

**Comments by Thomas E. Lovejoy,
U.S. MAB Chairman**

From July 29th through the 31st, the U.S. National Committee for MAB went on retreat in Berkeley Springs, West Virginia to review the progress of the past 3 years and to consider new directions.

To no one's surprise biosphere reserves, while conceptually elegant, remain a long way from widespread implementation. Accordingly, Robert Woodmansee of Colorado State University will work with the Secretariat over the next months to develop an action plan for biosphere reserves.

Generally speaking, while progress has been made in integrating social and biological sciences, particularly in the membership of directorates, this aspect with U.S. MAB projects still has a long way to go. For the near future, the best means of making progress seems to be with projects designed by directorates. The National Committee has set very high standards for such initiatives: only one was approved last year and only one at this most recent meeting. I know this has not been easy for those submissions which failed, but in the end I am optimistic that others will pass muster, and that the inspirational value of the successful projects will add considerably to their intrinsic value.

I believe U.S. MAB is truly distinguishing itself in this effort to integrate the social and biological sciences. We also intend to explore this topic with other elements of the MAB network. In the end there is little hope for us all unless we are successful in these efforts.

**Core Program for Human Dominated
Systems Directorate Approved by U.S.
MAB**

The U.S. National Committee for MAB, at its recent meeting at Coolfont, West Virginia, approved the funding of the core program proposal for the Human Dominated Systems Directorate. The Human Dominated Systems Directorate, which focuses on ecological systems that are significantly affected by human activities, has identified the interdisciplinary issues for exploration which will actively involve all of its members in a coordinated set of activities. These activities will focus on the central theme of ecological sustainability, defining precisely what that means ecologically and examining a variety of human institutions and policies that impinge upon it. The project will not be an abstract exercise but, rather, will explore issues in the context of some very real environmental problems within three U.S. Biosphere Reserves that have been selected for use as case studies. They are: the Everglades and surrounding areas of south Florida; the New Jersey Pinelands; and the Virginia Coastal Reserve.

Their goal will be to: a) define ecological sustainability for the ecosystems of the case study Biosphere Reserves

continued on page 2

In This Issue

- **U.S. MAB FY 1992 Request for Proposals**
- **Core Program of Human Dominated Systems Directorate Approved**

continued from page 1

and surrounding areas in terms of particular levels of selected ecological endpoints; b) evaluate patterns of human uses of environmental resources and other anthropogenic stresses imposed upon these systems; c) examine societal and institutional factors influencing ecological sustainability; and d) assess their compatibility with essential characteristics of ecological sustainability.

Methodologies for defining ecological sustainability and understanding its causal relationships with and feedbacks from society will be developed for each case study. Although extrapolation to other Biosphere Reserves and other stressed ecological systems is an ultimate goal of the Directorate project, more immediate outputs will be directly relevant and contributory to the above mentioned Biosphere Reserves. A control systems model of coupled human/ecological systems will provide the overall framework for the activities, the focal point for specific hypothesis testing and data integration and analyses, and the point-of-departure for a continual development and refinement of a conceptual model as the project proceeds.



U.S. MAB BULLETIN

The U.S. MAB Bulletin is published quarterly by the U.S. MAB Secretariat, OES/EGC/MAB, Department of State, Washington, DC 20522-3706. Tel. 703-235-2946, 2947. FAX # 703-235-3002.

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

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

The program is organized into five directorates: High Latitude Ecosystems; Human Dominated Systems; Marine and Coastal Ecosystems; Temperate Ecosystems; Tropical Ecosystems; and a U.S. MAB Coordinating Committee for Biosphere Reserves.

Notes From the Executive Director

The U.S. National Committee for MAB met last week to make funding decisions on the competitive proposals for Fiscal Year 1991, to review current policy, and to set new directions for the U.S. MAB Program. Among the proposals approved is a new core program for the Directorate on Human Dominated Systems focusing on Ecological Sustainability and Human Institutions. A summary of this project is found elsewhere in this Bulletin. For a more complete description of the project, contact the MAB Secretariat. We will be happy to send you a copy of this excellent project.

Future issues of this Bulletin will provide you with a description of the smaller projects selected. While some criticize the \$50,000 cap on funds available for individual projects (and our policy of not paying overhead), U.S. MAB does continue to attract very high quality proposals that attempt to integrate the social and biological sciences. Additionally, these small grants are not intended to underwrite long term programs, but rather are specifically awarded as seed funds to launch new, experimental efforts attempting to break down the barriers between the social/biological and natural sciences in applying the needed rigor of science to environmental policy issues.

Due to increasing requests for U.S. MAB endorsement, if not funding, for various conferences, seminars and meetings, we have adopted new guidelines (contained elsewhere in this Bulletin) for those seeking such endorsement.

You will also find in this issue our Request for Proposals (RFP) for the forthcoming fiscal year. We continue to call for proposals to complement the core program areas as the National Committee attempts to build programs of sufficient size to address significant environmental issues which transcend any one particular agency's mandate and scope of action.

The National Committee also decided that it is time to address the issue of finding common ground for some meaningful action on U.S. biosphere reserves. The general concepts of biosphere reserves retain widespread support. However, the Committee believes that we do not have a framework—analagous to the mission statements of the MAB Program directorates—which provide U.S. MAB with a plan of appropriate goals, mechanisms, and priorities to guide any implementational activity. The Committee, therefore, commissioned the drafting of a U.S. Action Plan for Biosphere Reserves. A drafting group was approved and they are charged with providing the Secretariat with an initial draft by October 1, 1991. The Secretariat will

continued on page 3



continued from page 2

thereafter take charge of the process and involve appropriate entities such as, biosphere reserve managers, scientists, agencies, program directorates, and scientific organizations in the public review, vetting, and production process leading to adoption of a U.S. Action Plan for Biosphere Reserves. It will take some time to complete this process, but it is time that we got on with the job.

Roger E. Soles

U.S. National Committee For The Man and The Biosphere Program

Request For Proposals FY 1992

Introduction

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.

To implement this mission, the U.S. National Committee for U.S. MAB hereby announces its priorities and criteria for the selection of original research proposals and projects to receive U.S. MAB support in federal fiscal year 1992, contingent upon the availability of funds. During federal fiscal year 1992, U.S. MAB will concentrate the majority of its available resources on the development of the major core research programs of the U.S. MAB Directorates and the development of a U.S. Biosphere Reserve Action Plan. Consequently, the U.S. MAB program intends to make available a relatively modest amount of funds (approximately \$250,000) for individual scientist investigators, or small groups of scientists to begin, in a limited manner, interdisciplinary pilot projects and programs. U.S. MAB funding is aimed at stimulating scientists from different disciplines to work together in the areas described below.

Scientists are encouraged to seek complementary funds from other sources. Funding from U.S. MAB is not intended to substitute for discipline specific support available from other sources.

U.S. MAB will give priority consideration to proposals which directly complement the objectives of the U.S. MAB directorate programs. Proposed research and projects which further the U.S. MAB objectives may be spread over several years. Proposals will be evaluated for the intrinsic merit of the research, their policy relevance, effectiveness in integrating the social and biological sciences, and the quality and demonstrated productivity of the principal investigators. Interested

scientists and individuals should write to the U.S. MAB Secretariat to receive copies of the full U.S. MAB Directorate Mission Statements on:

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

Program Areas

In the area of High Latitude Ecosystems, U.S. MAB seeks proposals which enhance the understanding and rational management of resources and ecosystems in the high-latitude regions of the United States and other circumpolar northern lands. Proposals to accomplish this should seek participation in and the support of cooperative international endeavors; foster integrated research in biological, physical, and the social sciences in applying scientific and technological advances to societal needs; and include the concerns of multicultural residents and indigenous peoples of the north. Proposals should foster and support informed and rational policy formulation relevant to high-latitude regions including: sustainable development, global change, and maintenance of biological diversity and stability in high-latitude ecosystems.

In the area of Human Dominated Systems, the U.S. MAB program focuses on ecological systems that are significantly affected by human activities. The Directorate's core program focuses on the central theme of *ecological sustainability*, attempting to define its meaning and examining a variety of human institutions and policies that impinge upon it.

The Directorate's core project explores these issues through case studies on three U.S. biosphere reserves: the Everglades and surrounding areas of south Florida, the New Jersey Pinelands, and the Virginia Coastal Biosphere Reserve. The goal is explicitly to: a) define ecological sustainability for the ecosystems of the case study biosphere reserves and surrounding areas in terms of particular levels of selected ecological endpoints; b) evaluate patterns of human uses of environmental resources and other anthropogenic stresses imposed on these ecosystems; c) examine societal and institutional factors influencing ecological sustainability; and d) assess their compatibility with essential characteristics of ecological sustainability.

In support of the Human Dominated Systems Directorate core project, investigator-initiated proposals are solicited that advance methodologies for defining ecological sustainability, or understanding its causal relationships with and feedbacks from society. Priority will be given to proposed research and activities that address specific components of the Directorate's coupled human/ecological systems model and/or address specific aspects of one of the selected biosphere reserves.

continued on page 4



continued from page 3

In the area of Marine and Coastal Ecosystems, U.S. MAB seeks proposals that: assess the sources, impacts, and control of marine pollution—including but not limited to nutrient loading, eutrophication, siltation, and relationships to freshwater resources; analyze sea level rises, coastal erosion, and other land margin disturbances; assess habitat loss or alteration, including implications for biological diversity; identify and estimate the means for and benefits of preservation of traditional marine and coastal uses; clarify the relationships between natural fluctuations and human perturbations, as with red tides and harmful algal blooms; and investigate fisheries and other living resource management issues.

In the area of Temperate Ecosystems, the U.S. MAB program focuses on the comparative analysis of social and economic processes, land uses, landscape dynamics, and resource effects and environmental quality impacts for the case study areas in the Southern Appalachian Mountains and the Olympic Peninsula of Washington State. An interdisciplinary team of social, biological, and quantitative scientists has developed an integrated approach to studying landscape-level processes coupling humans and their biophysical environment.

U.S. MAB seeks proposals that complement and reinforce the Temperate Ecosystems Directorate core project's theme of management of the temperate landscape for diversity, resilience, productivity, and sustainability for the long-term. Proposals and the products of research should: (1) involve the integration of social and biophysical sciences; (2) address problems of integrating either site or community level processes with landscape processes, or landscape processes with regional or global processes; and (3) be useful to major land management agencies, landowners, and authorities coordinating multiownership resources. Preference will be given to projects that function as satellite programs and provide pertinent information that is beyond the scope of the Directorate's core project or provide comparative information from other regions or levels of ecological analysis.

In the area of Tropical Ecosystems, U.S. MAB seeks proposals on tropical ecosystem restoration and management of tropical ecosystems. Proposals should be interdisciplinary with a holistic focus, have strong scientific underpinnings, and clear implications for policy and/or decisionmaking. More specifically, the Tropical Ecosystem Directorate is interested in advancing the field of Social Ecology that addresses the interface between the social and natural sciences, especially focusing on analysis of the sustainability of tropical land use systems. Successful proposals must demonstrate that the human aspects of the research are an integral part of the study and must include a clear effort to address the human-biosphere interaction.

Workshops, Conferences, and Seminars.

Proposals for U.S. MAB endorsement and/or funding of workshops, conferences, and seminar activities should describe activities that are especially innovative to merit consideration and are interdisciplinary in order to comply with the interests of the U.S. MAB program.

U.S. MAB will give preference to lending its endorsement and will consider funding workshops, conferences or seminars when:

1. U.S. MAB is involved early in the planning process in order to provide substantial intellectual input;
2. The conference involves interdisciplinary input and participation by scientists from the natural, biological and social sciences; and
3. The conference has a clearly stated relevance and/or focus on governmental (federal, state and/or local) environmental policy.

Because of limited available funding, U.S. MAB will give priority consideration to proposals for workshops, conferences, and seminar activities which directly meet the objectives and complement the core research programs of the U.S. MAB directorates.

General Instructions:

All potential proposers are encouraged to contact the Secretariat of the U.S. Man and the Biosphere Program (telephone number and address noted below) to request the mission statement or a description of the core program of the particular directorate that their proposal would address. Potential proposers, if invited to submit a full proposal, should expect to be interactive with the relevant U.S. MAB directorate, and the proposal budgets should reflect, within the total amount requested, sufficient funds to implement this interaction.

Preference will be given to proposals that:

- are interdisciplinary in terms of including the social and natural sciences;
- request \$50,000 or less in total support;
- when seeking initiation or seed funding from U.S. MAB, also indicate potential additional funding sources for continued project support;
- are submitted by U.S. citizens or persons studying or teaching at U.S. institutions/universities;
- when international, also involve scientists from the host country;
- deal with environmental policy issues relevant to agencies which support U.S. MAB;

continued on page 5



- within the program areas, utilize units of the International Network of Biosphere Reserves as sites to integrate appropriate project components of monitoring, research, education, or demonstration. Proposals concerning activities within biosphere reserves should contain a letter of endorsement from the manager of the relevant biosphere reserve; and
- propose that the project activities will result in a report that is intended to be of publishable quality in a peer reviewed scientific journal or report.

The U.S. MAB process for evaluating and selecting projects for funding includes a preproposal stage. All preproposals must be submitted as a prospectus of a maximum length of three (3) pages, clearly indicating how the proposal meets the above stated requisite criteria. Prospectuses must be accompanied by a summary biographic sketch of the potential principal(s) including exceptional qualifications and a publication list which is limited to a maximum of 5 titles of articles relevant to the proposed activities and which appeared in peer reviewed journals. Biographic sketches should demonstrate that principals have worked with others from different disciplines; and may not exceed three (3) pages for each principal.

U.S. MAB will not pay overhead fees on grants.

Mail prospectuses to:

U.S. MAB Secretariat
OES/EGC/MAB
Room 608, SA-37
U.S. Department of State
Washington, D.C. 20522-3706

No prospectus will be accepted after November 4, 1991. Prospectuses will be subject to an administrative review for adherence to the requirements listed and will be returned without review if deficiencies are found.

Evaluation and Review Process of Prospectuses

The U.S. MAB Secretariat will distribute prospectuses to the appropriate U.S. MAB directorate. Individual directorates will review the prospectuses based on their responsiveness to this call, relevancy of the proposed activity to their mission statements or approved core program, and the performance competence of the proposed principal(s) as evidenced by the summary biographic sketch.

Prospectuses favorably reviewed by a Directorate will be sent to the U.S. National Committee for MAB for evaluation at the January 1992 National Committee meeting. The National Committee will review each of these prospectuses for its relevance to the U.S. MAB program priorities. The National Committee will then determine which principals will be

invited to submit a full proposal. The U.S. National Committee, at its own initiative, may request that additional proposals on specific subjects be submitted for review and consideration.

Evaluation and Review Process of Proposals

Invited prospective investigators should submit proposals which clearly state the objectives, scientific rationale, methodology, personnel, and time and funding requirements. Prospective investigators may also nominate not more than five individuals, who are not members of the same institution as the potential investigator(s), who they believe are qualified to serve as peer reviewers of the proposal to supplement the peer reviewers selected by the U.S. MAB program. The list must include addresses and phone numbers of the nominated reviewers.

Complete project and research proposals must be received by the U.S. MAB Secretariat by close of business May 4, 1992. Proposal texts may not exceed 25 pages, double-spaced, including a two page executive summary describing the objective of the proposed effort and the method of approach. Proposals must be accompanied by a summary biographic sketch of the potential principal(s) including exceptional qualifications and a publication list which is limited to a maximum of 5 titles of articles relevant to the proposed activities and which appeared in peer reviewed journals. Biographic sketches should demonstrate that principals have worked with others from different disciplines. The biographic sketch for each principal may not exceed three (3) pages.

If proposed project activities are international in scope, the proposal must provide written evidence that host country permissions on an appropriate level have already been obtained to carry out the project.

All proposals must contain: (1) clearly defined objectives; (2) a feasible work plan to achieve those objectives within the time frame and resources of the grant; (3) specified work products resulting from the grant with a minimum requirement of an interim and final report. The proposal must state when an interim report will be produced and that a final report will be delivered to the U.S. MAB Secretariat within 90 days of the completion of the grant.

Proposals must indicate how the proposal could complement or assist in problem-solving for funded core Directorate programs.

Proposals must identify one individual for contract purposes and specify one institution to receive and suballocate funds for the proposed activities.

Proposals will be subject to an administrative review for adherence to listed requirements and, if deficiencies are found, will be returned without further consideration.



Appropriate U.S. MAB directorate and outside peer reviewers, including specialists in the areas of the proposals, will be selected by U.S. MAB to evaluate each proposal. Evaluative criteria for assessing the proposals include, but are not limited to: the intrinsic scientific or technical merit of the activities; the utility or policy relevance of the research or activities; the interdisciplinarity of the proposed activities; and the performance record of the principal(s).

A final ranking of the proposals will be made by the U.S. National Committee for the Man and the Biosphere Program based on all of the above factors and their assessment of each proposal's relevancy to the goals of U.S. MAB. Proposals will then be funded in the order of their assigned rank and based on availability of funds.

Principals will receive copies of all peer review evaluations made of their proposal and a written notification of the Committee's decision on their project. Selected proposals become part of the public domain; proposals not selected for funding by the U.S. National Committee for MAB will be returned to the authors.

The National Committee will notify all principals of its final decisions in August/September 1992. Funds will be committed to the managing institutions identified in the selected proposals by September 30, 1992.

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

Position Available Director, Charles Darwin Research Station (CDRS), Galapagos Islands, Ecuador

The Charles Darwin Foundation for the Galapagos Islands (CDF) is seeking a Director for its international research, conservation, and education center.

Duties: management and administration of CDRS, including over 50 scientific and support staff; organization/supervision of annual process of planning, execution, and evaluation of programs; provide technical advice to Ecuadorian counterpart agencies; supervise training and educational programs; raise a substantial portion of the Station's annual budget through preparation of proposals and reports, and participation in CDF's fund-raising campaigns in Europe, North America, and Ecuador.

Qualifications: M.S., preferably Ph.D, or equivalent in a field of natural sciences, natural resources management, or similar; minimum 4 years practical experience in one's field; bilingual English/Spanish; 25-55 years of age and in good physical condition; demonstrated ability for team leadership with persons of a wide variety of educational and cultural backgrounds; enjoy living and working in isolated conditions in a different cultural setting. Preference given to candidates with experience in administration of similar institutions or programs, applied conservation research and/or training, and educational program design and practice.

Benefits: basic salary of \$20,000 per year with possible increment depending upon experience; free high-quality housing; health and life insurance; international transport of director, family, and personal belongings. Additional information available upon request.

Deadline for applications: October 15, 1991 (telephone or FAX if you are near or past the deadline, yet still would like to apply).

Application procedure: Send curriculum vitae and three (3) letters of reference to Craig MacFarland, President CDF, 836 Mabelle, Moscow, Idaho 83843, USA; tel:(208) 883-4876; Fax: (208) 883-0653.

For a more complete position description write, telephone or Fax: Dr. David Challinor, Vice President, Charles Darwin Foundation, c/o National Zoological Park, Education Building, Smithsonian Institution, Washington, D.C. 20008. Tel: (202) 673-4705, Fax: (202) 673-4607.



Course Offered by Organization for Tropical Studies, Costa Rica—Ecological Principles for Decision-making

The Environmental Policy Program of the Organization for Tropical Studies in conjunction with the University of Costa Rica will offer a 3-week intensive field course in Costa Rica during October–November 1991 entitled “Ecological Principles for Decision-Making and Natural Resource Management in Latin America.” It has been designed to sequentially explore the ecological realities that affect economic development in the tropics, to examine the practical aspects of decision-making so as to highlight mechanisms for integrating environmental with socioeconomic concerns, and to bring both perspectives to bear on actual decisions through working case studies. The objective is to facilitate the formulation of policies that foster the sustainable use of natural resources and improved long-term economic productivity in tropical countries.

Potential course participants are Latin Americans with a university degree who work as congressional advisors or assistants, or technicians in the public or private sectors who are interested in improving their understanding of ecological principles and applying them to the legislative process.

For further information contact:

Oficina Centroamericana

Apartado 676
2050 San Pedro de Montes de Oca
Costa Rica
(506) 40-6696
Telex: 3674-OTS
Fax: 40-6783

or:

North American Headquarters

P.O. Box DM
Duke Station
Durham, North Carolina 27706
U.S.A.
(919) 684-5774

PUBLICATIONS

REMEMBER, ENCLOSE YOUR SELF-ADDRESSED MAILING LABEL (OR LABELS, IF YOU ARE REQUESTING SEVERAL ITEMS).

Available from U.S. MAB:

May 1991 issue of *BioScience*, the magazine of the American Institute of Biological Sciences, in collaboration with the U.S. Man and the Biosphere Program. **Articles on Coastal Barrier Ecosystems prepared for a U.S. MAB supported symposium on coastal barriers held at the AIBS meeting at the University of Toronto in August 1989.**

Proceedings of a **Workshop on Forest Hydrological Resources in China, An Analytical Assessment.** The workshop was held in Harbin, China, August 18–23, 1987. The Proceedings were edited by Peter F. Ffolliott and D. Phillip Guertin.

Bibliography on the International Network of Biosphere Reserves. Published by the United States Man and the Biosphere Program in July 1990.

Directory of Biosphere Reserves in the United States. Published by the United States Man and the Biosphere Program in June 1991.

Pamphlet on The United States Man and the Biosphere Program Department of State Publication 9798. Released July 1990.

Available from Others:

Geographic Information Systems and their Application in MAB Projects, Ecosystem Research, and Environmental Monitoring edited by Michael Ashdown and Dr. Jorg Shaller. Report #34. Available from: MinR Wilfried Goerke, Dipl.-Biolge. Federal Ministry for Environment, Nature Protection and Nuclear Safety, P.O. Box 120629, D-5300 Bonn 2, Germany. Please include your self-addressed mailing label.

BIOSPHERE RESERVE Brochure/Map. Listing and location of all (international and U.S.) biosphere reserves as of July 1989. Containing a new code to the location of all biosphere reserves. Available from: GPO Bookstore, 710 North Capitol Street, Washington, DC 20401. Tel. (202) 783-3238. Stock # 044-000-02277-0 @ \$3 each or \$225 for 100.

DEPARTMENT OF STATE PUBLICATION 9731
Bureau of Oceans and International Environmental
and Scientific Affairs

Released August 1991



U.S. Man and the Biosphere Program, OES/EGC/MAB

DEPARTMENT OF STATE, U.S.A.
Washington, D.C. 20522-3706

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300



POSTAGE AND FEES PAID
DEPARTMENT OF STATE
STA-501