

## QUARTERLY REPORT FOR OCTOBER - DECEMBER 1996

### Overview

The following report summarizes the quarterly activities under the University of Arizona / Clark University Cooperative Agreement with USAID. During this quarter the Government of Malawi prepared a three year workplan for the environmental monitoring program. This workplan focuses on monitoring, research and training and does not refer the NATURE and PLUS components included in the UA/CU workplan. As this report must fulfill reporting requirements on all UA/CU activities, as well as reporting on how the UA/CU technical assistance is supporting activities in the GoM workplan, considerable information is provided which is not referred to in the GoM workplan.

Comments on the quarterly component activity results and monitoring indicators (in brackets) from the GoM Workplan (p. 13-14) which the UA/CU Cooperative Agreement is helping to support and the UA/CU annual workplan (p. 1-10) are included at the end of each component section.

### Component One - Catchment Monitoring

Short term technical assistance was provided through the University of Arizona's Department of Agricultural and Biosystems Engineering to review the watershed monitoring component of the MEMP and data reporting needs by each GoM agency involved in the program. Recommendations for improvement in current data collection and analysis methods were made and illustrative reporting formats provided for use by the agencies. To promote in-country capacity building, a one day review was conducted by the consultant for the desk officers to present the findings and options for improving monitoring included in the draft report.

Subsequent to the Watershed Monitoring consultancy, the MoREA Monitoring and Management Unit (M&M) staff circulated copies of the final report to the desk officers for discussion and selection of the recommended options to improve monitoring during the 1996/97 monitoring season. The options included reducing the number of field pits and moving the rain gauges closer to the field pits to enable development of a better rainfall/runoff relationship.

To follow-up the previous years efforts to improve the quality of the data collection and assembly, farmers and field assistant trainings were held for all the catchments during November.

Performance Based Budgeting was discussed as a means for increasing agency output for the programme during workplan discussions held at the Salima workshop in June 1996. A proposal was prepared by the accounts section to hold a workshop but little action in development of this activity has occurred since the budgeting sessions at the Annual Review Meeting in Mangochi (report in preparation) last July. The accountant supporting these activities left during the quarter for further training in Blantyre.

### Quarterly activity results and indicators

- *feedback to communities (trip reports)* The only feedback to provide is the 1994/95 findings for the Chilindamaji catchment. As some of these results were questioned at the annual review meeting, no further action has been taken.
- *develop synthesis reports for integration of sectoral data (annual report)* No sectoral reports from the 95/96 monitoring season were provided to enable this activity to be completed as part of the planning process for the annual review meeting in July.
- *implement performance based budgeting system (reports produced)* The MEMP Technical Advisor prepared an outline for these reports based on the consultancy report from the NATURE PBBS activity as part of the planning process for the annual review meeting in July.
- *public sector agencies able to undertake environmental monitoring, analysis and presentation of findings (reports used by managers, reports presented to TCE)* As above, one report exists which was presented in July at the annual review meeting. The report highlights a finding of high pesticides levels in the Chilindamaji catchment for which no follow-up to verify findings has been initiated.

### Component Two - Development of an Environmental Information System

This quarter a Design Mission was planned to provide more detailed guidance on the development of the proposal prepared by MoREA to develop an environmental information system. This mission was postponed until January 1997 due to scheduling conflicts with the U.S. based technical advisors.

The UA/CU cooperative agreement only provides support for technical assistance in the development of the EIS. Support for implementation will have to be sourced through collaboration with and coordination of multiple donors. MoREA prepared a document for submission to the World Bank for Project Preparation Funding (PPF) which included some EIS funds for preparation of an initial assessment of data needs and data availability for the Shire River Catchment. Although the funding was approved, logistical problems delayed disbursement of funds to undertake any activities planned with these funds.

A World Bank mission in November began preparation of the Project Implementation Plan (PIP). The EIS has approximately USD 819,000 over a five year period to support implementation of the EIS. A draft workplan was prepared based on the proposal for an EIS which will require modification after the January Design Mission.

### Quarterly activity results and indicators

- *Data needs survey (data base)*, Not started due to delays in securing funds.
- *Shire River Integrated Watershed Management (action plan)*, The Director of Environmental Affairs called a meeting to discuss this plan. The Director of LR&CB was delegated responsibility for acting on the recommendations in the *Sources of Siltation in the Shire River* consultation report. Unfortunately, no further action was taken on this activity during the quarter which was hoped to help provide guidance to the EIS Design Mission on the data needs required to address problems in the Shire.
- *Creation of an effective and efficient environmental data management system with national level implications (national level data archiving standards established and adopted, mechanism established and utilized for data retrieval)* Consultancy for these activity was postponed until January 1997.

## Component Three - Expansion of Environmental Monitoring Technologies

### Area Sample Frame

Short term technical assistance was provided through the subcontract to Agricultural Assessments International Corp. (AAIC) in December. The purpose of this mission was to;

- review the subdivision of the primary sampling units (PSUs) into secondary sampling units (SSUs) and the selection of segments.
- review progress of the ASF pilot activity with key GoM staff
- train enumerators to collect data using both the tract identification and listing form (TILF) and the field and farm questionnaire (FFQ)
- monitor enumerators field testing data collection in two segments

The PSUs in customary lands were subdivided properly and segments were selected according to the previously agreed upon procedures. In the public lands PSUs were not subdivided since they require a different sampling strategy which is addressed in a report submitted by the U.S. Forest Service. (see below)

The consultants report indicates the design of the questionnaire went through a 'rigorous design and review' process. This seemed to have been done in isolation of some key players including the Agricultural Development Officer at USAID and the MEMP Technical Advisor. Concern over the lack of survey questions covering environmental change were also raised at a workshop conducted in Mangochi as part of the training of enumerators. As a result, the consultant was requested to modify the questionnaire and data entry programs.

The field test was included as part of the three day workshop in Mangochi. Fields in the training segments were irregular and difficult to enumerate. As anticipated the farmers did not always know the size of their fields. Due to these complications, photo enlargements (1:6K) of the selected segments will be made and used instead of contact prints (1:25K). There were problems as well with absentee farmers. It is hoped that sending the enumerators to the fields early will help avoid this problem. The consultant was satisfied with the performance of the enumerators in their ability to successfully collect data.

Actual data collection was delayed due to rains and indications that funds were not available to support the request from LR&CB for the data collection activity.

### Addition of Forest Information to the Area Sample Frame

The U.S. Forest was asked to provide assistance to incorporate forest information into the area sample frame. This consultancy actually took place in the third quarter but the final report was not submitted for review until the fourth quarter. This consultancy provided a methodology that could be used in conjunction with the ASF to inventory the forest resource and to provide recommendations for estimating deforestation. Included were criteria for stratification, sampling intensity, data collection requirements and a user guide for field techniques.

## Quarterly activity results and indicators

- *Area Sample Frame - Secondary sampling units (report presented)*, A report was presented from which a request were made for modifications to the questionnaire and data entry programs.
- *GoM line agencies and environmental researchers have applied and evaluated intensive and extensive environmental monitoring technologies (ASF implemented in one ADD and evaluated)* Development of the sampling units, survey strategy and data collection instrument completed.

## Public Lands Utilization Study

### Level 1. Physical Characterization of Public Lands (national, digital level of analysis)

#### Quarterly activity results and indicators

*Spatial Data Collection and Base Mapping* PLUS suffered a major set-back when it was discovered that a number of the satellite images provided from vendors were corrupt and had to be re-requested. Equally frustrating have been all efforts to obtain Land Resources Evaluation Project (LREP) digital data on Malawian soils, agro-climate zones, and land suitability. The organization which digitized all of these, International Fertilizer Development Corporation (IFDC) has undergone personnel changes which have made compiling this data problematic and it appears likely these critical data will not be available for the study. Therefore PLUS is considering alternatives such as digitizing key areas, though current resources would limit the geographic area, most likely to the five Level 2 sites which are seen as the highest priority. Despite these data acquisition problems, the University of Arizona's Arizona Remote Sensing Center (ARSC) continued to assemble the digital data set for PLUS, including the following:

- Completed search and acquired a digital elevation model (DEM) for the creation of a national Shaded Relief Image for inclusion into the GIS Atlas.
- Began to convert of GIS Atlas version 1.0 from Idrisi format to ArcView layouts.
- Completed the digitizing of Agricultural Scheme boundaries as they were provided to ARSC. Added the digital cover of Agricultural Schemes to the working database for the GIS Atlas in ArcView.
- Digitized the boundary, roads, streams, huts, villages, and 250 foot elevation contours for Zomba/Malosa Forest Reserve. Digitized the Domasi watershed boundary, huts, streams, and 50 foot elevation contours. Created digital elevation model and shaded relief image for the Domasi Watershed. Digitized LREP soils data for this watershed.
- Continued to pursue the LREP data from IFDC for inclusion in the GIS Atlas but without success. Alternatives were investigated to fill this gap in the national level GIS dataset.
- At the request of the Forestry Department, all protected area boundaries were digitized from 1:250,000 Survey Sheets, and approximately 75% of the Agricultural Scheme boundaries were also added to the data set. Maps for the balance have not been made available by various responsible agencies within the Malawi government.

*Classification and Change Detection*. Continued selection and purchasing of satellite data from Eros Data Center (EDC), EOSAT Corporation and the Landsat South African ground receiving station. EDC provided 11 archived Landsat scenes from 1984 which cover the entire nation of Malawi. The 11 pre-selected scenes were received by ARSC in October, 1996. After previewing all scenes for data quality and cloud cover content two scenes were returned and replacements re-ordered in November. Although all 1994 Landsat

data were purchased through EOSAT 8 of the 11 scenes came from the South African Receiving Station. Data quality problems and unacceptable cloud cover in the majority of the 1994 TM scenes required us to repeatedly refuse data and reselect appropriate scenes from the preferred dry months. The following activities were completed upon the eventual successful acquisition of these data:

- Wrote and provided CDs of Landsat 1994 data to Clark University for the Malawi Environmental Monitoring Programme (MEMP) January, 1997 training course.
- Began outlining the actual methodology to be used in all the processing steps of portions of the 22 TM scenes. Processing steps outlined up to this point include:

Previewing data  
 Reading data from tape media and subset 6 of 7 TM bands  
 Subsetting appropriate scenes of Public Lands  
 Atmospheric and radiometric correction  
 Rescaling to 8 bit data  
 Intermediate backup of 6 corrected TM bands  
 Calculate a vegetation index  
 Supervised classification to isolate cloud and cloud shadows  
 Unsupervised classification  
 Georeference 1984 image to map  
 Georeference 1994 image to 1984 image  
 Merge and label classes  
 Modify the pseudo color tables  
 Majority Filter

- During this quarter current literature was researched, evaluated, and tested to obtain the appropriate methods for preprocessing the image data. Selected best solution for atmospherically and radiometrically correcting the TM data. Information collected and required for preprocessing included: date of data acquisition, solar zenith angle, sun earth distance, bias and gain settings of sensors, and minimum reflectance value occurring in the scene for each TM band. These activities required extracting information from image header files, library research, and previewing image data. All data were entered into an Excel database for further calculations and to be used in conjunction with image processing modeling package as study areas are processed.
- Zomba/Malosa Forest Reserves and Mt Mulanje Forest Reserve were subset from both 1984 and 1994 full TM scenes.
- Atmospheric and radiometric correction was then completed for the 1984 and 1994 TM images for Zomba National Forest and Mulanje National Forest. Performed linear contrast stretch for color infrared composites. A test of the Modified SAVI (one of several "greenness indices used to improve land cover classification which were tested) was selected as the best option for the Level 2 study areas.

*Summary Data Extraction.* Two critical unknowns continue to thwart PLUS efforts: a) the availability of ArcInfo vector LREP data—soils, agro-climate, and land suitability are critical for analysis, and b) the availability of Landsat TM images. In both cases the data are said to exist but delivery cannot be predicted by those who hold the data. These delays have now pushed back original completion dates for all Level 1 activities indefinitely – the new schedule has not yet been defined as the indeterminate nature of these data delays make scheduling for the University of Arizona highly problematic.

## Level 2. Land-use Characterization of Public Lands (field-intensive level of analysis)

### Quarterly activity results and indicators

*Creation Rationale.* Park & Wildlife have completed their list. Forestry has submitted a copy of the "forest reserve register" to address this issue. The LRCB within MoALD is pursuing the Agriculture Scheme list through the ADDs, though a completion date is not currently available.

*Rapid Appraisal* The rapid appraisal for all five level 2 protected areas was completed, with an average of 30 villages visited for each.

*Key Respondent Interviews* All but three villages in Liwonde National Forest and four for Vwaza were completed.

*Participatory Mapping* This was completed for Mulanje, Zomba and Dzalanyama. The remaining areas will be completed by February 1997.

*Formal Survey* Zomba and Mulanje were completed. Dzalanyama, Liwonde and Vwaza have all been launched and should be completed by February 1997.

*Resource Assessment* Mulanje and Zomba are now complete. Rains permitting, the other areas should be completed by February 1997.

*Data Entry, Cleaning and Analysis* Data entry for Zomba formal survey was completed in mid-November. Mulanje should be complete in January, Liwonde in February, and the remaining two in March 1997. Cleaning and analysis has begun for Zomba in the Bureau of Applied Research Anthropology (BARA) of the University of Arizona. The other sites will follow in January-April 1997.

### Framework for Decision Making

In May 1996, USAID requested that PLUS provide a means of making its final products more accessible to decision makers. Initially, this was conceived as a sort of matrix which would guide decision makers to consider the multiplicity of factors which all play a role in tenure and management decisions where protected areas are concerned. Increasingly, however, it is becoming clear that it is not only necessary to organize the data by such factors, but also to enhance the possibility that experts or stakeholders familiar with those factors be mobilized when such decisions are being made. These are only initial thoughts, though it is clear that the broad, consultative base of expertise provided by the Lands Steering Committee may be useful in such a framework. In addition, it has been suggested to explore the strategies recommended by the International Model Forest Network (IMFN) which supports an integrative, consultative management of natural resources at the landscape level, a local and yet multi-sectoral approach which involves communities as well as ministries, often with a protected area as a point of focus.

These ideas will be explored in more depth in March 1997.

### Observations

At the request of the Lands Steering Committee, we will now include qualitative, unevaluated observations in the progress report to help fuel discussion of land issues at the Steering Committee meetings, with the notable proviso that no formal analysis has been completed at this early stage. Observations of potential interest through December include:

*Land Pressure* Most severe in Mulanje and high in Zomba and Liwonde, less severe in Dzalanyama. On the surface, quite low in Vwaza, however, the crowding of estates has put the reserve under enormous pressure, not all of it political. Land issues are highly sensitive in all sites, though perhaps most tangibly felt in Vwaza.

*Resource Pressure* Resource use and impact is most evident on the forest reserves, perhaps due to stricter controls on Parks and Wildlife reserves. The steepness of slopes hinders some use in Mulanje and Zomba. Urban pressure is quite high in both Zomba and Dzalanyama. Outside users are evident in Mulanje (timber), Liwonde (firewood for the train to Blantyre as well as organized poaching) and Vwaza (Zambian poaching).

*Management Strategies* Vwaza (extension efforts and community-based management trials) and Liwonde (community outreach and environmental education) show the most activity in involving communities in reserve resource management. Dzalanyama Ranch and Forest have a long standing co-management strategy and the Lilongwe Forestry Project envisions linking all concerned parties with local community representative. Mulanje has begun a conservation trust with proposed activities similar to the efforts in Liwonde.

*Public Relations* PLUS does not directly seek information on the relationship of line agencies with local communities. However, concern has been raised by the number of people who respond to an open question about "recommendations for land and resource management" with exceptionally strong feelings about these relations. Some members of the Steering Committee have recommended an informal meeting to discuss ideas on how best to address these concerns.

*Related Studies* It has recently come to the attention of PLUS participating agencies that at least two studies are underway in Malawi with some similar objectives similar to those under Level 2 fieldwork. One, involving forest reserves, is being guided by APRU, the other involving border-zone parks and wildlife reserves in the north, guided by GTZ. USAID and the Steering Committee have made it clear that data collected by PLUS will be made available; in the mean time a number of meetings have been conducted to prevent duplication of effort or "research saturation" in any particular site. At this time it appears there will be no direct overlap in either case – we will keep the Steering Committee posted on our progress in this regard.

## Component Four - Environmental Training and Research

### GIS Training

The first in a series of three trainings was conducted for two weeks at Bunda College. The training combined theoretical knowledge with practical hands-on computer work, emphasizing Malawi specific applications. A total of fifteen participants from both the University and different Ministries participated.

The course received favourable reviews which may be attributed to the decision to provide instruction at a slower pace over a longer period of time than previously provided. The course did have one low point when the participants were organized in a one day stay away due to concern that they were not receiving sufficient allowances and were not appropriately accommodated.

After the training, one of the trainers assisted in training members of the PLUS field crews in participatory mapping techniques which were used to assist in gathering community input on past and present land use, land issues, and resource utilization.

## Environmental Scientist

Dr. Yusuf Mohamoud was the successful candidate in the recruiting process led by the University of Arizona to select an Environmental Scientist to join the long term technical assistance team in Malawi.

Dr. Mohamoud arrived in December for a familization visit which included a trip to Zomba and Blantyre to meet the University Administration, and Department heads and College Administrators at the Polytechnic and Chancellor. Several visits were made to Bunda and APRU for preliminary discussions and logistical arrangements.

## Quarterly activity results and indicators

- *Facilitate in-service training* - The first GIS course was held. Twenty four participants were proposed by the institutions, seventeen arrived and fifteen completed the first course.
- *Liase with Environmental Scientist to develop research applications and environmental monitoring products*  
As no assurance was provided on the availability of local currency funding for this component, little action was taken.

## Component Five - Environmental Policy, Legislation, and Institutional Development

The quarter saw substantive progress made on a number of fronts, but the pace was slower than had been hoped or expected. The main reason for this lay in the nature of the NPA approach, which appears to mean that the program progresses at the speed of the slowest participant: the involvement of nine agencies leaves plenty of scope for delay. But there were also other factors which impeded efficiency, including the absence of administrative backup to the UoA team and the emergence of new, unplanned work themes (for instance, the policy advisor attended no less than fourteen formal meetings to discuss the UoA workplan during the reporting period).

The functional organization of the Department of Environmental Affairs was finalized during the last quarter of 1996. The coordination of sectoral policies and initiatives in E/NRM falls to the newly created Policy and Planning Division, staffed by two officers both of whose programs are committed to backstopping the IDA/World Bank-funded Environment Management Project and range of national responsibilities related to international conventions. Viewed in this light the identification of a counterpart to the policy advisor, with specific responsibility for policy coordination, should be considered an essential task for 1997.

Development of a Composite Action Plan for review and reform of policies, institutional roles and legislation for E/NRM.

The consolidated action plan and monitoring schedule for the policy, institutional and legal reform process was completed in draft by mid-October, with all changes recommended by the August PIC meeting negotiated and incorporated. More difficult was the acquisition of financial information from participating agencies to enable the action plan budget to be finalized. An incomplete budget proposal was submitted informally to the Ministry of Finance early in October, with formal submission by MoREA following on November 8th. The action plan was approved without alteration by the Ministry of Finance early in December. The contents of the approved plan were designed in May-July 1996, with the expectation of additional funding from Treasury in August. This was not forthcoming, and most agencies have had to suspend implementation of the plan until further support becomes available. The MoF has made it clear that the next allocation will have to await the release of the first tranche of NATURE NPA funding. The time scheduling included in the approved action plan is no longer meaningful, therefore, neither is it possible to

effect a revision until a realistic financing plan is in place. A caveat to this effect is included in the approved action plan document, and the rescheduling exercise will be accomplished as soon as possible after the release of the first tranche.

A proposal for technical support to the resolution of forestry policy issues and the finalization of the draft Forestry Bill was submitted to UNEP (Nairobi) in October for funding under the UNDP/UNEP Environment and Law Programme. Despite strong recommendations from UNDP (Malawi) and from Dr. Ogolla of UNEP, no response to this proposal has been received. In November, a conflict in the schedules of the Ministry of Justice and the Ministry of Natural Resources concerning the finalization of the draft Forestry Bill became apparent, and discussions were held with both Ministries in order to resolve this. At a meeting with the Director of Forestry early in December it was agreed that given the urgency with which the new legislation is required, its advanced state and the lack of response from UNEP, no further delay would be acceptable: thus the review of legal issues in the forestry sector will be deferred until such time as other sectoral legislation is being developed, probably mid-late 1997. It is expected that the draft Forestry Bill will have been enacted by this time. UNDP/UNEP technical assistance will still be sought for this review, and the Forestry Department's proposal will now require revision and re-submission to UNEP.

#### Refinement of draft Performance-Based Budget Support (PBBS) Guidelines

The Ministry of Economic Planning and Development (MEP&D) has the responsibility for finalizing the "guidelines" document by incorporating a number of written comments into a report prepared by a consultant. Although the comments were provided early in August 1996 there was no activity at all on this front throughout the remainder of the year. This item is likely to delay the fulfillment of tranche one conditionality and thereby impose delays on the remainder of the program. Given the key role that MEP&D is expected to play in the selection and monitoring of sectoral PBB projects this ministry's lack of commitment and/or capacity warrants serious concern.

#### Donor Co-ordination

Meetings of all donors active in the E/NRM sectors have continued to be hosted by USAID on a monthly basis, and have proved well-attended and lively. Following discussion within MoREA it was formally proposed to the November meeting that the Ministry should be represented: this request met with agreement, and the Director of Environmental Affairs now has a standing invitation to attend. This should be regarded as a step towards MoREA's taking a more active role in the coordination process.

Meetings of the donors E/NRM Protected Areas Sub-committee were held at the World Bank resident mission on November 1<sup>st</sup> and 28<sup>th</sup>. At the first of these meetings it was explained how the NATURE conditionality, formalized through the Letter of Intent process, could be used to impose a timetable to policy changes. Following a suggestion by the GTZ policy advisor in DNPW (a member of the PA sub-committee), this resulted directly in the development of an additional condition under NATURE tranche two related to the retention and sharing with boundary communities of revenues deriving from all National Parks and Wildlife Reserves. This concept was subsequently incorporated in the Secretary to the Treasury's LOI of December 13<sup>th</sup>, 1996.

The Deputy Director of Environmental Affairs and the NATURE policy advisor also participated in a USAID strategic planning meeting on November 12<sup>th</sup>, where it was agreed that the planning process initiated by the donors' E/NRM group should be harnessed towards refining the ESP. This theme was followed up actively within MoREA during December, with encouragement from USAID, by means of meetings with interested parties, principally in Government. MoREA was supported in this by the visit of Mark Renzi, a member of the USAID/NRMP LIFE project team (Namibia) during December.

### Sustainable financing for E/NRM programs

A meeting was held with MoF on October 8<sup>th</sup> to discuss USAID's requirements with regard to the establishment of an endowment trust working group: it was agreed that the minimum requirement would be for the working group to have met at least once. The first meeting of the working group was held in the MoF on October 18<sup>th</sup>. The group elected a chairman and agreed to meet again in Blantyre on 31<sup>st</sup> October to discuss operational modalities and TORs for a coordinator to be hired on contract. USAID agreed that with the second meeting completed the working group could be considered "organized" and would thus meet requirements under tranche one. October 21<sup>st</sup> 1996

The NATURE policy advisor attended a debriefing of UNDP consultant Brian Downing and UNSO financial coordinator Tejan Jallow on November 29<sup>th</sup>. As a result of this and other meetings held earlier the same week it has been agreed that there exists a sufficient community of interest between the proposed **Desertification Fund** and the **NATURE Endowment Fund** to merge the two. The proposed merger was unanimously endorsed by a third meeting of the Endowment Fund Working Group on December 10<sup>th</sup>. This meeting further agreed

- to use both UNDP and NATURE (NPA) funding to establish a constituency and develop a working format for the fund;
- to adopt, with minor modifications, UNSO's proposed TORs for a full-time coordinator for the Working Group;
- to broaden the membership of the Working Group to include, henceforth, representatives from UNDP and the Ministry of Commerce and Industry, and
- to accelerate the timeframe for the establishment of the fund.

### Initiation of a study into Community-Based Natural Resource Management (CBNRM) in Malawi.

Two informal proposals for implementation of the study were received by USAID at the end of September: of these the proposal submitted by ULG of Harare was selected on technical grounds by a USAID/UoA evaluation committee, and negotiations commenced early in October. The ULG team comprised: Richard Bell (regional CBNRM expert and ULG staff member), Kelly Stevenson (consultant, ex-CURE), Herbert Kamwendo (consultant, ex-MoALD) and Hastings Chikoko (CURE). The study commenced on October 21<sup>st</sup>, with completion expected before the end of December. Both of the regional experts (Dr. Bell and Mr. Stevenson) were out of the country for most of November, a factor which reduced the team's overall efficiency to the extent that the study had not accomplished its objectives by the end of the quarter. Mr. Joao de Queiroz (USAID/REDSO NRM advisor) joined the study for 10 days during November. Following initial meetings and field work the team held a successful 2-day workshop in Blantyre on November 26<sup>th</sup>-27<sup>th</sup>, at which two papers were presented for discussion by a broad spectrum of CBNRM practitioners and community representatives. The team distributed a draft report on 16<sup>th</sup> December and agreed to reconvene in January for finalization. In summary, the team's findings and recommendations were:

- Malawi's circumstances are unique within the region, in that the ratio of population to resources is extremely unfavourable. Wildlife, which gives a high-value impetus to CBNRM initiatives in neighbouring states, cannot therefore form a viable basis to CBNRM in Malawi, which must therefore focus primarily on soil, water and forest resources on customary land, with some limited co-management potential afforded by protected area and lake resources. Extension capacity within the public and NGO sectors is low in relation to the number of

communities to be reached. Therefore, in order to have any prospect for making a meaningful impact on national NRM problems, community programs must build in a community outreach capacity, thereby extending the program's reach beyond the current extension network and encouraging a chain reaction in CBNRM impact.

- The size of the funding envisaged by USAID is small: it should therefore be focused on three pilot areas so as to foster the beginnings of the chain reaction indicated above.
- In order to divert the highest possible proportion of the funding into direct community impacts, the team recommend a "fund" approach rather than a conventional "project" approach. The fund's administration could be provided either by a stand-alone structure or, preferably, it could be incorporated into an existing structure, possibly in collaboration with another donor.

#### Status of NATURE tranche one conditionality

Throughout the quarter the NATURE policy advisor maintained a close liaison with the Ministry of Finance in respect of the status of tranche one conditionality and the acquisition of necessary documentation. During November, meetings were held with participating agencies individually to discuss tranche two activities and items for possible inclusion in the

Letter of Intent (LOI). The content of the LOI was discussed in detail at a technical meeting held on November 22<sup>nd</sup>, following which a refined draft Letter of Intent for tranche two was prepared by the NATURE policy advisor and submitted to MoF on November 26<sup>th</sup>.

December saw the completion of most of the conditions for the release of the first tranche of NATURE funding. Significant developments during the month included the **approval by Treasury of the Action Plan** for policy and legislative reform and the **submission to USAID of Government's Letter of Intent** describing actions to be undertaken during the second tranche. By the end of the month the only conditions remaining to be fulfilled were:

- the publication of guidelines for performance-based budget programs in natural resource management (responsible agency: MEP&D), and
- the recruitment of a fifteenth professional staff member into the Environmental Affairs Department (responsible agency: MoREA).

#### Other activities

##### Land Policy

The development of a new land policy for Malawi is central to the reform of policies in each of the land-related natural resource sectors, and is in itself the single most important theme in the reform process. The NATURE policy advisor has therefore endeavoured to keep closely in touch with developments in this field, specific actions including

- attendance of monthly meetings of the Land Utilization Studies Steering Committee;
- participation in a working group to design a new lands policy and institutional development project for ODA financing (November 4<sup>th</sup>), and
- participation in a meeting to discuss the multi-donor financing proposal for the Lands Commission, UNDP, November 5<sup>th</sup>.

A development of potential significance to the future of public lands is the possible extension to Southern Africa of the Canadian-led (CIDA/IDRC) Model Forest Network, with Malawi taking a leading role. Two meetings were held with CIDA and IDRC staff members John Moore, Michel LaVerdiere, John Latham and Ron Ayling in late October and early November to discuss the application of the model forest concept to the Malawi situation. As practiced in Canada and in an increasing number of countries worldwide, the model forest concept is in essence an experiment in resolving land/resource use conflicts through the devolution of management responsibility from Government to a representative user-group institution. The "resource" at the centre of the conflict need not necessarily be restricted to forests (i.e. it could be wildlife), and the method could be viewed as one solution to the growing problems associated with Malawi's protected areas. This possibility will be explored through a workshop currently scheduled March 10th to 13th 1997.

#### Development of recommendations arising from awareness-raising workshops for politicians

The NATURE policy advisor participated in an intensive two-day review of outputs from three awareness-raising workshops held for politicians during the third quarter of 1996 (Zomba, 13<sup>th</sup>-14<sup>th</sup> November). The outputs were refined into a series of uncompromising but practical recommendations targeting the post-democracy management vacuum in NRM: these will be presented to the National Council for the Environment for endorsement and thereafter directed to Government at the highest level.

#### Quarterly activity results and indicators

The NATURE programme does not appear in the GoM 3 year workplan.

- *Legal framework in place, policies revised, and public sector agencies able to interpret programs and activities (reports from sectoral policy and legislation review)* As noted above, many activities are on hold until release of local currency funds to support NATURE activities.