated the Department's commitment to a \$30,000 yearly contribution to operation funds for the U.S. National Committee for MAB, and indicated that one person will soon be available to work fulltime for the Committee. In addition, an inventory of DOE studies that would support or contribute directly to the U.S. MAB Project areas has been completed.....

"The Smithsonian Institution, too, has taken approving note of its own long-time relationship with the MAB Program and listed as particularly significant in this regard its vast data resources on changing patterns of land use as they affect pollution of a watershed at the Chesapeake Bay Center. It also cited its studies of demographic change through the Research Institute for Immigration and Ethnic Studies as being pertinent to the MAB effort. The Smithsonian offered all cooperation in line with data gathering and 'a recommitment of efforts and strengthening of participation in this most worthy program'.

"The Tennessee Valley Authority expressed solid support of MAB and suggested that TVA serve as a training ground and information source for MAB objectives. They suggested five specific areas where TVA could plug its efforts into the overall MAB Program: (1) integrated regional

studies, such as the broad implications of wood-for-energy; (2) aerometric monitoring and bottling applications; (3) terrestrial and aquatic impacts of energy states; (4) watershed ecosystems studies; and (5) one of my own favorites--environmental education.

"Tom Ripley, manager of TVA's office of natural resources, indicated his grasp of MAB's superb potential for 'linkage' and hence, for increased efficiency in the area of scientific exchange, when he noted 'a wide range of cooperative interaction exists including posting personnel on sabbatical leave with interests in the program areas, exchange of administrative or technical personnel with other agencies or with other nations, participation in symposia, information integration and dissemination, and so forth'.....

"The Environmental Protection Agency, too, has responded. Lewis Hughes, Acting Associate Administrator for International Activities, in an extremely responsive memorandum, delineated EPA activities in two MAB Directorates--Island Ecosystems-Caribbean (No. 7B) and Pollution (No. 14). EPA staff members are chairmen of these two Directorates and an additional person, representing the EPA Research and Development Office, is a member of the U.S. National Committee.

"EPA is cooperating with the U.S. National Park Service on development of a pollutant monitoring system for the International Biosphere Reserves, and recently EPA helped sponsor the 25-nation Conference on Environmental Management and Economic Growth in the Smaller Caribbean Islands. EPA further suggested that MAB research of interest to that agency might be funded under EPA's R&D grants and contracts program.

"The offers of help and cooperation continue to trickle in, and while no one is claiming that the results constitute a flood or that there is any immediate need to seek higher ground in order to avoid drowning in dollars, it is still a real beginning--a substantial one.....

"Some hurdles of a psychological nature still remain. It is perfectly natural and understandable that as science and government start moving in each other's direction there will be general anxiety and specific criticism from each sector--directed at the other's perceived failures of perception, misplaced emphases, etc. If this were not the case, then there would be no need for the exercise in the first place.....

"Man and the Biosphere is a first, difficult step in the direction of a synthesis long overdue. Progress will come more easily in some segments of MAB than it will in others. The World Biosphere Reserve idea is one that is tailored to fly almost at once. Its dual structure--to reflect the scientific reality that is mainly composed of natural systems and the equally scientific reality that is those same systems impacted by human actions--provides a natural bridge between the social and the natural sciences. Men and women of good will can approach one another from both sides of this bridge and the view of the world will be wider and wiser as each set of people glimpses the other's information and concern.

"A tougher nut to crack is such a project as No. 11, Urban Ecosystems. Here we have to be willing to give the sociologists--the demographers, the urbanologists, the economists, all those who deal in the human systems--at least an equal role in devising the models to be studied and in defining new pathways through the systems that need to be laid down.

"The scientists of the so-called natural systems must be willing to deal with cities as dynamic, productive societies engaged in urban growth, education, commerce--in short, as educational, developmental, productive systems. Sociologists, on the other hand, must be open to the need for establishing thresholds of human impact on the underlying natural systems that have so long been taken for granted.....

"There IS such a need, and happily that need is becoming irresistible at precisely the time that an answer to the need is taking shape.....Man and the Biosphere provides a third response--a creative synthesis of science and government joining forces to tackle the problems in a holistic manner.

"This Administration--through OMB, through OSTP, with the building support of a Congress that is beginning to see the potential pay-off to a world approach--has given us the send-off we wanted. It's up to us now to use the additional muscle we've be given--to help our MAB office and the headquarters office in Paris. We have to respond to the support memos from the President's Executive Offices by producing U.S. annual work plans in line with this new U.S. Committee Plan. And with the annual work plans must come budget strategies. And information about all this work should begin to appear, on a regular basis, in newsletters--tying the MAB activities into a strongly knit network of tough connective tissue.....I don't expect all this to happen overnight. But I do expect it to start happening right now. I think we have a fine beginning and I stand ready to help in any way I can....."

MAB RESEARCH CONSORTIUM

Seven of the 13 research proposals submitted to the Consortium for the Study of Man's Relationship with the Global Environment in 1979 were funded by the U.S. Dept. of Agriculture, Forest Service. Titles of the seven proposals and the amount of each award follow:

1. Comparison of Wood Productivity between Tropical Second Growth Forests and Plantation Forests	\$49,024
2. A Forester's Manual of the Moraceous Trees of Sarawak, East Malaysia	46,002
3. Biosphere Inventory of Mangrove Forest Lands: Current Status, Managing Institutions, Research Initiatives	17,858
4. Interaction between People and Forests in East Kalimantan	56,677
5. A Study of the Bornean Intensive Agriculture System as a Model for Development	35,000
6. Regeneration and Growth Strategies of <u>Brosimum alicastrum</u> , Swartz. in the Moist Tropical Forests of Mexico	38,723
7. Present and Potential Utilization of a Tropical Palm Forest	<u>58,728</u>
TOTAL	\$302,012

National Park Service, Fish and Wildlife Service, and Heritage Conservation and Recreation Service have joined with the Forest Service in funding the Consortium for 1980. A total of \$600,000 will be available for funding research proposals related to the agencies' missions and directed toward the objectives of MAB Projects 1, 2 and 8, i.e., Tropical Forests, Temperate and Mediterranean Forests, and Biosphere Reserves.

The Governing Committee of the 1979 Consortium suggested specific alterations in the Charter, Guidelines, and the Proposal, Review and Evaluation form and process for the 1980 Consortium. These were incorporated in the revision and approved by both DOI and USDA Forest Service. Scientists interested in submitting proposals to the 1980 Agency/MAB Consortium are advised to prepare a draft using the 1980 Guidelines. These were distributed to Directorate Chairmen, Experiment Stations, and Land Grant Colleges before the Holidays. A copy is appended to this issue of the BULLETIN.

STATUS REPORT - AID/MAB PROJECT

In September 1977, the Agency for International Development (AID) entered into agreement with the U.S. Man and the Biosphere (MAB) Program to develop training and technical assistance material for AID countries and AID Missions in the area of environmental protection and natural resource management.

MAB has emphasized projects which can be continued in countries without permanent U.S. assistance. Considerations for project development are as follows:

1. Minimal reliance on expensive or complicated technologies.
2. Design and develop prototype approaches to the environmental issues with which AID must deal. These can be adopted by AID Missions and developing country governments.
3. Provide environmental information useful in the early planning stages of AID development projects.
4. Identify critical environmental national and regional priorities. This process should be based on relatively inexpensive and quickly gathered data.
5. Seek solutions to problems which emphasize indigenous needs and capabilities.

The following programs illustrate some of the work now being carried out under the AID/MAB Project.

Technical Assistance

1. Environmental Profiles - Literature searches for 25 AID countries are a first effort to identify published data and general information on the status of the environment, the use of natural resources, and the availability of environmental data and capabilities. Several of the Profiles will be further developed by specialists sent to AID countries to verify environmental issues and to design and review the environmental programs.

2. Environmental Guidelines -

a. The identification and evaluation of common elements in both large and small scale AID irrigation projects from which environmental guidelines can be designed. These will be useful in planning, designing, and implementing environmentally safe water-use projects.

b. A process similar to the above except that new research will be carried out on the response of tropical forests to perturbation to determine minimum critical habitat size. These guidelines will assist AID Missions when considering long-term effects of development projects on tropical areas.

Training

1. Participant Workshops -

a. Technical laboratory training in methods of detecting carcinogenic and mutagenic substances in the environment.

b. Four courses which began in the Philippines in November 1979 to train trainers in management of water, soil, wildlife, vegetation, and fauna utilizing whole watershed concepts. Our intent is to establish programs in universities of host countries.

c. A three-week U.S. workshop to provide technical training in natural area inventory, monitoring techniques, and the values of preserving genetic materials. The workshop will be for students from AID countries enrolled in degree programs in the U.S.

d. Upgrading training capabilities at the College of African Wildlife in Tanzania by detailing U.S. scientists and planners to the Tanzanian College and the African staff to the U.S. for training in resource management and U.S. training methods.

Training (cont)

2. Policy Level Seminar - A one-week seminar in Durango, Mexico with vice-ministerial level representation for environmental or resource management agencies throughout Central America so that a higher level of common understanding and of environmental awareness may develop among the participants.

3. Training Material Development - Substantial gaps in knowledge about tropical forests necessarily limit the success of programs designed to train forest managers and scientists. Spanish language training materials for monitoring and inventory, taxonomic keys, and species checklists for tropical forests will be developed.

4. Reference Services - A directory of U.S. institutions has been developed for use in the AID Training Office to assist with constantly increasing requests from students for environmental training.

5. Endangered Species - A report on the status of endangered species and their habitat in Thailand, accompanied by a full bibliography and methodology for carrying out similar studies elsewhere.

6. Policy Development - International Conference on Tropical Deforestation. This conference defined the scope of the problems and developed a U.S. strategy for dealing with them.

MAB CONFERENCE REPORTS

The Proceedings of the international MAB workshop on the Biological and Sociological Basis for Rational Use of Forest Resources for Energy and Organics was distributed to participants several months ago. We have a good supply and will send it to those wishing copies. A summary document also has been prepared. It will be published as a US MAB Report as soon as camera-ready copies are prepared in French and Spanish.

Transactions of the conference on Environmental Management and Economic Growth in the Smaller Caribbean Islands has been published but the supply is limited; however, we will try to obtain copies for interested persons. The conference, only seven months in the making, originated with the Caribbean Islands Directorate and was held in Barbados in September, 1979. It was designed to help officials from the smaller islands (populations of fewer than 500,000 and areas less than 10,000 square kilometers) specify some of their natural resource problems and to help give the islanders, as well as others, insight into planning for the sound future of the islands. The conference was a marked success because of the fortuitous blend of representatives, delegates, and observers at the conference and the generous sponsorship by the many organizations interested in the Smaller Caribbean Islands.

For the first time, the smaller islands formulated their specific environmental concerns and needs. These, we were told, may be used by USAID, UNEP, the Rockefeller Brothers Fund, and others in setting priorities for their Caribbean programs. Of highest priority to the delegates were: regional talent pools, workshops and training on project evaluation in environmental and socio-economic impact studies, coastal zone management, soil erosion, afforestation and reforestation, mariculture, nature reserves, wildlife protection, information retrieval, and information education.

Report of MAB-5B Meeting

In conjunction with a Coastal Ecosystem Research Workshop sponsored by the LSU Center for Wetland Resources and the National Sea Grant Program, a meeting of MAB-5B, Coastal Zone Resources, was held on Nov. 9, 1979, in Baton Rouge, Louisiana.

The group reaffirmed that the principal focus of MAB-5B is living resource productivity of estuaries and outlined an approach to the design

of a prototype study of the Gulf of Mexico. The primary objective of this regional project will be to understand the effect of man's impact on the living resource productivity of the coastal fisheries, in order to manage these resources wisely. Elements of the proposed study will include: (1) assessment and comparison of research and management techniques utilized in selected estuary-shelf areas fringing the Gulf of Mexico, (2) development of a set of guidelines for conducting coastal ecosystem research programs and establishing appropriate mechanisms for transferring resulting knowledge to resource managers, (3) generic examination of phenomena associated with coupling of estuary-shelf systems and their significance in determining fishery productivity, and (4) appropriate classification of estuary-shelf areas flanking the Gulf of Mexico to assess the representative or unique nature of ongoing, geographically-focused studies and to eventually permit the design of a program that will assure comprehensive understanding of estuary-shelf interactions and their significance in gulf fishery production.

It was agreed that two or three page statements concerning selected elements would be prepared by appropriate individuals and sent to Jack Van Lopik and Ed Fernald. The material will be used in the preparation of a joint MAB-5A and 5B proposal. The proposal will include establishing a data/information coordinating entity for gulf estuary-continental shelf research and convening a workshop to specifically develop the above-mentioned program elements within a broader management and socio-economic framework.

Reindeer/Caribou Symposium

The 2nd International Reindeer/Caribou Symposium gathered some 180 scientists and managers from 14 countries, among these were the U.S. and Canada. This meeting, held in Røros, Norway, last Sept. 17-21, focused on domestic and wild reindeer, the comparative aspects of range ecology, and the role of technological harassment and obstruction.

The symposium included 60 oral and 40 poster presentations. The poster presentations proved to be effective in communicating research findings and management proposals, provided a welcome diversity from the usual conference presentations, and eliminated the need for concurrent sessions. The lengthy proceedings of the symposium will be published in 1980 by the Norwegian organizing committee: Caribou Symposium, Institute of Zoophysiology, University of Oslo, P.O. Box 1051, Blindern, Oslo 3, Norway. The proceedings will include a special section on the present status (population size, distribution, food habits, etc.) of all reindeer populations throughout the world.

The next Reindeer/Caribou Symposium is scheduled for Finland, in 1982.

For your copies of
"Proceedings of an International Workshop: Biological and Sociological
Basis for a Rational Use of Forest Resources for Energy and
Organics" - Michigan State University - May 6-11, 1979

Write: MAB SECRETARIAT
U.S. Dept. of State, IO/UCS
Washington, D.C. 20520

U.S. MAB PUBLICATION SERIES

By this time, all of you should have heard about or seen a copy of Guidelines for the Selection of Biosphere Reserves: An Interim Report and Key, the first in a new series of reports from US MAB. Two other series of US MAB publications also are being established: U.S. MAB Handbooks and U.S. MAB Miscellaneous Publications. Examples of both should be available for distribution during 1980.

Criteria for US MAB publications include (a) practical use to co-operators, scientists working in MAB, and decision makers; (b) simple English text (minimum of technological terms and jargon); (c) clear and concise text and figures (fewer than 50 pages of single-spaced text and figures combined). Manuscripts should be submitted through appropriate Directorate(s) to the Secretariat for final review. A publications committee composed of MAB members will be established in the near future specifically to draw up guidelines for the US MAB series and to screen and recommend manuscripts for publication. Until the committee is formed, the US MAB Secretariat will unilaterally publish a few manuscripts to establish the series.

Three new MAB publications are available from the MAB Secretariat: (1) Proceedings from the Symposium on the Environmental Consequences of Fire and Fuel Management in Mediterranean Climate Ecosystems: Research and Priorities and Programmes; (2) Long-Term Ecological Monitoring in Biosphere Reserves, and (3) Proceedings from the Conference of Environmental Management and Economic Growth in the Smaller Caribbean Islands.

MAB CALENDAR

January 3-8	AAAS Meeting (MAB Symposium) MAB-10 Directorate Meeting MAB-12 Directorate Meeting	(San Francisco, California (" " (" "
January 24-25	MAB-2 Directorate Meeting	Washington, D.C.
February 5	MAB-4 Planning Meeting	Davis, California
February 15-16	MAB-3 Directorate Meeting	San Diego, California
February 29- March 1	MAB-13 Directorate Meeting	Washington, D.C.
March 6-7	MAB-4 Directorate Meeting	Tucson, Arizona
March 10-14	2nd U.S.-U.S.S.R. Symposium on Biosphere Reserves	Everglades National Park, Florida
March 17-18	MAB-7B Directorate Meeting	San Juan, Puerto Rico
May 18-24	IUFRO/MAB Conference: Research on Multiple-Use of Forest Resources	Flagstaff, Arizona
June 22-28	Effects of Air Pollutants on Mediterranean and Temperate Forest Ecosystems; An International Symposium	Riverside, California

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Interested scholars in need of funds and volunteer support for their 1981 field research should contact The Center for Field Research. This private, non-profit organization and its affiliate, EARTHWATCH, arrange support for 70 research projects each year through the field assistance and financial contributions of interested volunteers.

Proposals are reviewed on the basis of scholarly merit and the project's need for teams of volunteers in the field. There are no limits on geographic location, and proposals in any recognized academic discipline are considered. One example of the kind of project sponsored by The Center is a geobotanical study of the interaction between plants and geological processes of the Provincelands of Cape Cod, carried out by Dr. Stephen Leatherman of the National Park Service. With the assistance of 61 volunteers over two field seasons, Dr. Leatherman was able to conduct an extensive soil coring program and vegetational analysis.

The Center invites proposals from post-doctoral scholars of all nationalities, and actively encourages women and minority investigators to apply. Upon favorable review of a preliminary proposal, a full proposal will be invited for the May 15 deadline (for work taking place December-June) or the October 1 deadline (for work taking place June-December).

If you are planning field research in 1981, write for more information, or send a two-page preliminary proposal outlining your objectives, dates, and funding and volunteer needs to:

Nancy Scott
Research Coordinator
Center for Field Research
Box 127-i, 10 Juniper Road
Belmont, MA 02178

GUIDELINES FOR PREPARING RESEARCH PROPOSALS
for the
CONSORTIUM FOR THE STUDY OF MAN'S RELATIONSHIP WITH
THE GLOBAL ENVIRONMENT

Guidelines and a suggested format for preparing and submitting proposals for research grants are enclosed. They were developed under the direction of the Governing Committee of the Consortium to assist scientists in organizing their proposals and to facilitate the review process.

Appended to the Guidelines are Objectives of the Consortium and of the MAB program; Mission statements of the USDA Forest Service; USDI Fish and Wildlife Service, National Park Service, and the Heritage Conservation and Recreation Service. Goal statements of the participating MAB Directorates, Fish and Wildlife Service, National Park Service, Heritage Conservation and Recreation Service, and a copy of the form to be used to evaluate research proposals. This background material should prove useful in focusing the research proposed most advantageously and in evaluating proposals equitably.

A calendar of Events with Deadline Dates for fiscal year 1980 also is included.

Funds Available -- Approximately \$50,000 per research proposal. Workshops, Conferences, Symposia, Meetings, etc., will not be considered for funding.

Comment: Although no upper limit has been set on the size of the grant, those not exceeding \$50,000 will receive the highest consideration.

Principal Investigators -- Principal investigators affiliated with other agencies of the Federal Government will receive transferred funds. Those at universities and with non-profit organizations will be issued grants. Office of Management and Budget (OMB) Circular A-110 shall be used to model financial aspects of research proposals from these sources. Principal investigators affiliated with State and local governments shall follow the administrative requirements in OMB Circular A-102 as a model.

Type of Grant -- Grants to scientists at research institutions will be made under a reimbursable agreement unless there is a justifiable fiscal need for an advance of funds.

Comment: Regardless of how grants are made, fully 20 per cent will be withheld pending receipt and acceptance of all reports agreed upon in the contract. As a minimum, an interim progress report and a final report will be required, the latter within 2 months of the expiration of the grant.

Longevity of Research Grant -- 3-year maximum

Call for Proposals -- The Chairman of the Consortium will make an announcement calling for research proposals annually.

Comment: The announcement will be made as early in the new fiscal year as a realistic estimate can be made of agency funds available for MAB research and by January 1 at the latest.

Areas of Consideration -- Until such time that additional funds for MAB research become available, only proposals relating to Tropical Forests, Temperate Forests, and/or Biosphere Reserves will be considered. Objectives and Goals for the Consortium, participating agencies, MAB, and these Directorates are in the Appendix.

Submission of Proposals -- The original and 10 copies of each proposal, prepared in the format herein described, should be submitted to:

U.S. MAB Secretariat
 U.S. Department of State
 IO/UCS SA-2
 Washington, DC 20520

so as to arrive at the Secretariat before the deadline set forth in the annual announcement by the President of the Consortium. Recipients of grants will be notified during August and grants will be awarded soon thereafter.

Format of a Proposal -- The format was developed by the Governing Committee of the Consortium to assist researchers in organizing their proposals and to facilitate the review process.

Sample of Cover --

RESEARCH PROPOSAL SUBMITTED TO THE
 CONSORTIUM FOR THE STUDY OF MAN'S RELATIONSHIP
 WITH THE GLOBAL ENVIRONMENT

Title of Proposal

Principal Investigators -- Names, addresses, phone numbers, affiliations

Institution or Agency

Proposed Starting Date

Estimated Completion Date -- Last day of month listed

Duration -- Months

Total Budget -- Estimate in U.S. dollars; total to include all overhead

Endorsements

Investigators

Institutional Officials

-- (Signatures and Titles)--

Sample of Contents --

Abstract -- One page to include a brief statement of the problem, justifications, study objectives, scope and relationship of the study to the objectives of the Consortium.

Problem Statement -- Background and justification
 -- Review of pertinent literature
 -- Relationship to objectives of the Consortium and to goals of one or more U.S. MAB Directorates (at least one from the Consortium)
 -- Anticipated benefits

Objective(s) and Scope --

Methods -- Study design including variables to be measured, sampling procedures, data collection
 -- Method of analysis
 -- Schedule of operations for field and/or laboratory

Reports and Manuscripts -- Schedule, plans, and suitability for publications (list media).

Literature Cited --

Principal Investigator(s) -- Vita including social security numbers, qualifications and available facilities to conduct and complete proposed research.

Budget Requirements --

	<u>Dollars</u>
1. Salary and Wages	
Principal Investigator	_____
Assistants	_____
Secretary - Typist	_____
Other	_____
Subtotal	_____

2. Staff (Fringe) Benefits
 _____ % of Principal Investigators
 salary _____
 _____ % of Assistants salary _____
 other _____
 Total Salary, Wages & Benefits _____
3. Expendable Materials and Supplies _____
4. Non-expendable Equipment (Itemize by unit,
 quantity, and price if more than \$300
 per unit 1/ _____
5. Travel and Per Diem
 Travel _____
 Per Diem _____
 Total _____
6. Computer Costs (Itemize) _____
7. Other direct costs (Itemize) _____

- Total Direct Costs (All of above) _____
8. Indirect (Non-recoverable) Costs
 _____ % of Total direct costs _____
 Total Costs (Direct and Indirect) _____

1/ If equipment costs exceed \$300 per unit, include justification statement with budget request. Disposition of equipment costing \$300 or more must be negotiated before the grant is awarded.

APPENDIX

The Objectives of this Consortium are to operate harmoniously within the existing framework of the U.S. Man and the Biosphere Program; to encourage and support research that complements the mission of the participating agencies; to identify man-related problems of the environment; to initiate and carry out research programs directed toward a systematic resolution of these problems; to encourage publication and dissemination of meaningful research results; and to support and facilitate related activities furthering these purposes.

The Objective of the Man and the Biosphere Program is to develop the basis within the natural and social sciences for the rational use and conservation of the biosphere and for the improvement of the relationship between man and the environment.

The Mission of the Forest Service is federal responsibility for national leadership in forestry; promotion and achievement of a pattern of natural resource use that will best meet the needs of people now and in the future; protection and improvement of the quality of air, water, soil, and natural beauty; protection and improvement of the quality of the open space environment in urban and community areas; generation of forestry opportunities to accelerate rural community growth; encouragement of the growth and development of forestry-based enterprises that readily respond to consumers' changing needs; encouragement of optimum forest land ownership patterns; improvement of the welfare of underprivileged members of society; involvement of the public in forestry policy and program formulation; encouragement of the development of forestry throughout the world; expansion of public understanding of environmental conservation; and development and availability of a firm scientific base for the advancement of society.

The United States Fish and Wildlife Service provides leadership for the protection and improvement of land and water environments (habitat preservation), which directly benefits the living natural resources, and adds quality to human life; biological monitoring, through scientific research; surveillance of pesticides, heavy metals, and thermal pollution; studies of fish and wildlife populations; ecological studies; environmental impact assessment through river basin studies, including hydroelectric dams, nuclear powersites, stream channelization, dredge and fill permits; associated research; environmental impact statement review; area planning and preservation involving river basin, wilderness areas,

and special studies, such as oil shale and geothermal energy. The Service is responsible for improving and maintaining fish and wildlife resources by proper management of migratory birds and other wildlife; control of population imbalances and fulfilling the public demand for recreation fishing while maintaining the Nations fisheries at a level and in a condition that will assure their continued survival.

The Service provides national and international leadership in the area of endangered fish and wildlife from the standpoint of both restoration as well as preventive measures involving threatened species. This program includes development of species lists, recovery plans, conduct of status surveys, coordination of efforts nationally and internationally; research on propagation methods, distribution, genetics, and behavior; operation of wildlife refuges; law enforcement, foreign importation enforcement, and consultant services to foreign countries.

The Mission of the National Park Service is to administer the properties under its jurisdiction for the enjoyment and education of our citizens, to protect the natural environment of the areas, and to assist States, local governments, and citizens groups in the development of park areas, the protection of the natural environment, and the preservation of historic properties. The Service develops and implements park management plans and staffs the area under its administration; provides leadership in the preservation of representative natural areas; studies the natural environment as a means for improving the scientific basis for natural resource management through the promotion of inventories, baseline studies, and relationships of man-caused impacts in pristine natural areas.

The Heritage, Conservation and Recreation Service monitors and stimulates research relating to outdoor recreation, and cooperates with and provides technical assistance to other Federal departments and agencies. Certain rivers and trails are identified for possible study for inclusion in the National Wild and Scenic Rivers and Trails Systems. The possible adverse effects of transportation projects and programs on parks, recreation areas, and wildlife and waterfowl refuges are reviewed along with Federal actions having an impact on outdoor recreation. The Service sponsors programs to identify and recognize natural and historic landmarks, recovery of archeological remains, and records significant architectural and engineering works.

Criteria that the participating agencies will use in making their selections are: (a) compatibility with the missions of the agencies; (b) relatively short-term applied research involving both the natural and social sciences; (c) research aimed at an incremental and sequential achievement of Directorate objectives; and, (d) international involvement and/or applicability, especially with developing nations.

The Goal of the Tropical Forests Project is to stimulate, sponsor, and coordinate research, training, and application of research directed toward management of tropical and subtropical forest landscapes. Management may involve use of these landscapes for natural reserves, production forests, plantations, agriculture, and urban activities. Man is considered as part of the forest ecosystem.

The Goals of the Temperate Forests Project are, internationally, to study the ecological and socio-economic effects of alternative uses and managerial practices in boreal, temperate, and mediterranean regions having forests or the characteristic natural cover, and domestically, to research the following problems and problem areas: (1) environmental impacts of wildfire and fuel management policies; (2) effects on forests of energy development technologies, specifically, utilization of forest products for energy; (3) information and analytical techniques applicable to forest land use planning with emphasis on environmental benefit/cost of regional forest lands development and on regional ecological effects; (4) the ecological and socio-economic effects of intensive forest management practices and particularly the impacts on- and off-site of alternative methods of site preparation on the soils, water, and nutrient status of forest ecosystems, and the implications for future productivity of the land; and, (5) accumulate, analyze, and transfer information about forests.

The Goals of the Biosphere Reserve Project are (1) to promote the conservation of natural and man-modified areas representative of the world's major ecosystem, as a strategy for safeguarding the genetic diversity of the biota of these areas on which their continuing evolution depends; (2) to provide for research on the structure, functioning, and dynamics of ecosystems in order to enhance our understanding of natural processes and of man's impact upon them, to be applied toward better management policies, and, (3) to make available facilities for education and training in natural resource studies and management.

The nine preliminary elements of the 1978-1982 operational plan for Biosphere Reserves are: (1) completion of the world coverage of biosphere reserves; (2) full implementation and demonstration of the biosphere reserve concept; (3) implementation of ecological research in biosphere reserves and establishment of effective links with other MAB project areas; (4) develop means and ways for effective ecosystem and species conservation in biosphere reserves; (5) identify future monitoring functions of biosphere reserves and implement monitoring schemes on a pilot basis; (6) establish education and training programs on the reserves; (7) establish a computerized information system to improve the flow of information concerning biosphere reserves; (8) provide for proper legal protection of biosphere reserves; and (9) link biosphere reserves with other protected areas.

CALENDAR OF EVENTS

Fiscal Year 1980

<u>Deadline Date</u>	<u>Event</u>
<u>1979</u>	
December 21	Estimate of funds to be made available by participating agencies received at the U.S. MAB Secretariat.
December 21	Chairman of the Governing Committee of the Consortium makes annual announcement calling for proposals.
<u>1980</u>	
March 10	Proposals must be postmarked by February 25 and received by the U.S. MAB Secretariat by March 10.
March 10	Proposals distributed for review by representative(s) of participating agencies and by the Executive Director of the U.S. MAB Secretariat for conformance to Agency Missions and to objectives of the MAB Program and the Consortium.
March 31	Reviews completed. Proposals with comments and evaluations received by the Secretariat on this date.
April 14	Proposals distributed to chairmen of participating directorates for peer review, evaluation, and comment.

May 12 Proposals returned to chairmen of participating directorates.

May 19 Meeting of Governing Committee to consider alterations in proposals suggested by peers. Return proposals to Principal Investigators, if needed.

June 16 Proposals postmarked by this date and received at the U.S. MAB Secretariat by June 30.

June 30 Meeting of Governing Committee to select and recommend proposals for funding.

July 14 Notification of acceptance of proposals as one to be negotiated by agencies (fiscal and technical negotiations).

August 15 Grant awarded.

**DEPARTMENT OF STATE, U.S.A.
WASHINGTON, D.C. 20520**

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DEPARTMENT OF STATE
STA-501**

