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University of Montana

University Development Linkages Project

"Institution Building and Internationalization at the University College of Belize and The University of Montana: Models for Sustainable Resource Development"  
(936-5063)

2nd Quarterly Report FY 1994 (Year Three)

Date: January 1 - March 31, 1994  
Cooperative Agreement No. DAN-5063-A-00-1116-00  
Project Officer: Ruth Frischer

Activities undertaken during the second quarter of the third year of the agreement, January 1 to March 31, 1994, are summarized below by project objective.

Objective 1: *Develop UCB's outreach capacity, including the UCB Adult and Continuing Education (ACE) Department, and certificate programs and courses offered through the Development and External Relations Office (DERO)*

Evan Cayetano has been teaching the year-long EIA training course co-sponsored by UCB and BCES. Nearly 20 persons still attend this course, which grew out of the short course on the same topic offered by UM's Tom Nimlos under the UDLP. BCES agreed to include an environmental impact assessment of a small research facility at Calabash Caye as a component of this course. PAC members agreed at the 24 February meeting that UCB will co-sponsor, with BCES, the preparation of an EIA Case Study and the presentation of its results on the Calabash Caye Marine Research Centre project as one of its short courses along with courses planned for community eco-tourism and natural resources economics; these short courses will be co-sponsored by BCES, BEST, and BAS, respectively.

At its 24 February meeting, members of the Project Advisory Council reviewed and discussed the upcoming short courses on Watershed Management and Planning and on training ecotourist guides. Coordination is needed with BTIA's 7-day June/July course for tour guides as part of the Tourism Training Project. PAC members suggested that Vincent Palacio submit the outline of his upcoming short course with Don Jenni for BTIA review and input. PAC members agreed that, whenever possible, UM faculty on exchange at UCB will offer at least one short course.

NARMAP's workplan for 1994 calls for UCB, drawing on its links with UM under the UDLP, to offer five in-country short courses in designated environmental planning and monitoring subject areas (compliance-monitoring and enforcement methods; environmental monitoring; environmental-education techniques; and environmental-management tools). In a Belmopan meeting attended by Peter Koehn and Mustafa Touré, NARMAP officials indicated that doing these courses right should take priority over timing. This would potentially allow UCB to involve the expertise of a UM environmental studies faculty member during second semester of the 1994-95 a/y. Ismael Fabro of GOB's Ministry of Tourism and the Environment later suggested that this might involve a short course on environmental policy for chiefs of departments as well as for economists from the Central Bank and the Ministry of Trade and Industry.

The LCNF-FDB fire training program continued in 1994 with emphasis on shifting teaching responsibilities to FDB. In February 1994, LCNF instructors delivered the second annual Wildland Fire Behavior and Suppression Training course in Belize. They also developed and delivered a Firing Methods course. Forest guards and rangers constituted the principal clientele for this training, but members of the Belize Defense Force, Meteorological Service of Belize, and the Belize City structural firefighters also participated. Total enrollment was fourteen. A 5-acre practice burn (simulated wildfire) demonstrated fire

behavior and enabled participants to apply suppression tactics. Students measured flames and evaluated fire behavior to determine the length of fireline needed. They also assessed the effects of fuel type and loading on fire behavior. The participants practiced using pumps, hoses, and hydraulic systems. Three additional practice burns, 1/2 to 1 acre in size, demonstrated several different lighting methods and burnout techniques. One day was devoted to water handling. Domingo Ruiz, FDB Forest Ranger, taught portions of the courses, initiating the course-transfer process. LCNF also delivered a 3-day basic firefighter course to forest workers. LCNF staff developed this course in response to concerns that surfaced in the 1993 course evaluation. The forest guards who participated in the first Wildland Fire Behavior course had difficulty gaining crew acceptance for new firefighting strategies. To address this situation, FDB recommended a basic course to provide forest workers with the fundamental principles of firefighting. Combined, the three courses lasted fourteen days, covering basic fire suppression tactics, standards for survival, fire behavior, water handling, and firing methods.

The benefits gleaned from these courses and the previous Fire Behavior and Suppression course are:

- Fire safety practices have substantially increased since fire training began in 1993;
- More than 90% of FDB's Forest Guards have received Wildlands Fire Behavior and Suppression training;
- The courses fostered collaboration between FDB fire managers, Belize city structural firefighters, and the Belize Meteorological Service. As a result:
  - FDB and Belize City firefighters now exchange personnel and equipment when fighting fires;
  - The meteorological service now provides daily weather forecasts to FDB during the fire season;
- Fire-suppression activities have become more organized, efficient, and effective; and
- LCNF-FDB has introduced fundamental principles of prescribed fire.

LCNF instructors met with Permanent Secretary Lindsay Belisle, Oswaldo Sabido, and Domingo Ruiz, mainly to provide the new Permanent Secretary with an overview of the LCNF-FDB partnership. The Permanent Secretary expressed enthusiastic support for the program and commitment to Domingo Ruiz' lead role in transferring the fire course to FDB.

In January, Co-director Siebert completed arrangements for the short course on Watershed Management and Planning -- including prioritizing and outlining specific subject matter, identifying level of instruction, field exercises, course location and support, recruitment of course participants, and collection of basic information for use in preparing the course. Siebert made site visits to Mountain Pine Ridge Station and held meetings with Earl Green, Richard Belisle, and Oswaldo Sabido, Department of Forestry officials, and held follow-up meetings with Mark Nienow and Seth Diamond of Lewis and Clark National Forest, and UM's Don Potts.

In March, Dr. Don Potts of UM and LCNF hydrologist Mark Nienow developed and offered Belize's first course in Watershed Management and Planning. The course was offered at the Mountain Pine Ridge Forest Station, and was attended by a total of twelve Forest Rangers and representatives from the National Hydrological Service, Belize Center for Environmental Studies, Geology and Petroleum Department, Department of the Environment, FDB, Belize College of Agriculture, Forest Department - Belize City, and the British Peace Corps. Class discussion focused on the climate and meteorology of Belize streams and hydrologic cycles in forested ecosystems. In addition, the class discussed nutrient cycling, water quality, erosion, and monitoring programs. Oswaldo Sabido of FDB conducted tours of Mountain Pine Ridge. Instructors and participants focused field activities on general watershed principles and effects from timber harvest and road construction. The co-sponsored Watershed Management and Planning course enabled participants to integrate hydrologic issues and principles into management activities, and granted the UM and LCNF instructors valuable teaching experience in a multicultural environment.

### Evaluations of 1994 Watershed Management and Planning Short Course

	<u>excellent</u>	<u>good</u>	<u>fair</u>	<u>poor</u>	<u>not applicable</u>
Course value to profes. dev.	4	7	1		
Usefulness of material	4	6	2		
Value of course to agency	5	6			
Value of course for Belize	9	3			
Value of field exercises	6	5	1		
Approaches used by instructors	5	7			
Rating of Instructors	6	6			

One hundred percent of the participants stated that this short course met all of its objectives. The course assisted them in their professional responsibilities by helping them to know how to protect the watershed when there is land development, road building, and logging. As a result of this course offering, many of the participants now understand better the importance of data collection and analysis, and the need for cooperation between government departments.

In early March, Bob Campbell of UM's Montana Entrepreneurship Center travelled to Belize on staff exchange with UCB. Mr. Campbell went to help UCB establish a program that will assist small businesses. Ms. Sylvia Cattouse, Chair of the Department of Business Administration (DBA) at UCB, is interested promoting entrepreneurship in Belize. No one institution in Belize presently has an entrepreneurship-development thrust. UCB is a logical entity to offer consultancy services to the Belizean business community, and to teach entrepreneurship as a separate program and/or as part of a degree program. Mr. Campbell assisted the DBA at UCB in its investigation of the feasibility of establishing an entrepreneurship center in Belize. He helped the Business Department refine its goals and outline the structure of a program that is consistent with the many elements of the Belize and UCB environments. He raised practical issues regarding business assistance that will help make goal setting more realistic. Mr. Campbell's meetings with Belizean government and private sector representatives helped to raise UCB's profile and will aid UCB in becoming an acknowledged player in the country's economic development. The end product of his staff attachment at UCB is a detailed and thoughtful proposal, based on the meetings he held and the information he and Ms. Cattouse gathered before and during his staff exchange, calling for the establishment of a Belize National Entrepreneurship Centre, that is available for development and submission by the Department of Business Administration at UCB. The more ties UCB has with the business community and the more use the business community makes of UCB, the more credibility the university gains. This, in turn, will make it more likely that businesses and entrepreneurs will turn to UCB for guidance in matters related to natural-resource management and conservation. If located at UCB, the services to be provided by the proposed Belize National Entrepreneurship Centre (BNEC) will be more likely to provide conservation-compatible assistance because (1) it would be located on a university campus, and (2) it would interact with experts in international resource management and sustainable development. The BNEC would develop communication channels that it would give UCB additional avenues to get the natural-resource management message out to the business community in a sensitive manner.

UCB made a special request for the services of UM Professor George Stanley to assist with instruction of the environmental impact assessment (EIA) field course to Calabash Caye and to conduct an environmental assessment of research activity on the Caye. In March, UM's George Stanley, Professor of Geology, cooperated with UCB in the EIA during a six-day assignment on the Belize Barrier Reef, Turneffe Atoll, Calabash Caye. He was assisted by UM's John Pierce, a botanist. The Belize Center for Environmental Studies (BCES)'s Evan Cayetano and his environmental-studies class assisted Dr. Stanley with the assessment on Calabash Caye. Dr. Stanley and Mr. Pierce made a brief survey of the terrestrial environment of the immediate three acres and some surrounding areas of the Coral Caye Conservation's leased site. They also conducted a marine survey of the barrier reef, assessed the reef flat, shallow reef

lagoon, and made two trips to the mangroves behind the caye. The preliminary survey revealed little, if any, recent environmental damage or serious degradation of the terrestrial and marine ecosystems. Their diving surveys revealed a healthy reef with good biotic zonation out to the pinnacle and drop-off. There were no signs of human impact, but rather obvious effects from natural storm damage.

In April 1993, the National Environmental Education Task Force (NEETF) was formed as a direct output of the linkage project when UCB and the Programme for Belize co-sponsored a National Environmental Education Symposium. It became Belize's official counterpart for liaison with the JASON Foundation's "JASON V Expedition to Belize: Rainforests, Reefs, and Ruins." The support of NEETF officials, including UCB's DERO, assured Belizean participation in this pioneering international environmental education and research effort. Belizean scientists and specialists, and three UCB students participated. In conjunction with the JASON project, the Belize Zoo and Tropical Education Centre held two teacher-training workshops. Belize Information and Distance Learning Network (BELINET), formed with the assistance of Dr. Sharon Alexander of UM during her November 1993 staff exchange to UCB, greatly assisted the NEETF in coordinating the technical matters related to linking Belize's cable operators with the JASON Project. A BELINET paper describing international and national collaboration in distance education in Belize has been accepted at a conference sponsored by ICDE (International Conference on Distance Education) to be held in New Zealand in May 1994. Dr. Alexander submitted the initial abstract and has played a vital role in advising this UCB-led grouping of education, NGO, and private-sector agencies. A DERO/UCB representative will present the paper in New Zealand if adequate funding is procured.

External sources of funding will play an increasing role in UCB's development and outreach activities because of its financial status and the fiscal policy of the GOB. UCB's DERO, headed by Mustafa Touré, has spearheaded efforts to obtain external funding. The first phase of a three-pronged UCB institutional development strategy began during this past quarter. The first stage, called Project 2001, sought opinions on the role of UCB from Belizeans from all sectors and geographic regions through local focus groups and a national "Dear Citizen" survey questionnaire. The second stage, an internal "Self Study," is underway and will result in an analysis of UCB's institutional capacity at present. The third phase will overlap with the first two, and will launch a long-term fund-raising strategy which will be coordinated by the newly-formed UCB

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Foundation and target the outcomes of both public perceptions and desires as well as internal assessments and projects.

Co-director Koehn met with Seleni Matus and Reynaldo Guerro and toured the new BIM facility on the UCB campus. He received valuable advice regarding the design, conduct, and financing of short courses which he shared with Mustafa Touré and Vincent Palacio.

Co-director Siebert initiated arrangements for a short course on Training Ecotourist Guides that will be taught by Mr. Vincent Palacio, Dr. Don Jenni, Professor of Biological Sciences at UM, and Mr. Wayne Phillips, Forest Ecologist at Lewis and Clark National Forest, in July 1994. Siebert met with Suzette Miller, Director, Belize Tourism Industry Association, in Belize, and with Vincent Palacio and Don Jenni in Missoula.

Siebert reviewed all arrangements for the Watershed and Ecotourist Guides short courses with UCB officials (Mustafa Touré, Project Officer; Philip Morgan, Project Director; and Dorian Barrow, Vice President) and recruited potential clientele from non-governmental conservation organizations. The latter included meetings with Belize Audubon Society's Virginia Vasquez, Executive Director and Osmany Salas, Manager; Programme for Belize's Joy Grant, Director; and Dale Young, Director of Research, and Belize Center for Environmental Studies' Lou Nicolait, Director.

UCB has begun a newsletter which informs faculty and interested outsiders about UDLP and other activities. Co-director Koehn provided the Project Officer with comments on the draft brochure describing the UM/UCB partnership.

Objective 2: *Enhance capabilities of UCB faculty and staff*

Philip Morgan is UCB's next faculty-exchange nominee. During this period, he worked on preparations for coming to The University of Montana, and the project co-directors worked on local arrangements. Mr. Morgan has applied for candidacy in the Ph.D. program in Watershed Sciences in the School of Forestry in anticipation of his faculty exchange at UM. Co-director Koehn and Vice-President Barrow reached agreement on the division of responsibility between UM and UCB for Philip's salary, living, and study expenses over the term of his exchange. Selection of Philip Morgan and the arrangements made for his education at UM go a long way toward ensuring that the project meets Steve Cornelius' recommendation (p. 16) that two strategically selected core UCB faculty be "in place or about to return from advanced training by the end of the program."

UCB Cultural Anthropology faculty member, Rien Ploeg, visited The University of Montana campus. During his visit to Missoula, Rien participated in an international conference on refugee training and development assistance, met with John Douglas (Rien will be John's counterpart faculty member next fall), and consulted with additional UM faculty on areas of mutual teaching and research interest. During their visit to UCB, Peter Koehn and Traci Tanaka-Hall guest lectured on issues of development policy and assistance to Rien's seminar on Conflict and Development.

UM's Don Habbe, Provost/Vice President for Academic Affairs (Emeritus), spent two weeks in January on staff attachment at UCB. He met with faculty, students, administration, staff, and government officials, explaining the institutional-review process used by the accreditation community in the United States, and the potential applicability of this process to UCB. Habbe advised UCB faculty and staff on how to carry out a self-study, how to identify an outside evaluation team, how to report results, and how to use the process for the long-term benefit of the institution. Dr. Habbe concluded that the willingness of UCB to consider an institutional review based on the accreditation model speaks well of the continuing development of the University and its self-confidence. Following Dr. Habbe's staff exchange, UCB participated in a system-wide review of all ATLIB institutions.

In February, the Project Executive Committee at UCB expressed interest in a future staff exchange that would involve assistance in library-technology training and in the development of grant proposals designed to strengthen the library.

**Objective 3:    *Curriculum and course development at UCB***

In January, co-director Siebert reviewed potential course content, structure, and field components of the proposed natural-resource curriculum with the UCB project director and officer, relevant UCB staff, and representatives of Coral Caye Conservation.

Vincent Palacio continued his work on the curriculum for the proposed Associate Degree program in natural-resource management at UCB's Belmopan campus. Co-directors Peter Koehn and Steve Siebert worked on a new version of the Associate Degree curriculum with Mr. Palacio. Per Dr. Vengroff's suggestion, Mr. Palacio presented a preliminary draft to project staff in order to get their suggestions, criticisms, and ideas for bibliography. Mr. Palacio sent the revised draft to UCB. Since the beginning of March, Phillip Morgan of UCB and Alexander Williams of Belmopan Junior College have met weekly to plan the integration of the Associate Degree curriculum in the form of expanded natural-sciences electives. UCB made contact with leading public and private sector agencies which will aid in marketing the new Associate Degree program among the government ministries and NGOs who will benefit from it.

Co-director Koehn held discussions regarding UCB's proposed Associate Degree program in Belmopan with Vice President Barrow. He also visited the temporary and new sites of the Belmopan campus, discussed Associate Degree plans in detail with Israel Cano, Dean of the Belmopan campus, and met most of the faculty there. Dean Cano stressed the importance of conducting a needs assessment before introducing a new Associate Degree in natural-resource management. He also noted that UCB's new site lends itself to land-based natural-resource management exercises and suggested that tourism management be an integral part of the planned Associate Degree. UCB has hired Alex Williams to coordinate this program between Belmopan and DERO. Alex also represents UCB on NARMAP's Subcommittee on Environmental Planning and Monitoring.

UCB has entered an agreement with Coral Caye Conservation of the U.K. that will provide short-term funding for an instructor in marine sciences. UCB also is exploring opportunities to establish an academic program in marine sciences, with an extensive field component on Calabash Caye. UCB recognizes the importance of a marine-based component in its overall natural-resource management curriculum.

Rien Ploeg, UCB faculty member, reviewed The University of Montana's 1993-94 semester catalog and identified courses and programs that are potentially compatible with Belize's needs and interests, and that would be useful, at some point, for UCB program development in Cultural Anthropology, Archeology, and Development Studies. He submitted his list to Vice President Barrow in February.

Co-director Koehn discussed curriculum development with Rien Ploeg at UCB. Rien is interested in developing a social-science division at UCB, in integrating cultural-resource management and natural-resource management, and in greater participation by social-science faculty at UCB in the UDLP. During his visit to UM, Rien consulted on curriculum issues with numerous UM faculty members and collected syllabi for further study and adaptation at UCB.

Bob Campbell and Sylvia Cattouse explored optional models that include teaching entrepreneurship in its own right and as part of a degree program.

**Objective 4:    *UCB/UM library enhancement***

UCB has requested, through the University of North Florida, Jacksonville, books and resources relevant to courses that UCB plans to offer, including those in project-related areas.

UCB resolved to acquire two sets of the Land Resource Assessment of Belize from the Ministry of Agriculture. The PAC supported this move at its February meeting.

Siebert collaborated with the University of North Florida faculty who have Belizean research interests to compile an enlarged bibliography of Belizean references. The bibliography now contains over 1,200 references.

Objective 5:    *Development of a field practicum in Belize*

Drs. Belsky and Siebert (UM) and Mr. Morgan (UCB) taught the 1994 field practicum to 5 UM students and 3 Belizean students from January 3 - 15 in Monkey Bay, Gale's Point, and Cockscomb Basin. The field practicum incorporated substantive field research. Student participants provided positive evaluations of the course as summarized below:

Student Course Evaluations of 1994 Field Practicum

	<u>excellent</u>	<u>good</u>	<u>fair</u>	<u>poor</u>	<u>not applicable</u>
Course value to profes. dev.	5	2			1
Usefulness of material	5	2			1
Value of course to agency	3				5
Value of course for Belize	6	2			
Value of field exercises	5	3			
Approaches used by instructors	7	1			
Rating of Instructors	7	1			

Siebert worked on editing and compiling student field-practicum papers into a summary manuscript (evaluation and recommendations) for each of the three protected areas in which each group worked. Copies of the papers will be distributed to the protected-areas and project counterparts in the future.

Siebert completed initial arrangements for the 1995 field practicum, including: 1) rescheduling to occur in March; 2) identification of new subject matter and field activities: ecotourism, ecology and management of non-timber forest products and associated conflicts between conservation of biological diversity and local community development; 3) identification of new course locations (Rio Bravo Conservation and Management Area, and the Community Baboon Sanctuary); and 4) revised estimated costs. Arrangements included site visits to Rio Bravo and the Community Baboon Sanctuary, and meetings with Joy Grant, Director and Dale Young, Program Assistant, Programme for Belize.

Co-Director Koehn made contact with Lois Kruschwitz, Professor of Biology at Oklahoma City University, regarding the field course she teaches in Belize. She shared information with the project directors. Prospects for future coordination will be considered.

Objective 6:    *Collaborative Research Projects*

Co-directors Koehn and Siebert revised and updated project guidelines for collaborative research grants. Koehn gave Academic Vice President Barrow the revised materials during his visit to UCB. These guidelines henceforth also will be distributed at Dr. Koehn's orientation for outgoing faculty exchangees.

UCB faculty member T.R. Thiagarajan discussed his mangrove research interests with co-director Siebert. Upon return, Siebert identified interest in a collaborative research proposal on the part of Dick Sheridan, UM faculty member in Biological Sciences.

Vincent Palacio and Steve McCool began work on a collaborative research proposal.

UCB is exploring prospects of establishing land-based and marine-based field research stations.

UCB's new Research Officer, Ismail Bin Yahya, has become familiar with project objectives in this area.

Siebert and Belsky completed initial field work on the ecology and management of non-timber forest products, their relationship to local community development and to household livelihood strategies in Rio Bravo, Mountain Pine Ridge, Cockscomb Basin, and Gale's Point. This field work is supported by a grant from the U.S. Man and Biosphere Project.

Objective 7:    *Professional development of UM faculty and staff*

During this period, UCB accepted John Douglas, Professor of Anthropology, and Rita Sommers-Flanagan, Professor of Counsellor Education, as visiting faculty under the exchange program for the first semester of the 1994-95 and 1995-96 academic years, respectively.

Through attachment at UCB, Bob Campbell gained insights into the problems facing developing countries and the complexities of development issues. He found that the term 'appropriate technology,' though fairly clear initially, is not simple. His exchange showed him that his approach toward current projects at UM is widely applicable. The obstacles he anticipates in Montana are much the same as those that would be encountered in Belize. The differences between 'marketing' and 'education' in terms of information distribution for economic development are slight and should be treated that way. Mr. Campbell's experience in Belize also reinforced his enthusiasm for his current responsibilities.

Through his short course on Watershed Management and Planning, UM Professor Don Potts learned from UCB officials and academic counterparts about the potential role of UCB's water-resource curriculum, met with selected GOB officials to discuss possible collaborative efforts in water-resource research, and encountered, first-hand, some of the problems confronting water-resource management in developing countries. In addition, Dr. Potts had long, mutually beneficial discussions with Phillip Morgan, Mustafa Touré (UCB), Oswaldo Sabido, Earl Green (FDB), Frank Panton (Division of Hydrology), and Evan Cayetano (BCES). These discussions gave Dr. Potts a greater understanding of the problems Belize faces in development of her economy and protection of a fragile environment. His discussions with Mr. Morgan and Mr. Panton were particularly valuable because they concerned needs and possibilities for collaborative research. Other research possibilities surfaced during discussions with Mr. Ricardo Thompson, an Agricultural Engineer with the Belize College of Agriculture. Dr. Potts is looking forward to working with Mr. Morgan at UM in his capacity as Mr. Morgan's advisor. He also intends to remain in contact with Mr. Panton and Mr. Thompson.

Professor George Stanley returned from his EIA field course on Calabash Caye with enthusiasm regarding future research opportunities for both UM faculty and students when the Marine Research Center sponsored by the Coral Caye Conservation (CCC) on Calabash Caye is completed, and for prospects of participating in the faculty-exchange program.

Objective 8: *Enhance UM's international and cross-cultural curriculum*

One of the Curriculum Subcommittee's recommendations to UM's International Committee is that UM should build upon the expertise initiated under the USAID linkage grant with the University College of Belize in the areas of natural-resource management and sustainable development.

Dr. Rita Sommers-Flanagan continued her dialogue regarding appropriate disciplinary sponsorship at UM for a semester-long course in conflict management.

Objective 9: *Provide internship opportunities for UM students*

Siebert explored internship opportunities and developed specific internship assignments for three UM students who will complete volunteer internships in 1994. This included site visits and meetings with Matt Miller, Director, Monkey Bay Wildlife Sanctuary; Dr. Marion Glaser, Social Planner, Ministry of Economic Development; Mr. Earl Green, Forestry Department; and Gale's Point officials.

Objective 10: *Develop internal advisory group for on-going project planning, monitoring and evaluation*

The PAC met on 24 February 1994 at UCB. In attendance were Peter Koehn, UM co-director of the linkage project, and Traci Tanaka Hall, UDLP program analyst, Washington office. This meeting provided an opportunity for a University Center staff member to observe first-hand the functioning of the Project Advisory Committee for the Montana/Belize Partnership.

The Project Advisory Council is playing an increasingly active and instrumental role in guiding UCB's outreach efforts. The 24 February meeting was well-attended. The excellent turnout among GOB representatives is particularly noteworthy. Members shared important information with one another and explicitly recognized the value of PAC meetings as a means of coordinating training activities related to natural-resource management. The fact that several PAC members, including Alex Williams of UCB, also serve on NARMAP committees has led to the kind of improved coordination and information sharing between the UDLP and NARMAP projects called for by Steve Cornelius in his evaluation report (p. 13).

In February, PAC members agreed to review copies of the project evaluations carried out by Cornelius and Vengroff with a view toward possible re-structuring of its terms of reference.

Problems Encountered/Solutions to Problems Previously Identified:

UCB has introduced a more flexible summer-school schedule that can accommodate short-course offerings. In 1994, there will be one eight-week summer session and two four-week sessions between 6 June and 30 July.

Vice President Barrow now is copied on all important project-related communications and activities. He also is included in the appointment schedule of each of UM's project-administration visits, faculty and staff exchangees. This has facilitated project implementation.

During this period, The University of Montana made considerable progress in identifying suitable and interested faculty for the next four semesters of the faculty-exchange program. This is a breakthrough that addresses one of the few serious problems encountered by the project directors in the past, as cited in Richard Vengroff's evaluation.

In preparing for the field practicum, UCB only managed to recruit three Belizean students, rather than the five for whom funding and space were available. In 1995, UM will make a greater effort to ensure that five Belizeans participate in the field practicum, and that participation include non-governmental conservation organization personnel and Government of Belize personnel in addition to UCB students.

Although not a problem at this time, the proposed mid-term USAID evaluation process is a matter of concern. Co-directors Koehn and Siebert devoted considerable time and effort to commenting on the draft evaluation-process proposal sent out by the University Center office. Our principal concerns are that the evaluation process rely as much as possible on materials already available (including comprehensive quarterly and annual reports such as these) in order not to deflect project staff from concentrating their time and energy on achieving project objectives and that it involve university faculty (peers) with experience on similar projects as the principal final evaluators.

Lack of adequate support for DERO has hampered UCB's ability to become more proactive in its financial coordination and reporting. Fiscal-resource scarcity also has limited UCB's ability to finance direct-cost items from its own resources.

UCB feels hampered by a perceived lack of timely financial support from UM under the linkage project. However, UM can authorize subcontract payments only after having received a complete accounting of direct costs and cost sharing from UCB. Greater coordination and understanding between the two institutions is still needed. More effort will be placed on clearing up these administrative matters.

UCB's growing interest and emerging national role in environment and development education is gaining recognition among Government of Belize ministries and non-governmental conservation organizations. This is encouraging as it demonstrates the positive impact of the UDLP project, growing institutionalization of environmental-science and sustainable-development studies, research, and outreach activities at UCB, and an emerging consensus among UCB faculty that these activities should be central to the mission of the University. On the other hand, these positive developments are occurring within an increasingly polarized political environment (at the national level and within UCB itself), and within the context of severe budget constraints (at the national level and for UCB). These developments are likely to limit the ability of UCB to develop new curricula, research, and outreach activities in resource conservation and management, and portend potentially destabilizing effects on the administration and management of UCB.

USAID/Belize will close in 1996. The Mission has informed the project staff that they expect no further USAID activity in Belize beyond September 1996. Since the UDLP project is neither funded nor managed by the local mission and is linked to over 40 similar projects around the world administered by USAID's University Center headquarter's office, it would be a grave mistake to tie the Montana-Belize Partnership to local timetables that bear no relationship to the in-Belize and in-Montana objectives of the UDLP project. This project must be treated in the same manner as all other UDLP efforts. Short-sighted insistence on rigid and unrelated deadlines for terminating UDLP activity in Belize could seriously jeopardize the attainment of all 10 project objectives and would certainly undermine joint efforts on the part of UM and UCB to lay the foundation for program sustainability. Such results would be in no one's interest.

The need remains for long-term planning and analysis of Belize's natural-resource and training needs as mentioned in earlier project reports and confirmed by Steve Cornelius' external assessment. Given that virtually every activity in this particular UDLP had to be launched from scratch, a ten-year life cycle would be far more appropriate in the case of this particular linkage project (Cornelius, p. 8).

### Program Sustainability

One of the principal objectives of this project has been to develop UCB's outreach capacity to offer training courses that address natural-resource management needs. A major breakthrough occurred during this period when NARMAP identified UCB as the national institution for in-Belize short-term training in various environmental fields and decided to involve UCB, as Belize's established national training institution, "in the preparation of the training requirements, selection of participants, design and delivery of [its] courses" (NARMAP, Implementation Plan 1994, p. 1). This decision allows for the coordination of training resources through 1996 among UCB, UM, LCNF, and the NARMAP partners. In addition, the GOB envisions UCB as taking over the short-term training now offered overseas in the future. Recognition of UCB by NARMAP and others within Belize as the national training institution for environmental planning and monitoring also greatly enhances prospects for sustainability of the outreach function beyond the term of the UDLP grant.

In his evaluation report, Steve Cornelius noted that "a direct and immediate way for the UDLP to integrate with other Belize natural-resource conservation efforts would be through the sponsorship of an in-depth national training-needs assessment. This would refine the focus of UDLP within the context of other national and international opportunities, and likely open the possibilities of joint funding of UDLP events, particularly the field practicum, short-term courses, and perhaps the graduate level training." Thus, a project development of major importance is NARMAP's commitment at the 1 March meeting attended by co-director Koehn and Project Officer Touré to grant UCB institutional-strengthening funds for the purposes of (1) conducting a training-needs assessment in the environmental area and helping develop NARMAP's Implementation Plan for 1995; (2) reviewing UCB's training capacity and plans; and (3) engaging in curriculum development that will strengthen UCB's capacity to deliver in-county courses that address the identified needs. On its part, UCB has identified participation in the training-needs survey as a priority for the institution.

During his January trip to Belize, Siebert reviewed, in detail, the emerging natural-resource conservation and development role of UCB with representatives from UCB, GOB, and the private sector. He also noted the potential for increased UCB activity and collaboration with government and non-governmental conservation organizations in environment and development activities, particularly short-course training and research.

In January, Siebert discussed potential opportunities for collaboration between the UDLP and NARMAP projects in Belize with Mark Nolan, the NARMAP Chief of Party. Specifically, they discussed the national training-needs assessment, potential NARMAP support for Belizeans studying at UM, and potential future development of the field practicum to support NARMAP field activities.

Philip Morgan served as co-instructor of the field practicum. He found the course format and subject matter to be extremely relevant to UCB students and is exploring ways in which the practicum can be permanently incorporated into the UCB curriculum. This will facilitate institutionalization of the practicum at UCB.

UCB would like to see the EIA training course offered on an on-going basis and possibly integrated as part of the Associate Degree core curriculum at the Belmopan campus. Therefore, they are building up the needed course materials from now. BCES had intended to offer the course for three years and then turn it over to UCB. However, the uncertainty of PACA funding has jeopardized this plan. Also, there currently is insufficient resident capability within Belize for UCB and BCES to offer the course without relying heavily on outside visitors.

USAID announced that 21 missions serving 35 countries and territories would be phased out over the next three years as part of a program of cutbacks. Belize is named as one of the Caribbean countries to be affected. Less U.S. government funding will result in greater difficulty in securing assistance for the

programs set in place during the tenure of the UM/UCB project. It will be increasingly vital to identify other sources of revenue to help sustain the linkages formed through this project.

The termination of USAID/Belize funding in 1996 makes it imperative that UM and UCB explore alternative internal and external sources of funding in order to ensure program sustainability. Internal sources include the Protected Areas Conservation Trust and course fees and charges. External sources include the Global Environmental Facility, the Inter-American Development Bank, the Government of Taiwan, and JICA. In this connection, it is encouraging that NARMAP specifically invited UCB staff to participate in the proposal-writing workshop offered in Belize by experts from the World Wildlife Foundation's Washington, D.C., office. This is an outgrowth of a recommendation made in Steve Cornelius' evaluation report (p. 18). As Cornelius noted, one of the most pressing needs is "to expand understanding of how to prepare funding proposals for environmental activities" so that Belize will develop the indigenous capacity to compete for funds that will ensure the sustainability of beneficial programs.

The subject of charging fees for UCB-offered short courses came up at the 24 February PAC meeting. Co-director Koehn advised that consideration be given to phasing in fees from now rather than waiting until the UDLP project ends.

DERO, headed by UCB's UDLP Project Officer K. Mustafa Touré, has helped UCB position itself to seek external funding. External sources of funding will have to play an increasing role in UCB's development because of its financial status and the fiscal policy of Belize's government. Efforts to garner support over the past 3-month term included coordination of the first phase of a three-pronged UCB institutional development thrust. This first stage, called Project 2001, sought out the opinions of Belizeans from all sectors and geographic regions through local focus groups and a national "Dear Citizen" survey questionnaire. The next stage, which is underway concurrently with Project 2001, is an internal "self study" which will result in an analysis of UCB's institutional capacity at this time; the third phase will overlap with the first two and launch a long-term fund-raising strategy which will be coordinated by the newly formed UCB Foundation and target the outcomes of both public perceptions/desires and internal assessments/projections.

Two principal barriers to the sustainability of project-related internationalization at The University of Montana identified in Steve Cornelius' evaluation report (p. 23) have not yet been addressed. These are (1) the absence of "a long-range strategic plan for expansion of UM's presence in the international resource-conservation arena;" and (2) the lack of sufficient core funding of the Office of International Programs by The University of Montana to assure the donor community of the University's commitment to sustaining international development activity.

### Spin-off Benefits

Bob Campbell has been invited to prepare an article for Montana Global on his attachment at UCB. This could result in additional trade between Montana and Belize.

In April 1993, the National Environmental Education Task Force (NEETF) was formed as a direct output of the linkage project when UCB and the Programme for Belize co-sponsored a National Environmental Education Symposium. It became Belize's official counterpart for liaison with the JASON Foundation's "JASON V Expedition to Belize: Rainforests, Reefs, and Ruins." The support of NEETF officials, including UCB's DERO, assured Belizean participation in this pioneering international environmental education and research effort. Belizean scientists and specialists, and three UCB students participated. Most of Belize's cable television industry received live JASON project transmissions simultaneously as they were broadcast worldwide. In conjunction with the JASON project, the Belize Zoo and Tropical Education Centre held two teacher-training workshops. A third workshop is planned to review the 50+ hours of

videotape and the JASON-Project curriculum in order to make recommendations as to their usefulness in enhancing Belize's environmental-education curricula, especially at the secondary level.

### ACRONYMS

BAS	Belize Audubon Society
BCES	Belize Center for Environmental Studies
BELINET	Belize Information and Distance Learning Network
BEST	Belize Enterprise for Sustained Technology
BIM	Belize Institute of Management
BNEC	Belize National Entrepreneurship Centre
BTIA	Belize Tourism Industry Agency
CSU	Colorado State University
DERO	Development and External Relations Office
EIA	Environmental Impact Assessment
FDB	Forest Department of Belize
GOB	Government of Belize
ICDE	International Conference on Distance Education
JICA	Japan International Cooperation Agency
LCNF	Lewis and Clark National Forest
MEC	Montana Entrepreneurship Center
MRC	Marine Research Centre
NARMAP	Natural Resource Management Project (USAID-sponsored)
NEETF	National Environmental Education Task Force
NGO	Non-governmental Organization
OIP	Office of International Programs
PACA	Proyecto Ambiental de Centroamérica
PAC	Project Advisory Committee
UCB	University College of Belize
UDLP	University Development Linkages Project
UM	University of Montana
USFS	U.S. Forest Service

### Planned Travel

Rita Sommers-Flanagan - groundwork for faculty exchange (own funds), May  
Steve Siebert - project administration at UCB (own funds), April  
Vincent Palacio - NARMAP needs assessment, UM short course with Dr. Jenni, May

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