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ACTION MEMORANDUM FOR THE ADMINISTRATOR

THRU: ES

FROM: AA/PPC, Philip Birnbaum

*AShalon for*

690-0054  
Verif. AAC

SUBJ: Bunda College of Agriculture (Malawi)

Problem: The Office of Southern Africa Regional Activities Coordination (OSARAC) and the Regional Economic Development Services Office for East Africa (REDSO/EA) have submitted a Project Paper for the proposed Bunda College of Agriculture project. Because the estimated life of the project is six years and the cost is \$4 million, your approval is requested. In addition, your approval of a procurement waiver as described in Section B below and the attached Project Paper is also requested.

Discussion:

A. General Background: The Government of Malawi (GOM) places top priority on agricultural development in its "Statement of Development Policies 1971-1980", and identifies the expansion of Bunda College as an essential element in improving agricultural productivity. The President of Malawi, the University of Malawi, and the External Aid Section of the Ministry of Finance have all confirmed the development of Bunda College of Agriculture as their highest priority for U.S. assistance. Malawi, a relatively small land-locked country listed by the U.N. among the 25 least developed countries in the world, depends upon agriculture as the most productive sector of the economy and the principal foreign exchange earner. More than 90 percent of Malawi's 4.8 million people live in rural areas and practice subsistence farming.

Bunda College received assistance in the 1960's from AID and the Ministry of Overseas Development (ODM) of the British Government. Most of the buildings, including classrooms, student hostels and staff housing were provided by AID in the beginning stages of Bunda College development and additional buildings have been added by ODM. During the first five years, Bunda College was assisted by a team of up to six faculty members from the University of Massachusetts, later followed by OPEX assistance (2 technicians) sponsored by AID.

The AID Development Assistance Program (DAP) framework for Malawi identified the lack of trained manpower as the principal constraint to achievement of Malawi's general rural development goal. Various manpower surveys have revealed that the demand for agricultural diplomats and graduates is greater than Bunda's current output. An AID-funded team prepared a report in September 1974 which concluded that Bunda College should be expanded in order to provide a larger student output.

The GOM's basic rural development strategy concentrates on raising the productivity of small farmers. In order to accomplish this strategy, the GOM must satisfy the demand for agricultural graduates and diplomates from its public and private sectors by increasing the total enrollment, from its only source, Bunda College. AID has focused on Bunda College because its graduates are apt to retain a keen sense of relevancy to the rural scene as a result of their training experience. Each young man or woman attending Bunda is required to take extremely practical courses and spends twenty-five percent of the total study time in field or laboratory work. The past record of Bunda indicates its graduates are working in the agricultural sector - in private, parastatal, government or research activities. Other important reasons to consider Bunda College are the firm GOM commitment to the institution and the outstanding Malawian leadership of the school.

B. Description of Proposed Project: Over the proposed 6 year project life, AID in cooperation with the GOM shall improve Bunda's ability to train increasing numbers of professionals who are responsive to agricultural development needs. These improvements are based on manpower gap findings that Bunda's total enrollment, diplomates and graduates, should be increased from the 1974-1975 level of 209 to 365 by 1979-1980. The proposed project consists of two major components. A technical assistance portion will provide 6 technicians for 27 man-years in the Departments of Crop Production and Rural Development plus participant training, local cost funding for student involvement in rural development studies and conferences, commodities for laboratories and classrooms, and technical and academic consultancies in support of the project. The capital component will assist the GOM in constructing soils and animal science laboratories, student and staff housing, agricultural engineering and maintenance shops; and in renovating an auditorium, the student union and related facilities.

Given the substantial development at the University and prior institutional support (e.g. University of Massachusetts), Bunda College administrators now feel able to approach technical assistance with operational staff inputs rather than with institutional support. OSARAC will be responsible for project management and REDSO/EA will provide the necessary AID approval/monitoring function for the capital component of the project in consultation with OSARAC. Required reports and evaluations of the capital component will be prepared by REDSO/EA and concurred in by OSARAC. Project evaluation will be performed annually by OSARAC and REDSO/EA staff with AID/W assistance if required. The FY 1978 evaluation will be an external evaluation. This project appears on page 188 of the FY 1976 Africa region CP.

The Project Paper (page 34) submits a justification for a commitment of six years to provide a sufficient degree of overlap between the technical assistance and participant training components of the project. Disbursements for the capital component of this project will be made within a 36 month period thus avoiding violation of Section 110(B). The paper also requests, see Annex H, a waiver of up to

ACTION MEMORANDUM

\$1.1 million to permit procurement of construction materials from Code 935 countries. Items manufactured in the U.S. are not normally compatible with the standards and specifications for construction and other materials used and locally available in Malawi. This is particularly the case for all electrical equipment and plumbing facilities. It has been the experience in the past with procurement from the U.S. for projects in Malawi, that such procurement leads to inordinate construction delays and resulting price escalation.

C. Recommendation: It is recommended that you sign the Action Memorandum thus approving the project.

- 1) Approve project and its six year term as presently designed.

Approved [Signature]  
Disapproved \_\_\_\_\_  
Date 2/10/76

- 2) Authorize source/origin waiver from AID Geographic Code 000 (U.S. only) to Geographic Code 935 (primarily South Africa and the U.K.).

Approved [Signature]  
Disapproved \_\_\_\_\_  
Date 2/10/76

Attachment: Project Paper

Drafted by: AFR/ESA:EGal [Signature]:nmb (2/18/76)

Clearances:

AA/AFR:SSScott [Signature] Date \_\_\_\_\_  
GC:CGladson [Signature] Date 2/24/76  
GC/AFR:TBork (draft) Date 2/13/76  
PPC/DPR:AHandly (draft) Date 2/17/76  
SER/COM:WSchmeisser (draft) Date 2/12/76  
AFR/ESA:JKnoll [Signature] Date 2/19/76  
AFR/DS:PLYman [Signature] Date 2/23/76  
AFR/DP:RHuesmann [Signature] Date 2/20/76

[Signature]

PROJECT PAPER  
BUNDA COLLEGE OF AGRICULTURE  
(MALAWI)  
690 - 0054



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	- University of Malawi Assessment Committee's Report (UMAR) Analysis of MS-71
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MALAWI: Bunda College of Agriculture

Part I - Summary and Recommendations

A. Background

Malawi's economy for the foreseeable future will be primarily agricultural since it is the most productive sector of the economy and the principal foreign exchange earner. The Government of Malawi (GOM) is aware that improving agricultural education institutions is a key factor in developing modern and efficient farming techniques relevant to the Malawi rural scene. President Banda, the External Aid Section of the Ministry of Finance, and the University of Malawi (U of M) have all confirmed that the development of Bunda College of Agriculture (Bunda) is their highest priority for U.S. assistance. The Malawi Development Assistance Program Substitute (DAPS) also concludes that the Agency for International Development (AID) assistance to Malawi should address significant constraints to Agriculture and Rural Development. Trained manpower is the most binding constraint to achievement of Malawi's general rural development goal.

B. GOM/AID Project Description

This is a cooperative project to develop a modern agricultural training institution (Bunda College of Agriculture). The project consists of two major components: First, a six-year technical assistance (TA) portion will finance up to 27 man-years of OPEX personnel who will teach at Bunda. The project also includes 40 man-years of participant training, local cost funding for establishment of Rural Development Special Studies and Seminars, foreign exchange funding of laboratory and teaching equipment, and funding for consultancies as required over five years. Second, the project will provide capital assistance to the GOM to build additional student and staff housing and laboratories and lecture halls and to rehabilitate and expand existing facilities.

C. Summary Findings

The GOM's strategy is to raise the productivity of small farmers. By expanding degree and diploma agricultural training, a greater percentage of smallholder farmers will be provided access to knowledge and skills, disseminated by the Bunda trained agricultural personnel. The training experience at Bunda will sensitize graduates to Malawi's rural socio-cultural environment. In doing so, Bunda's graduates and diplomates will be able to assist smallholder farmers in adopting modern agricultural methods.

D. Project Issues

Project life exceeds five years. See page 34 for explanation and justification.

E. Recommendations

Authorization of a grant of \$4,000,000 for the project, subject to the following waivers:

1. A source/origin waiver from AID Geographic Code 000 (U.S. only) to Geographic Code 935 (primarily South Africa and the U.K.) for the procurement of up to \$1.1 million of construction materials and other related supplies. (See Annex II for justification.)
2. Concurrence in the use of standard Government of Malawi contracting rules, procedures and forms, including, but not limited to, Malawi requirements applicable to contract award, and bid and performance security.

Part II - Project Background and Detailed Description

A. Background

1. The Country

Malawi is a landlocked independent nation in the South Central part of Africa, bordered by Tanzania to the North, Zambia to the West, and Mozambique on the West, South and East. There are several special political and economic factors affecting Malawi's economic activity. Malawi is one of the 25 poorest nations in the world; this severely limits its ability to achieve self sustaining growth. Malawi, due to its proximity to Rhodesia, its relative poverty and its large labor surplus has an exception to the UN imposed trade and other sanctions on Rhodesia and therefore conducts trade with Rhodesia and allows its laborers to work in Rhodesia. Malawi also trades with South Africa and allows its labor force to work in South Africa. In fact 60% of Malawi's regular paid work force work outside of the country, primarily in South Africa and Rhodesia. This is a most important foreign exchange earner for Malawi. Malawi's relatively high population density (133 persons per

sq. mi.) is four times the African average and tends to inhibit productive employment opportunities. The country's main resource is agricultural land, there are no known large mineral deposits nor is there the near term opportunities for industrial expansion other than some limited growth in the agricultural processing industry.

More than ninety percent of Malawi's 4.8 million people practice subsistence farming. Out of an economically active population of 1.5 million, less than 150,000 are in paid employment in Malawi while 250,000 work in neighboring countries.

Lake Malawi covers twenty-three percent of Malawi's 46,000 sq. miles. Malawi's land area is 35,400 sq. miles or 23.2 million acres of which some 11.5 million acres is arable. Much of this potentially arable land is left fallow each year, since traditional agricultural practices are still followed. Malawi could encourage a considerable increase in its overall agricultural production by reducing the percentage of fallow land while improving farming practices to increase yields and maintain soil fertility.

The GOM's Statement of Development Policies 1971-1980 (DEVPOL) has placed the highest priority on agricultural development. The DEVPOL calls for improving agricultural productivity through improved extension services and better marketing operations. President Banda has repeatedly stressed the importance of improving agricultural productivity in order to improve the basic nutrition and economic welfare of his people. The GOM and AID feel the output of Banda project is an important element in attaining these goals.

Table I below, presents data on population now served by the GOM and donor-supported major projects, the Settlement Schemes and the GOM Department of Extension. Table II links the number of people so served to technical agricultural staff utilization. This shows that in 1972 about 37 percent of the trained agricultural field level workers work within settlement schemes and major projects serving 9 percent of Malawi's rural population. It also notes that the International Bank for Reconstruction and Development (IBRD) funded Lilongwe Land Development Project (LLDP) is using 23 percent of all available trained staff to serve 3 percent of the country's population.

Additional trained manpower is needed to improve services reaching the 91% of the rural population not involved in major projects or settlement schemes. The GOM needs to carefully evaluate and rationalize its levels of field contact throughout the country.

TABLE I

Populations Served by Major Projects,  
Settlement Schemes and the Department of Extension (1972)  
(000's)

<u>Region</u>	<u>Est. Total Rural Population, 1971</u>	<u>No. People Served by Projects</u>	<u>No. People Served by Settlement Schemes</u>	<u>No. People Served by Dept. of Ext.</u>
NR <sup>1/</sup>	492	N11	3	489
CR	1,513	277	1	1,235
SR	<u>2,020</u>	<u>113</u>	<u>4</u>	<u>1,903</u>
All Malawi	4,025	390	8	3,627

<sup>1/</sup> Northern Region (NR); Central Region (CR); Southern Region (SR)

TABLE II

Field Contact Staff in Relation to Population Served (1972)

	<u>Population Served (000)</u>	<u>2/ Trained Staff</u>	<u>People per Trained Staff Member 4/</u>	<u>Semi- Trained Staff 3/</u>	<u>Total Field Contact Staff</u>	<u>People per Field Contact Staff Member 5/</u>
<u>Major Projects</u>						
L.L.D.P.	130	147	884	69	216	602
SALIMA	154	38	4,053	91	129	1,194
SHIRE	<u>106</u>	<u>34</u>	3,118	<u>140</u>	<u>174</u>	609
TOTAL	390	219	1,781*	300	519	751*
<u>SETTLEMENT SCHEMES</u>						
NR	3	11	273	38	49	61
CR	1	6	167	26	32	31
SR	<u>4</u>	<u>7</u>	571	<u>36</u>	<u>43</u>	65
TOTAL	8	24	333*	100	124	65*
<u>EXTENSION &amp; TRAINING DEPT.</u>						
NR	489	98	4,990	97	195	2,508
CR	1,235	149	8,289	232	381	3,241
SR	<u>1,903</u>	<u>143</u>	13,308	<u>372</u>	<u>515</u>	3,695
TOTAL	3,627	390	9,300*	701	1,091	3,324*
<u>COUNTRY-WIDE TOTAL</u>	4,025	633	6,359	1,101	1,734	2,321

<sup>2/</sup> Trained staff includes all staff who have received at least one year post school training for their job - i.e., Field Assistants, Farm Home Instruc-  
\* Average total. Total number population served divided by total number trained staff.

As noted in the tables above, trained extension staff are concentrated in the major projects and settlement schemes. While this is not necessarily an imbalance of resources (since the extension staff working on major projects and resettlement schemes is well utilized), it does point out the paucity of extension staff personnel reaching the 91% of the rural population not involved in major projects or resettlement schemes. One could estimate that the country could easily absorb thousands of trained extension workers, if the GOM budget could handle the recurrent expenditures needed to support an increased extension staff.

## 2. Bunda College of Agriculture

Bunda was established in 1962. It was originally planned to replace Colby School of Agriculture, a two year certificate school. Bunda's original purpose was to improve the skills of the extension workers who had not been well trained during the pre-independence period. It was also intended to upgrade the certificate course. In 1963 the GOM realized that extension work involved in agricultural development required staff trained at higher levels. Therefore a three-year diploma course was introduced at Bunda. Colby was not closed and still offers the certificate course. In 1965 the GOM decided that Bunda should be incorporated into the U of M's system and should offer a degree in Agriculture as well as the diploma.

There are two separate streams of students now being taught at Bunda. Students who are studying for a three year diploma spend all of their time at Bunda. Those who are selected to study for a degree spend the first year taking basic courses such as English, Mathematics and Sciences at the U of M's Chancellor College at Zomba. They then transfer to Bunda for three years to complete the requirements for a Bachelors Degree in Agriculture.

Beginning in September 1975, Bunda introduced a new three year course of study leading to a diploma. Selected students from this course will continue for two more years and receive a degree. Chancellor College will no longer provide the first year basic study courses.

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tresses and Conservation/Planning Assistants working as farm planners for small farms.

- 3/ Semi-trained staff includes Development Assistants and Demonstrators whose courses are often highly specialized to a particular crop and last between three weeks and three months. Almost all are on temporary non-established terms.
- 4/ Column one divided by column 3.
- 5/ Column one divided by column 5.

Colby College certificate holders will be permitted to enter year 2 of the combined curriculum provided that they pass a qualifying examination. Upon completion of years 2 and 3 they will receive a diploma. Qualified diploma holders who are currently employed may enter into year 4 of the Bunda program and earn a degree in two years.

In 1974-75 Bunda had an enrollment of 209 students, 19 of them women. Of this number, 160 were enrolled in diploma courses and 49 in the degree program. The U of M has awarded the Bachelor of Science Degree in Agriculture to 37 students and Bunda has issued diplomas to 247 students and upgraded 78 Ministry of Agriculture (MOA) certificate holders to diploma level standard.

Various manpower surveys have revealed that the annual demand for agricultural diplomates and graduates is greater than Bunda's existing output. An AID-funded team prepared a Report <sup>6/</sup> which concluded that Bunda should be expanded in order to provide for a larger student output. The project proposed herein has been developed based upon these studies and continued discussions with the GOM.

## B. Strategy

### 1. The Focus on Bunda:

AID's decision to support Bunda has been influenced by the results of several Government of Malawi Manpower studies and by the DAP substitute analysis recently performed. All of these reports indicate that Malawi continues, and will continue for a substantial period of time, to face serious constraints to development due to the lack of qualified manpower at all levels and in all fields. The Bunda project, herein discussed, focuses on technical skills in the agricultural sector, the principal economic sector in Malawi, the sector where the great majority of Malawians work and live. This project focuses on manpower training at the diplomate (3 year) and undergraduate (5 year) level to provide generalized technical skills in agriculture.

Another factor taken into consideration in this decision is the unique nature of the training experience at Bunda. In some part due to the activities during the preliminary designs and studies from which this project has been developed, the University of Malawi has approved a system whereby a 3/5-year curriculum is established for training in agriculture. This means that each young man or woman coming to Bunda for training is required to take a three year course leading to a diploma in Agriculture. This course contains extremely practical and relevant components and also includes up to 25% of the total study time in field or laboratory work. No student can go on to an undergraduate degree at

6/ Requirements Analysis for Developing the University of Malawi Bunda College of Agriculture, 1975-80.

Bunda without first finishing the diplomate course, and only those who appear to be the leaders among the diplomate group are selected to go forward to a full degree (two additional years). It is believed that a Bunda graduate is apt to retain a keen sense of relevancy to the rural scene as a result of the field experience. Bunda also provides positions for upgrading present qualified certificate and diploma holders to degree level, another desirable feature of such an institution.

Another reason for selecting Bunda for AID consideration is the proven capability of Bunda to train people entering the private sector as well as the public sector. About 30% of Bunda graduates are currently found in a wide range of private and parastatal organizations serving the rural people of Malawi. They are not exclusively found in the extension services of the Ministry of Agriculture nor other ordinary public sector jobs where most agricultural graduates in most developing countries are employed. This ability of the system to meet the needs of the private sector, while not necessarily unique in Africa, is an important factor in AID's decision to support Bunda.

Another important reason for considering Bunda is the recognition of the firm GOM commitment to the Bunda project itself and to Bunda College in general. There have been repeated evidences by the Government of Malawi including statements by President Banda as well as the Ministries of Education, Agriculture, and Finance that Bunda is a priority project. A recent report of needs for training in Malawi, made by the University of Malawi, recommends strengthened practical training in agriculture as well as in the fields of technology and teacher training even if at the expense of the student enrollment in general degree courses.

Finally, Bunda has been well supported financially by the Government of Malawi. This paper, for example, notes that a high portion of the total project costs are being borne by the GOM.

## 2. The Rationale for Selection of Specific Areas for Intensive Support

The AID-financed Requirements Analysis identified that Bunda needs urgent support in the departments of agronomy, rural development and livestock production. The report also noted that previous support for agricultural engineering, financed through an AID contract will result in an agricultural engineering department capable of operating on its own by the time the current tour of present technicians is ended and coincident with the return from training of four Malawian ag engineering professors. During the development of this project it was decided that AID's basic TA inputs should be further consolidated for the departments of agronomy and rural development. This decision was made based upon the series of reports and studies made both by IRRD and by AID, which identify that the major income-producing segment of the rural sector is crop production. The design also notes that the accepta-

bility to Malawian smallholders of conversion to a modified commercial agricultural system will need careful attention to overcome social and cultural constraints. For this reason, A.I.D.'s support for the Rural Development Department at Bunda is relatively broad. Included is assistance to rural sociology, to farm management and extension, and to women's programs and home economics training

Support to production related agronomy and to rural development are areas in which A.I.D.'s project support is expected to have the most significant positive effects.

### 3. Selection of Specific A.I.D. Inputs

A.I.D. inputs to this project consist of technical assistance, participant training, a limited amount of support funds (particularly in support for rural development conferences and rural development related student and staff research), commodity support to provide equipment for the improvements and expansions made to the laboratory and classroom facilities and the provision of a trust fund for project support generated by base salaries paid by the University for A.I.D. funded staff. This match of personnel, money, training and support has been considered necessary to assure the effective use of the AID funded staff and to assure that the implementation of Bunda's development plans go forward in a regularized fashion. The capital component of the project, i.e., the buildings, the laboratories, the housing facilities, the student dormitories and others, have been selected because of the recommendations of the previously mentioned Requirements Analysis.

### 4. The Role of the A.I.D.-Financed Bunda Academic Staff Members

Academic staff members provided to Bunda by A.I.D. are expected to serve Bunda and to serve the A.I.D. program in a number of ways. The A.I.D. financed staff is expected to provide on the job training to Bunda staff members. They also will have, through support from the University itself, through contracts with other institutions and by a modest amount of A.I.D. trust fund support, an opportunity to train Bunda staff in applied research activities. American academic staff will, of course, provide the training noted above to the local teaching staff. Of equal importance is the training which A.I.D. funded staff can provide to laboratory assistants and other intermediate level staff. American provided staff are expected to make recommendations on curricula, keeping in mind the necessity to retain a strong thrust toward relevancy to the Malawi environment and linked to the unique needs of the 3/5 year diplomat/degree system now being introduced. Such recommendations will be made to the University staff who are in direct charge of the department or unit of the University system within which the A.I.D. funded staff are posted. These suggestions will be reviewed and incorporated in Bunda's program if considered practical and useful. Several of the A.I.D. funded staff

will be qualified to serve as department chairmen within the Bunda system. Those who serve in these roles will be able to participate in the periodic meetings of senior staff held by Bunda's principal. They, therefore, will participate directly in Bunda's decision making process. The A.I.D. funded staff will also, due to the nature of their appointments as direct members of the Bunda faculty, have free and open access to all of the proceedings and activities of academic councils and of the University Senate. Their recommendations and proposals can be made to and if approved, incorporated in the policy decisions made by University Senate.

#### 5. Training of Bunda Staff

As noted above, Bunda staff will be trained through on the job experiences with their A.I.D. funded U.S. professors or department chairmen. Bunda staff will also receive training in research activities through cooperation with the A.I.D. funded staff.

Bunda staff will receive academic training, probably in the United States, largely at the MS level. This project provides that approximately 20 staff members will receive up to 2 years each of academic training. It is intended that this training will utilize Bunda college graduates (general agriculture degrees). They will be sent to the U.S. or to a suitable institution in Africa for training in specific agricultural disciplines. For example, training will be provided in horticulture, agronomy, rural development, farm management and in similar specialized fields so that young men and women can return to Bunda with a MS degree. The project proposes some overlap with U.S. staff, when possible, upon return so their education experience can jell with on the job training.

#### 6. End of Project Status

The project is expected to result in completed dorms, staff housing and related buildings, providing Bunda with the physical capacity for an enrollment of 365 students by 1980. More importantly, it is expected to provide Bunda with the capacity to adequately train up to 365 people at any one time in the various subjects needed to produce effective agricultural extension workers at the diplomate and degree level. Many of Bunda's graduates will also be absorbed by private sector agricultural activities and by the GOM Ministries of Agriculture and Education.

If this project is successful, we expect Bunda will become a leading institution in the Rural Development field in this area of Africa.

Although the main purpose of the project is not to build Bunda's agricultural research capabilities, the project will in fact provide indirect support to Bunda for its fledgling agricultural research activities, especially low level or development type research which can be quickly disseminated from Bunda to farmers through Bunda trained extension workers.

At the close of the six year project life, qualified Malawians will fill most (about 90%) of the senior teaching positions in the departments of Crop Production and Rural Development. This institution building objective of the project is most important to its long range success and is a key aspect to assure that Malawi will have the domestic capacity to begin to meet the trained manpower needs of the rural sector.

C. Detailed Description of A.I.D. Support

Over the proposed 6 year project life, A.I.D., in cooperation with the GOM, proposes to provide capital and technical grant assistance designed to improve Bunda's ability to train increasing numbers of professionals who are responsive to Malawi's agricultural development needs. The elements of the project are outlined below:

Technical Assistance (TA)                      \$1,215,000

This project provides for the funding of six professors (27 man years) to teach in the Bunda's department of Crop Production and Rural Development. A.I.D.'s \$1,215,000 grant contribution will finance their salaries and authorized support costs. The U of M is expected to pay their equivalent base salaries (about \$3,000 per year, less agreed to deductions) into an OSARAC/U of M trust fund. This will be used for project-related costs.

Participant Training                              \$400,000

A.I.D. will provide \$400,000 in grant funds for participant training, principally but not exclusively, for training in areas related to crop production and rural development. Participants will be trained to either the BS or the MS level. Since Bunda does not plan to offer specialized undergraduate degrees, it will be necessary to provide participant training in such fields such as Agricultural Economics, Home Economics, Rural Sociology, Pasture Management, Horticulture, Dairy Production at the BS level. Such training will be provided for selected diplomates. MS candidates, preferably Bunda graduates, will be trained to return to teaching positions at Bunda. The training will be primarily in U.S. colleges.

Commodities    \$273,000

A.I.D. is providing \$273,000 for commodities to equip the laboratories and classrooms.

Consultancies    \$37,000

A.I.D. is providing \$37,000 for technical or academic consultancies in support of the project. These funds will also provide funds for U.S. interviews of proposed teaching candidates by the U of M personnel, if essential, and concurred in by OSARAC.

Other Costs \$ 75,000

AID will provide \$75,000 for student involvement in rural development studies and for conferences. The studies will concentrate on collection of baseline data, micro-economic analysis of smallholder production, the role of women in the rural development process and the impact of development on rural smallholders. These funds also will be used to finance up to three national or international rural development conferences, the objectives of which will have first been agreed to by AID.

Capital Assistance (Grant) \$2,000,000

This grant provides \$2,000,000 of capital financing for a portion of the following construction: auditorium (renovation); staff housing\* (21 senior staff, 34 junior staff, 30 support staff); student union (renovation) dormitory construction; maintenance shop; agricultural engineering shop.

TOTAL AID GRANT FUNDS \$4,000,000

D. Application for Assistance

In December 1973, the GOM requested AID assistance with the expansion of Bunda. This project proposal is based on that request.

The GOM requested assistance for the development of the Crop Production, Rural Development and Livestock Production Departments at Bunda. Bunda gave equal priority to developing these departments. AID determined that its resources should be focussed on Crop Production and Rural Development, the areas considered more directly relevant to increasing smallholder productivity in the Malawian context.

E. Prior AID Experience

AID's assistance to Bunda began in 1962 when \$1.5 million was provided for construction of school buildings (completed in 1966). Between 1966 and 1970, AID provided 14 man-years of technical assistance (professors) and participant training for 13 Malawians under a contract with the University of Massachusetts. AID is now completing the financing

\* Note: Proposed staff housing construction is based on standard GOM designs used at Bunda College and University of Malawi and is equivalent to that financed under previous AID projects. See Annex B for details.

of 8 man-years of TA (OPEX professors) and participant training for Malawians. Participants from the University of Massachusetts contract have returned to Malawi and are working for the GOM at Bunda and in the Ministry of Agriculture (MOA) and the Ministry of Education (MOE). Three of the participants funded under OPEX activity have completed training. All of them are teaching at Bunda.

Detailed descriptions of AID's involvement with Bunda may be found in the numerous reports, written assessments and project implementation documents which have been prepared throughout the entire period of U.S. assistance. These are available from AFR/ESA. In particular, reference is made to the report The Malawi Project - A Cooperative Program of Technical Assistance in Agriculture Development in Central Africa, prepared by the University of Massachusetts.

#### F. Other Donor Involvement

Since independence, donor nations and agencies have considered Malawi a viable recipient for assistance. In 1974/75, over 80 percent of the GOM's development budget was funded by external loans and grants. Both the educational and agricultural sectors have benefitted substantially from such assistance. Bunda College of Agriculture, which is a link between education and agriculture, has attracted a wide variety of donor assistance. Grants by other donors to Bunda from 1967 through 1975 have amounted to some \$484,000 not including a substantial but unrecorded amount from the UK for topping-off salaries of British expatriate staff at Bunda. The contributors were the UK, \$418,000, and various private trusts \$66,000.

While no other new major public or private donor inputs to Bunda are yet firm, the University, as a whole, anticipates donor assistance in at least two important areas. The Carnegie Foundation (US) is presently considering funding the capital costs of a newly established Institute of Education which will be jointly run by the U of M and the GOM Ministry of Education.

Less certain is the possible role of the UNDP and/or the Republic of West Germany in the extension of the Polytechnic component of the University of Malawi. Neither the establishment of the Institute of Education nor the expansion of the Polytechnic is expected to have any direct positive or negative impact upon the proposed expansion and improvement of Bunda. Thus, this other donor assistance is not critical in successful achievement of this project's purposes.

It is expected that Bunda will continue to receive moderate amounts of technical assistance from the UK, through the provision of staff by the Inter-University Council in London on a salary supplementation basis. At present, this assistance amounts to approximately ten staff and five visiting professors per year, generally in basic sciences. Bunda has and expects to continue a relationship with the

Faculty of Agriculture of the University College of Wales at Aberystwyth, Wales. This enables Bunda to acquire needed short-term academic staff from Aberystwyth. Assistance from Aberystwyth and the Inter-University Council has been helpful to the growth and quality improvement at Bunda. Assistance from both sources is expected to continue but would not critically affect AID's project if it were to be stopped.

### PART III. Project Analysis

#### A. GOM Development Policy

The GOM development policy is spelled out in the Statement of Development Policies 1971-1980 (DEVPOL). Because of the long time frame, it is essentially a statement of policies and a framework of indicative guidelines incorporating projections of economic indicators, rather than a firm development program. For the most part, DEVPOL retains the priorities of the initial post-independence years. The GOM's basic strategy continues to focus on raising the productivity of small farmers, through making more efficient use of productive land and labor while optimizing the use of scarce capital and technical skills.

In part, based on export projections for Malawi's major agriculture products (tobacco, tea, ground nuts, cotton) and on prospects for their increased production by smallholders and on estates, DEVPOL projects an average GDP growth rate of 7.9 percent. Other factors assumed by DEVPOL to achieve this rate of growth are that by 1980 investment levels will double and savings will increase fourfold. The latter would permit domestic savings to cover half of total public and private investment by 1980, compared to less than one-fourth in 1970. DEVPOL expects a major increase in saving from the rural sector to reach these goals.

Allocation of public sector investment remains roughly as before, with 36 percent going for transport and power facilities and 19 percent for agriculture (the comparable percentages were 40 and 20, respectively, in 1961-1970). DEVPOL projects an export growth rate of 10 percent and an import growth rate of 6.8 percent per annum, resulting in a declining trade deficit more than offset by increased net payments for other current account items. The increasing current account deficit would be financed by capital inflows. (The major unknown in the plan is the price Malawi will receive for its ag-exports, low prices could sabotage the plans goals).

DEVPOL projects an average wage employment increase of about six percent annually, or roughly the rate that has prevailed since independence. This would result in a rise in wage employment in Malawi from 150,000 in 1970 to 280,000 in 1980. The increment of 130,000 would be about one-third of the expected 350,000 increase in the male labor

force over the 1971-1980 period. DEVPOL notes that a contributing factor to the rate of increase in wage employment is the GOM's national wage and salaries policy which prescribes that increases in wages and salaries should relate to productivity increases. The GOM has maintained very strict wage restraints for urban and rural wage earners. This policy, at best, will contain the wage differences between these two groups of wage earners. Moreover, by concentrating on smallholder agriculture the GOM intends to increase rural incomes relative to those in urban areas, and to reduce regional and local disparities in income. The DEVPOL foresees that the expansion of degree and diploma levels of agricultural training should enable more small holder farmers to have access to the knowledge and skills needed to facilitate rapid rural development.

**B. Evaluation of GOM's Requirements for Technically Trained Agricultural Manpower**

This proposal bases its analysis of professional manpower demands in the Rural Sector on a review of a series of manpower studies as follows:

1. Manpower Survey 1971 (MS-71), Office of President and Cabinet, Economic Planning Division, GOM.
2. Projection of the Demand for Diplomates and Graduates to 1985 by E.K. Clark (Clark) Principal Agricultural Officer, Extension and Training, MOA, 1973.
3. University of Malawi's Manpower Assessment Report (UMAR), Dr. J. Mills, Chairman of Department of Economics, Chancellor College, U of M.

A detailed analysis of these reports and the rationale for this proposal to adopt the following levels is found in Annex B, Technical Details, Section 1.

Outputs figures which follow are also discussed in Annex B and are consistent with the UMAR recommendations.

The numbers of personnel trained as a result of this proposal are expected to alleviate the constraints to rural development due to shortages of technical skills. These estimates are based on the data from the Clark report (revised version) as modified by recent information on public vs. private employment noted in the UMAR report. From these surveys this proposal ascertains the estimated increases in graduate and diplomate posts between 1973/74-1979-80 in both sectors.

In 1973 Clark found 141 graduate and 302 diplomate posts in the Ministry of Agriculture and one graduate and 12 diplomate posts in the Ministry of Education requiring technical agricultural training.

Moreover, the AID-funded study (footnote 6/) shows that 25 percent of the Bunda graduates are now in the private sector. It is expected that large numbers of graduates will enter this sector in the future. Clark estimates 30 percent of the 1975/80 graduates will be employed in the private sector. Increases in the number of posts have been derived by adding the projected growth in posts, losses of Malawians during the period, decreases in expatriates and the increased number of graduates and diplomates going into the private sector. Table III below shows the expected demand for Graduates and Diplomates.

Table III

Projection of Demand for Graduates and Diplomates 1973/74-1979/80

	<u>Diplomate</u>	<u>Graduate</u>
Growth in posts available	144	77
Malawians leaving posts	96	25
Vacancies or Expatriate Reduction	38	69
Private Sector Intake @30%	<u>85</u>	<u>52</u>
Total Demand	363	223

Table IV below presents the demand for graduates and diplomates on a yearly basis. The 1973/74 figure presents some amount of pent up demand, the following years represent best estimates of yearly demand. Obviously real experience will be somewhat different.

Table IV  
Yearly

Demand for Graduates and Diplomates 1973/74-1979/80

<u>Year</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>	<u>Total 73-80</u>
<u>Course</u>								
Diplomate	82	51	47	47	47	47	42	363
Graduate	26	26	21	38	34	48	30	223

The AID funded study presented the proposed student enrollment projections 1973-84. Table V below presents Bunda's output for the period 1973/74-1979-80, taking into account a 15 percent dropout factor

(instead of the AID 5% dropout figure) and reflecting project start-up in 1975/76. <sup>7/</sup>

Table V

Proposed Output from Bunda

<u>Year</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>	<u>Cumulative 1973 1980</u>
<u>Course</u>								
Diplomate	42	55	53	44	40	60	60	354
Graduate	9	15	20	23	23	20	30	140

Table VI

Comparison of Demand and Output

<u>Course</u>	<u>Diploma</u>		<u>Graduate</u>	
	<u>Demand</u>	<u>Output</u>	<u>Demand</u>	<u>Output</u>
1973/74	82	42	26	9
1974/75	133	97	52	24
1975/76	180	150	73	44
1976/77	227	174	111	67
1977/78	274	234	145	90
1978/79	321	294	193	110
1979/80	363	354	223	140

Table VI above indicates that diplomate needs will be nearly met but there will be a gap in supply of graduates. Both this proposal and the GOM analysis have been conservative on the question of rapid build-up of degree level training. This factor will be carefully evaluated during project implementation and recommendations made if appropriate.

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<sup>7/</sup> There are differences of opinion about dropout rates. They tend to be very low in Malawi because of the lack of opportunity elsewhere for the students; thus a 15% rate is conservative because it appears to overstate the actual dropout rate.

C. Availability of Qualified Students for Bunda

Although the GOM MS-71 study concluded there will be an insufficient supply of entrants for graduate and diploma training to meet all of Malawi's needs, this will not affect Bunda. This determination is based on two factors: 1) the continuing priority of technical training in Agriculture, 2) the quality of secondary school graduates taking the Malawi Certificate of Education (MCE) examinations is improving, resulting in a larger available pool of manpower with scores making them eligible for Bunda.

The UMAR report presents data which shows that only 9 percent of the students seeking to enter Bunda in 1967/68 had MCE scores ordinarily considered good enough for U of M entrance. Thus in the past Bunda and other schools of the U of M system were forced to accept less than ideal entrants. Now, however, 75 % of those seeking Bunda admission meet the U of M standards.

D. Bunda Staff

Currently, Bunda does not have the staff to accomplish the GOM development goals. There are 31 established senior positions; 5 administrative and 26 teaching. The change in curriculum and structure noted earlier for graduate and diplomate training will impose additional burdens on this staff. During this transition it will be necessary to teach two streams of students since the curriculums for diplomates and graduates are dissimilar. Following a period of three years, a single five-year curriculum will be used. This plan will increase the number of senior faculty teaching positions from 26 to 36, with no change in the five member administrative staff. (See Table VII). This will provide a teacher/student ratio of 1:10, when the proposed enrollment of 365 is reached, as opposed to the present ratio of 1:8.

Table VII

Staff Projections for Bunda  
1974/75 - 1979/80

<u>Department</u>	<u>1974/75</u>		<u>1979/80</u>	
	<u>Total No. of Posts</u>	<u>No. of Malawians in Post</u>	<u>Total No. of Posts</u>	<u>No. of Malawians in Post</u>
Administration	5	4	5	5
Agricultural Engineering	6	1	6	6
Crop Production	8	1	12	10
Livestock Production	5	1	8	6
Rural Development	7	3	10	10
TOTAL	31	10	41	37
% Malawian	-	32.3	-	90.2

To accommodate the increased enrollment projected, the stress caused by the change in the curriculum and to provide lead time for participants to be trained, AID will fund 6 senior staff members (27 man years) for the Crop Production and Rural Development departments. Below is a summary of the AID technical assistance to be provided. Job descriptions for these positions are presented in Annex B (Manpower).

Crop Production Department

- |  |         |
|--|---------|
| 1. Lecturer in Horticulture                    | 5 years |
| 2. Lecturer in Agronomy                        | 5 years |
| 3. Lecturer in Pasture and<br>Range Management | 4 years |

Rural Development

- |  |         |
|--|---------|
| 4. Lecturer in Agricultural<br>Economics | 5 years |
| 5. Lecturer in Agricultural<br>Extension | 4 years |
| 6. Lecturer in Home Economics            | 4 years |

E. Socio-Cultural Feasibility

General - Bunda offers an indispensable service to rural development. It provides an essential linkage between practical, relevant technology, appropriately paced, to bring change to the rural people.

Graduates of Bunda serve Malawi's rural development process in a number of institutions. These include the extension service, the agricultural research stations, area development projects, secondary schools the Agricultural Development and Marketing Corporation (ADMARC), a parastatal agricultural marketing agency, and GOM settlement schemes. In addition, Bunda provides agricultural technology for the private sector. Bunda's graduates and diplomates come into direct contact with smallholder farmers as they work within these organizations. In their role they disseminate knowledge and skills acquired from the Bunda training experience. Thus, the relevance of Bunda to the development process and to the social/cultural environment is of particular importance.

Smallholder Attitudes. To appreciate the rural socio-cultural environment, within which Bunda's training must be relevant, consideration must be given to the smallholder farmer's work ethic and to traditional customs and habits which may need to be modified if development is to take place. A recent sample survey, undertaken by a U of M economist, Dr. C. Brown<sup>8/</sup>, ascertained the smallholder farmer's attitudes and opinions regarding planting decisions and resource allocations and

<sup>8/</sup> The Marketing of Primary Produce, Unpublished Research Paper, Dept. of Economics, UM, 1970

utilizations. In this survey, 400 smallholder farmers from the North, Central, and Southern Regions of Malawi indicated their planting decisions depended more on yield risk than on price or income factors. Another finding was that a smallholder farmer, when faced with a new technique or tool, is interested more in maximizing net revenue per man than revenue per acre.

The Brown survey indicated that an increase in income led to over two-thirds of the smallholders working harder with the remainder working as usual. It was noted that higher income tends to be absorbed within the extended family system. Not one of the 400 smallholders interviewed indicated that he worked less when income increased.

In answer to a question as to their use of increased income, 50 percent of the respondents replied that the increase was spent on consumer goods, 22 percent indicated it was used on fertilizer and 28 percent used it to grow more cash crops. Essentially none of the smallholders sampled who increased income reported planting less or claimed an increase in leisure time.

The results indicated that the Malawi smallholder is a rational economic man and willing to adopt change when risk is minimized. This conclusion, based on a very small sample, would seem to refute, for Malawi at least, the view that over much of rural tropical Africa there is the target income mentality. Among Malawi smallholders there is little tendency to regard a given income as enough and that additional income is not worth the extra effort.

Other issues. In addition to the point above, the Malawian land tenure system and traditional cultivation practice issues are relevant considerations for attention.

In Malawi there is no ownership of land in the traditional sector, only the right to cultivate land which is acquired through the tribal chief from the headman or relatives by birth or marriage, in the main via the matrilineal system. It is believed that about 35 percent of the arable land is allocated for use directly from a headman while about 50 percent is passed on from a relative by marriage. Less than 8 percent of the rural people are squatters. There is no market price for the customary or tribal land, which amounts to 85 percent of the total arable land. The remaining 15 percent is "plantation-type farming."

Some agriculturalists suggest that the smallholder farmer's reluctance to adopt new technology is affected by the land tenure system and the related risks involved in capital investment. Others

view the more equitable distribution of land, as found in the traditional system, as being more socially desirable. Since there are differences of opinion as to the effects of the tenure system on the pace and style of rural development this appears to offer an appropriate area for further research by Bunda staff, although this issue is not viewed as a critical constraint to success of this project.

Cultivation practice is another area in which the technology disseminated by Bunda will affect the smallholder. The typical smallholder is now engaged in fallow cultivation. There is a question whether acceptable techniques can be developed and utilized to permit annual cultivation. With fallow cultivation, the fallow period is 3-5 years with grass land areas set aside for pasture. As a result the land area under annual cropping is substantially below arable land totals. In annual cultivation systems, as now developing, fertilizer and improved seed is required and ox-drawn ploughs are usually found. To encourage and facilitate the change from fallow to annual cultivation practices, thus enabling Malawi to meet its increasing needs for food and to assist in increasing foreign exchange earning, Bunda may wish to develop less costly and more easily adopted annual cropping systems for the use of the smallholder.

Bunda and the Role of Women. Bunda's women graduates serve Malawi's rural development process in a number of institutions. Approximately half of the graduates have gone to agriculture research or secondary school training. The other half have gone to positions that emphasize home economics. Examples include instructing at Farm Training Centers, teaching in the Ministry of Community Development Training Centers and supervising field work in economics.

Bunda's own assessment of the effectiveness of women's training in relation to the kinds of roles women can realistically be expected to assume indicates women diplomates with a combined home economics/agriculture training have the greatest long range potential for employment. It is felt women can play roles in extension and rural development as well as by teaching home economics and/or agriculture at a secondary level. This is further endorsed by the AID-financed study which recommends dormitory space for women be increased to 112 accommodations.

The Ministry of Agriculture plans for more women extension workers in the future. There are several reasons for doing so. One is the recognition that village women traditionally play a key decision making role in agriculture. The second is that there are numerous areas of Malawi where there is an absence of males, since a large number of Malawian men work outside the country. In such cases, women make the decisions and allocate the resources directed to agriculture.

It also appears that the area projects are recognizing the need for women extension educators to communicate with women farmers, not only with the view of improving agricultural production, but also being cognizant of the role that women have in transmitting progressive ideas from the community to the family as a whole.

Bunda's National Role. Bunda clearly has a major impact upon the rural sector and particularly the smallholder and his family. While this role is perhaps the most important and immediate, it should be noted that Bunda also holds a position of influence on Malawi's modern sector. As a major segment of a university system, Bunda plays a key part in participating in the development of national educational theory and policy. Bunda's voice is heard in academic discussions which have effect on the planning of overall manpower development. Furthermore, Bunda's rural bias does not prevent it from having direct association with urban based interests. The research and experimentation conducted on Bunda's land and in its classrooms and the work of Bunda's diplomates and graduates in the field have relevance to the town and city dweller in the form of improving the availability of food and providing agricultural processing job opportunities. As an institution, Bunda influences Malawi as a whole and is a moving force in shaping social and economic development.

Bunda's Response to Social/Cultural Issues. The AID-funded Requirements Analysis made recommendations to the U of M in several areas as quoted below:

1. Expansion. It is recommended that the University of Malawi expand its enrollment at Bunda College of Agriculture to a total of 365 by 1979-80. The possible need for future expansion beyond 1980 should be reviewed regularly and at least at three-year intervals. It is further recommended that the University seek additional appropriations and external assistance to provide the staff, facilities, equipment, and recurring budget necessary to support future growth.
2. Administration. Administrative leadership at the University and Bunda College is good. The following suggestions are offered to add additional strength at Bunda.

- a. Greater use of the University Consultative Committee on Agricultural Education;
- b. The Principal of the College and Dean of the School of Agriculture be the same person;
- c. Establishment of the post of Vice-Principal to provide continuity in administration during frequent periods when the Principal is absent on official business; and
- d. Creation of a Department of Basic Studies.

3. Training Program Recommendations.

- a. Adopt a five-year curriculum with the first three years combined for Diploma and Degree students;
- b. Teach all subjects at Bunda rather than having first-year degree students attend Zomba;
- c. Offer some specialization for Home Economics students, but do not attempt further specialization until the 1980s;
- d. Delay offering graduate studies until the 1980s;
- e. Provide the opportunity to up-grade Certificate Holders and Diplomates who are able to pass qualifying examinations;
- f. Initiate short-course training during the long vacation period (July-September) to provide continuing education for agriculturalists already on the job;
- g. Strengthen practical training, especially in the areas of farming, livestock handling, financial and personnel management and extension;
- h. Bunda College farm should be maintained primarily for training, research and demonstration and the requirements of commercial production activities should be subordinate to these needs.

4. Research. Provide greater opportunity and related financial resources for the faculty to engage in practical development-oriented research.

5. Staff Development. The number of teaching Senior Staff positions should be increased from 26 to 36. These positions should also be supported by additional Technical/Demonstrators and Junior staff. Plans are presented to localize the staff by 1982.

6. Facilities.

a. It is recommended that a long -range Master Plan for expansion of Bunda College be prepared.

b. Specific recommendations are made in the report for providing additional student housing, staff housing, educational buildings and equipment related to student levels recommended in Section 1.

The third section above, Training program Recommendations, notes that Bunda should improve the quality of its training while simultaneously improving its relevance. The three-year/five-year diploma/degree system will assure that Bunda degree holders will have a practical bias to their academic training. Similarly, the recommendations to increase practical field training, to focus on extension to co-involve the farm research capabilities, with teaching, to provide summer courses and to upgrade existing field staff, are all steps which will assure that Bunda responds better to Malawi's needs.

Greater use of the University Consultative Committee, as recommended, will also assure that Bunda retains its strong ties to the GOM rural service institutions, extension services, research, parastatals, etc., and to rural people.

Bunda's sensitivity to social/cultural issues and to aspirations of rural people is being demonstrated by the concern given and actions taken in social/economic areas by Bunda's Department of Rural Development. Bunda has placed a high priority in the areas of rural sociology, agriculture extension (techniques and methods) and women's programs in this department. Bunda now structures practical field work in these subjects in the adjoining LLDP (IBRD financed agricultural development scheme) area. The IBRD is negotiating with Bunda to provide additional resources for student/staff research in applied sociological and technical base line studies and on-going evaluations for this project. The project will also provide limited funds for studies in other geographic areas as well as funds for investigating problems such as the role of women in agricultural production decisions. Bunda also plans, during the life of this project, to hold three [3] national/international conferences on Rural Development in which students will be active participants.

IV. Financial Analysis

A. Cost Estimates

Cost estimates for the proposed project components are shown below. (More detailed information is available in Annex B and from AFR/ESA.)

Table VIII - Cost Estimates  
(US\$ 000's)

	<u>Foreign Exchange</u>	<u>Local Cost</u>	<u>Total Cost</u>
1. Technical Assistance Costs			
Senior Staff*	\$1,215	--	\$1,215
Short-Term Consultancies	37	--	37
Participant Training**	400	--	400
Rural Development Conferences	--	\$75	75
Laboratory Equipment	273	--	273
	<u>1,925</u>	<u>75</u>	<u>2,000</u>
2. Recurrent Costs	--	819	819
3. Capital Costs			
Construction	886	1,463	2,349
A & E	--	312	312
GOM Inspection Services	--	90	90
Sub-Total	<u>886</u>	<u>1,865</u>	<u>2,751</u>
Contingency (15%)	133	280	413
	<u>1,019</u>	<u>2,145</u>	<u>3,164</u>
4. Total Cost	\$2,944	\$3,039	\$5,983

\* 27 man years at \$45,000/MY.

\*\* 40 man-years at \$10,000/MY.

Capital cost estimates, which were provided by the University's Consultant (Norman and Dawbarn) and reviewed by REDSO, were considered reasonably firm through October 1975. A contingency of 15% has been added to take care of an expected 8 to 10 percent price inflation between now and time of bidding as well as some increases in quantities.

B. Financial Plan

The financial plan for the proposed project is as follows:

Table IX - Financial Plan  
(\$US 000's)

	<u>Foreign Exchange</u>	<u>Local Cost</u>	<u>Total Cost</u>
1. <b>Technical Assistance Cost</b>			
AID	\$1,925	\$ 75	\$2,000
GOM	--	--	--
2. <b>Recurrent Cost</b>			
AID	--	--	--
GOM	--	819	819
3. <b>Capital Cost</b>			
AID	1,019	981	2,000
GOM	--	<u>1,164</u>	<u>1,164</u>
Sub-Total	<u>1 019</u>	<u>2,145</u>	<u>3,164</u>
4. <b>Total Cost</b>			
AID	2,944 (100%)	1,056 (35%)	4,000 (67%)
GOM	--	<u>1,983 (65%)</u>	<u>1,983 (33%)</u>
	<u>\$2,944 (100%)</u>	<u>\$3,039 (100%)</u>	<u>\$5,983 (100%)</u>

It is proposed that AID contribute 100 percent of the foreign exchange costs and 35 percent of the local costs. The GOM will contribute 65 percent of the local costs. This will result in AID financing 67 percent and the GOM 33 percent of the total project.

1. Technical Assistance. It is proposed that AID finance the total foreign exchange and local costs of this component. It is anticipated that except for financing provided for student research and rural development conferences (local and perhaps 941 costs), these funds will be utilized to procure goods and services from the United States.

2. Recurrent. The GOM will finance all of the recurrent costs. These costs are additive to the current levels of budget support for the operation of Bunda. The portion of the funds which are identified for basic salaries or supplements for AID provided staff will be paid into a trust fund for use on activities related to the project and as mutually agreed upon by the GOM and OSARAC.

3. Capital. The proposed AID grant will finance all foreign exchange costs and a portion of the local costs attributable to the capital component. AID's contribution to capital costs will be limited to construction. The GOM will finance all A&E related expenses, a portion of construction costs and the services and related expenses for normal GOM

works inspection.

C. Financial Cash Flow (Disbursements)

Table X indicates the expected flow of disbursements by the GOM and AID over the life of the project. In the initial year (FY 76), disbursement under the AID grant will be limited to a relatively small amount for the start-up of the participant training program. GOM disbursements in FY 76 will be for continuation of design work under the A&E contract as well as some recurrent costs attributable to the project. The largest drawdown of the AID grant is expected to occur in FY 77, the first full year of the project and the year in which the bulk of materials and supplies are scheduled to be ordered under the construction contract.

D. Conclusion

The cost estimates and financial plan for the project have been reviewed by RØDSO/OSARAC, the GOM and are considered reasonable and adequate. This project has a high priority with the GOM and thus appears assured of receiving the level of government financial support required. In fact, GOM inputs to AID projects have always been forthcoming on a sufficient and timely basis.

Table X -- Financial Cash Flow (Disbursements)

	<u>FY 76</u>	<u>FY 77</u>	<u>FY 78</u>	<u>FY 79</u>	<u>FY 80</u>	<u>FY 81</u>	<u>Total</u>
Technical Assistance							
Senior Staff	\$ ---	\$ 270,000	\$ 270,000	\$ 270,000	\$ 270,000	\$ 135,000	\$ 1,215,000
Consultants	---	9,000	15,000	7,000	6,000	---	37,000
Participants	15,000	105,000	167,000	95,000	18,000	---	400,000
Rural Dev. Seminars	---	25,000	30,000	15,000	5,000	---	75,000
Commodities	---	273,000	---	---	---	---	273,000
Sub-Total (AID)	\$ 15,000	\$ 682,000	\$ 482,000	\$ 387,000	\$ 299,000	\$ 135,000	\$ 2,000,000
Recurrent (GOM)	\$ 46,667	\$ 114,340	\$ 134,412	\$ 155,190	\$ 179,431	\$ 188,707	\$ 818,747
Capital							
Construction	\$ ---	\$ 1,262,400	\$ 607,300	\$ 480,600	\$ ---	\$ ---	\$ 2,350,300
A&E	100,000	75,000	75,000	62,000	---	---	312,000
Works Inspection	---	39,100	39,100	11,500	---	---	89,700
Contingencies	---	220,000	106,000	87,000	---	---	413,000
Sub-Total	\$ 100,000	\$ 1,596,500	\$ 827,400	\$ 641,100	\$ ---	\$ ---	\$ 3,165,000
(AID)	( --- )	( 1,000,000 )	( 521,300 )	( 478,700 )			( 2,000,000 )
(GOM)	( 100,000 )	( 596,500 )	( 306,100 )	( 162,400 )			( 1,165,000 )
Project Total	\$ 161,667	\$ 2,392,840	\$ 1,443,812	\$ 1,183,290	\$ 478,431	\$ 323,707	\$ 5,983,747

## PART V - TECHNICAL ANALYSIS OF CAPITAL COMPONENT

### A. Description of the Activity

Construction to be financed under this grant consists of four student hostels (224 student accommodations), a soils/crops laboratory, an animal science laboratory, two lecture theatres (125 and 200 seats) an agriculture engineering shop, auditorium renovation, student union and related extensions, a maintenance shop, 21 senior staff houses, 34 junior staff houses, 30 support staff houses, and related external works. See Annex B for detailed descriptions of these facilities.

### B. Engineering Plan

Architectural and engineering designs of the buildings have been prepared (preliminary plans, cost estimates and physical descriptions have been completed) by the UM planning and architectural consultants, Norman and Dawbarn of Blantyre, Malawi. They employ three qualified architects, a resident engineer and construction technicians. The firm has considerable experience in design and supervision of the construction of university and school buildings in Africa and was the architectural consultant for AID-financed construction projects; the UM dormitories at Zomba, the University of Dar-es-Salaam, and at the Gaborone campus of the University of Botswana, Lesotho and Swaziland. These projects were implemented properly.

This firm is retained by the UM under a long-standing contract. Design costs are part of the GOM contribution to the project.

The draft master plan for development of Bunda is available and is incorporated with an implementation plan for present, proposed and future developments. Specific recommendations are made for providing additional student housing, staff houses, educational buildings and equipment related to projected student enrollments. Approved working drawings and bills of quantities are being prepared for this proposed construction. Under its present contract, Norman and Dawbarn will provide complete architectural and engineering services which includes an invitation for bid package (IFB), contract review and contract recommendation services and construction supervision services.

### C. Technical Soundness

The designs proposed lend themselves to reasonable construction, operating and maintenance costs and follow the past design criteria developed by the University and the design firm.

The load bearing structural fired brick wall design chosen by the architect is consistent with common construction methods used on buildings recently built and now under construction in Malawi. It is undoubtedly the type of construction best suited to local material availability and

local construction techniques. The Bunda site is a well drained area providing satisfactory foundation characteristics for methods of construction to be employed. Adequate electrical power will be available with installation of larger transformers and electrical mains, prior to completion of the project. At present the Bunda administration is making arrangements to improve the water system. It is expected that the necessary water services will be funded under the Rural Center Water Supplies program for which African Development Bank financing has been requested. Failing the availability of AFDB funds, the GOM will provide the necessary funds from its own account. In any event, a condition to disbursement for capital construction under the grant will be a requirement that the GOM provide evidence satisfactory to AID that an adequate water supply will be available to support the planned expansion of facilities. An expansion of the present sewage system is also a part of the total expansion plan.

All buildings to be financed by this grant will be located on the Bunda campus in proximity to the existing campus core facilities. The cost estimates are based on the architect's review of similar construction at other U of M campuses. These consisted of student hostels, warden flats and a principal's house, all of which were an AID-financed U of M dormitory project (Phase I, Loan No. 612-H-003). A 15 percent contingency has been added to project costs to compensate for the unpredictability of bid prices, possible materials escalation, uncertainties which might arise due to off-shore procurement and transportation and possible quantity overruns. The preliminary plan, specifications, cost estimates and physical descriptions of the buildings were reviewed by AID and found to be sufficient to assure that cost estimates are reasonably firm. The requirements of Section 611(a) of the FAA are accordingly satisfied.

#### D. Environmental Analysis

The overall expansion plan for Bunda provides for the construction of buildings and expansion of utilities in an area designated under the Master Plan of Development for the University for the Bunda College Campus 1975, (see Annex B.4). This proposal provides for construction expansion as specified by the Master Plan. The project therefore allows for an orderly expansion with minimal environmental disruption in the surrounding area.

The buildings will be constructed of indigenous materials in accordance with the Master Plan. There will be no noticeable impact on the environment. There are adequate systems for disposal of human wastes, thus preventing pollution of nearby streams. New boreholes are being constructed to increase the water supply and there is no sufficient evidence to indicate a lowering of the water table. Adequate provisions have been made in the Master Plan to prevent any erosion of the soil due to runoff during the construction period and thereafter.

E. Construction Phasing

FAA of 1961, as amended, Section 101(b) states that no grant assistance shall be disbursed for a capital project where that project exceeds three years, without further justification of Congress and efforts being made to obtain local sources of financing. The actual construction phase (the capital input) will be completed in less than three years.

Part VI - Implementation Arrangements

A. Organization and Management

1. The GOM management of this project will be provided through the regular channels of U of M. The Vice Chancellor of U of M will be responsible for the overall management of the project while the U of M registrar and the Principal of Bunda will be responsible for implementation of the capital and technical assistance components.

The U of M Registrar will coordinate the activities of the U of M architect, Norman and Dawbarn. After construction contracts are awarded, he will be responsible for forwarding all documentation to AID through the GOM Ministry of Finance as instructed in relevant ProAgs or Implementation Letter. It is anticipated that the prior working relationship established during the AID financed U of M Dormitories project at Zomba will continue allowing for rapid implementation of construction.

The Principal of Bunda will be the responsible Malawian official for the technical assistance component of this project. He will be the chief supervisor of the AID financed staff, who will work within their departments, and will have the ultimate responsibility of all the details related to the TA component.

2. AID

(a) OSARAC: The OSARAC RDO will appoint appropriate technical staff to be responsible for overall project management.

OSARAC will be responsible for final preparation and issuance of AID project documents and will be responsible for approvals of payments.

(b) REDSO/EA: REDSO/EA will monitor the project's capital component, review and approve documentation relating to the construction component (bid and contract award documentation) and will coordinate as required with OSARAC and AmEmbassy Blantyre to assure proper implementation.

B. Implementation Plan

ProAg signed	March 1976
First PIO/T (6 technicians, 12 M/Y)	April 1976
First PIO/P (3 participants, 6 M/Y)	May 1976
PIO/C	June 1976
Construction IFB issued	August 1976
U of M TA Selection visit	September 1976
First TA Staff arrives	October 1976
Second PIO/P (4 participants, 8 M/Y)	December 1976
Construction contract signed	December 1976
First participants placed	January 1977
Third PIO/P (6 participants, 12 M/Y)	March 1977
First annual evaluation	March 1977
Second participant group placed	June 1977
Short-term consultants - 6 weeks	July 1977
Third participant group placed	September 1977
First PIO/C delivery	September 1977
Construction 50% completed	December 1977
PIO/C delivery completed	March 1978
Second annual evaluation	March 1978
Second PIO/T (6 technicians, 12 M/Y)	April 1978
Fourth PIO/P (7 participants, 14 M/Y)	April 1978
Short-term consultants - 3 months	July 1978
Construction completed	December 1978
First participants return (2)	January 1979
Fourth participant group placed	January 1979
External evaluation	March 1979
Short-term consultants - 2 months	July 1979
Participants return (6)	September 1979
Participant returns (1)	January 1980
Annual evaluation	March 1980
Third PIO/T (3 technicians, 3 M/Y)	April 1980
Participants return (4)	June 1980
Short-term consultants - 6 weeks	July 1980
Participants return (7)	December 1980
TA Staff terminates	October 1981
Final evaluation	November 1981

The above schedule will be reflected in a PPT which is being prepared. From that a CPI network will be developed for submission to AID/W at a later date.

C. Evaluation

Project evaluations will be initiated in March of 1977, about one year after project start-up. Internal evaluation, participated in by the U of M, OSARAC, the AID-funded staff and REDSO will be held in

March 1977 and March 1978. An external evaluation will be held in March 1979 with assistance from AID/W. In March of 1980 an internal evaluation will be held. In November of 1981 a project completion evaluation will be conducted.

Annual evaluations will focus on ascertaining progress toward project purposes. Items to be measured will include:

- a) Construction Progress
- b) Performance of TA Contractor
- c) Participant Schedule
- d) Status of Commodities
- e) Effectiveness of Use of the Trust Fund
- f) Promptness and Effectiveness of AID Backstop Support to the Project from AID/W, OSARAC and REDSO.
- g) Performance of AID-Funded TA Staff
- h) University of Malawi Support to the Project.

In addition to the points noted above, evaluations of specific activities of individual TA staff will be made against an annual plan of work for each staff member which will be provided by the U of M.

The external evaluation in 1979 will also comment on the relevancy of Bunda training to the Malawi rural environment. It will also review and comment on the role Bunda is playing in the development process. The services of a senior and experienced sociologist and a similar practical expert in applied training will be required.

D. Conditions and Covenants

Prior to the first disbursement for construction under this project the GOM shall, except as AID may otherwise agree in writing, fulfill the following conditions in form and substance satisfactory to AID:

1. Prepare an invitation for bid package (IFB) to be submitted;
2. Submit tenders received in response to the IFB and recommendation for contract award;
3. Submit evidence that an adequate water supply will be available to support the proposed expansion of facilities.

The GOM will covenant to provide annually a plan for utilization of the trust fund, and no disbursement shall be made from the trust fund until it has been approved by AID.

While the recommendations found at pages 22-24 of this PP will not be included specifically as conditions or covenants in the ProAg, they will be integrated into the Evaluation Plan discussed above as will the assumptions of the Log Frame.

E. ECPR Approval

On 15 February 1975 State cable 35312 to Mbabane, info Blantyre and Nairobi, noted Africa ECPR approval of project PRP in principle. State cable 51177 provided more information regarding PP preparation. See Annex A for State 35312 and ECPR memo. State 51177 is a Limited Official Use cable.

F. Fixed Amount Reimbursement (FAR)

The FAR method was given close consideration within the REDSO/EA and OSARAC project committee. It was decided this method was not appropriate for the capital component which will require construction by private contractors who will be paid for work completed on the judgment of a quantity surveyor. OSARAC has, however, implemented the FAR method on small construction components of three grant projects in its region and expects to use the FAR method on two proposed projects.

E. Issues

PD-57, as modified by AIDTO Circular A-466 dated June 27, 1975, prescribes a maximum period of five years for the life of a project, from date of signature of the Project Agreement to the date on which all goods and/or services have been delivered or performed. However, "In exceptional cases it may not be possible to design a project that can be completed within five years" and, rather than arbitrarily compress the project, a justification should be prepared explaining the reasons for and necessity of a more lengthy commitment.

The primary reason and justification for exceeding the PD-57 guidelines in this project is the necessity to provide some degree of overlap between the technical assistance and participant training components of the project. As shown in Table X, disbursements will be made in FY 1981 for senior staff personnel. This personnel, lecturers in certain agricultural-related disciplines, will be on hand to offer guidance to recently returned participants as to teaching methods, as well as to fill any gaps in the training the participants received in the U.S. It is felt to be essential that qualified senior staff be allowed to initiate this kind of on-the-job training of the participants so as to ensure a high quality of instruction at Bunda after the project is completed. Thus, three senior staff will be funded in FY 1981 to monitor and advance the progress of seven participants who will have been in the U.S. from 1978 to 1980 receiving technical training.

Finally, it should also be noted that, while the project will be funded over a six-year span, no more than \$15,000 of the grant funds will be disbursed in the first year, and these only in the latter part of the year. Thus, the project only marginally exceeds the guidelines in PD-57.

Therefore, for the reasons stated above, it is recommended that the project be approved for six years as presently designed.

A-1

# TELEGRAM

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15 FEB 75 18:21

ACTION: AID - REDSO  
INFO : AMB DCM ECON AD1

CONF RM CHRON

ACTION TAKEN WAN

R 150127Z FEB 75  
FM SECSTATE WASHDC  
TO RUEHPCE/AMBASSY NAIROBI 3597  
RUVQBR/AMBASSY BLANTYRE 5514  
RUVQC/AMBASSY NAIROBI 9400  
BT  
UNCLAS STATE 035312

DATE (M/D/Y) 2-19-75  
TIME S 11:21 2/15/75

AIDAC, NAIROBI FOR REDSO

E.O. 11651: N/A

TAGS:

SUBJECT: FUNDA COLLEGE PRP

REFERENCE: BLANTYRE 136

1. ECPR APPROVED SUBJECT IN PRINCIPLE. POSSIBILITY GRANT FUNDING UNDER REVIEW, PARTICULARLY IN VIEW REFTL. HOPEFUL EARLY RESOLUTION. SPECIFIC GUIDANCE FOR PREPARATION PP FORTHCOMING AFTER FUNDING DECISION. WILL ADVISE.

2. COPIES OF PROJECT COMMITTEE PAPER PREPARED FOR ECPR MEETING POUCHED ADDRESSEES. INGERSOLL.

JNN

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BEST AVAILABLE COPY

Minutes

AFR Executive Committee for Project Review  
December 29, 1974, at 3:45 p.m.  
Room 6944 New State

Subject: PRP for "Agricultural Manpower Development Project,  
University of Malawi, Bunda College"

Participants

AA/AFR:DBrown	GC/AFR:RJohnson
AFR/DP:EDonoghue	TA/AGR:GBeck
AFR/DP:DWilson	TA/EHR:JChandler
AFR/DP:MKarnecke	SER/ENGR:APitcher
AFR/ESA:JKnoll	PBAR:RThomas
AFR/ESA:FScordato	AF/EPS:ESegall
AFR/ESA:HKugler	OSARAC:CWard
AFR/ESA:ESiira	OSARAC:WJohnson
AFR/DS:JWooten	

Decisions

1. The Project Review Paper was approved in principle and it was decided that the PP should be written to cover alternatives for either grant or loan funding. If the project is finally financed from grant funds, these funds will be phased over the life of the project.
2. A decision was not made re grant vs loan funding for the capital inputs, pending review by GC/AFR of Section 110(b) requirements, decision of DA on an action memo concerning FAR (fixed amount reimbursement) procedures, and resulting determination of the most feasible method to permit prompt implementation and compliance with the mandates of PD 57.
3. AFR/GC is to initiate action soonest to obtain required clearances for this program under the Circular 175 procedure, as the U.S. has no bilateral agreement with Malawi under which a Project Agreement, Loan Agreement, or Grant Agreement could constitute an implementing document.
4. The Committee concurred with the comments and suggestions on presentation of PP contained in the Issues Paper.

Discussion

The meeting was called to consider a PRP presenting a five-year project estimated to cost \$3.75 million and requiring 27 man-years of contract technical services (five staff instructors), 50 man-years of participant training (university level), and approximately \$1.75 million in facilities and equipment. Discussion covered the following points, in addition to those reflected by the decisions reported above:

- Grant/loan recipient. Bunda College was said to be a "refreshing" institution, with land availability, fairly good physical plant, strong government interest and support, good management capability, and a young Malawi Principal who is well trained, innovative, has drive and the potential of doing a good job.
- Legal prerequisites. Any agreement with GOM for a proposed program such as this must be preceded by one of the following: a) clearance throughout State and AID under Circular 175 procedures, b) a bilateral agreement, or c) blanket authority for AID agreements similar to that granted for Mauritania and Chad. The first procedure is lengthy, the second even longer, and the third entails special conditions which are not applicable in the case of Malawi.
- Percy Amendment. The College has 24 slots for girls, graduates are presently going into extension work where they work with farm families, and it is felt that the girls need general agricultural training.
- Timing. It is critical that at least some of the capital facilities such as dormitories and staff housing be constructed by September 1976. Otherwise, much of this project will be delayed by an entire school year.
- Grant vs loan. AFR/DP would prefer, if funds are available, to see this project grant funded because of the minimal financing involved -- to avoid the problems of servicing a loan this small for 40 years, to mesh with PD 57 requirements, and because the capital inputs are for the most part integrated with the technical assistance inputs. It would be phased like a regular grant project, with immediate funding needs met the first year.
- PP design. REDSO/EA will draft the PP with the assistance of OSARAC. Johnson and Ward will personally inform REDSO of the substance of this meeting, with additional Project Committee information pouched by AFR/ESA. Further guidance will follow upon resolution of questions being researched by GC/AFR re the FAR technique, splitting of contracts, 11(b) requirement, etc. in the context of the loan vs grant funding question.
- Priorities. The requirements analysis listed crop production as first, rural development as second, livestock development as third, and engineering as fourth priority. This FRP focuses on the first and second. Our present involvement in engineering will be completed in four years, when our current technician departs; and the College will soon be prepared to handle livestock development with its Malawi staff and possibly Canadian assistance.
- Training. Training is proposed across the board for the College. By 1980, when the project ends, the staff will be 80% localized and other participants will be in-stream to have a full Malawi staff by 1982.
- OPEX or university. OSARAC recommends that this be implemented on essentially an OPEX basis.
- Linkage to the rural poor. TA/LRS (Mr. Chandler) suggested that this be strengthened.

AMC 1. A-4

Page 3  
Bunda

Meeting adjourned at 4:50 p.m.

Cleared  
AFR/DP:JDonoghue  
AFR/ESA:FSordi to  
GC/AFR:RJohnson

AFR/DP:mw  
2/28/75

ANNEX B - TECHNICAL DETAILSB - i. ManpowerA. Analysis of GOM's Manpower Studies (Demand)Introduction

The GOM faces an overall constraint to achievement of its development goals; the availability of adequately trained manpower. Availability of such middle level manpower is the most binding constraint due to pressure to localize and the difficulty of obtaining technical assistance to alleviate anything other than shortages of high level manpower. The manpower constraint is likely to affect agricultural development most seriously, given the magnitude and complexity of the requirement for agricultural development activities.

Forecasting the needs for trained manpower is related to the expected growth rates of the national economy. Various manpower forecasting methods have been used. Some are complex such as the Manpower Survey 1971, Results of the Survey and Analysis of Requirements, 1971-1980 (MS-71), and others, such as those used in the University of Malawi Manpower Assessment Committee's Report (UMAR), and the report of Dr. E. K. Clark, Principal Agricultural Officer, Extension and Training, Ministry of Agriculture and Natural Resources in 1973 (Clark), are more straightforward and specific. It is important to note, however, that MS-71 and UMAR report on country wide trained manpower and do not focus on the needs for only the rural sector as does the Clark report.

Manpower Survey 1971 (MS-71)

MS-71 is a basic starting point for an examination of Malawi's manpower demand. All subsequent manpower reports compare their high and intermediate level manpower (HILMP) demand projections with those set forth in this survey. MS-71 took actual field sampling of employment needs. It found a total of 47,750 persons falling within the definition of HILMP, plus a vacancy or shortage of 1,105, making an overall HILMP demand of 48,855. The breakdown of HILMP and HILMP vacancies is set forth in Table I, below:

TABLE I <sup>1/</sup>

<u>Broad Occupation Levels</u> <sup>2/</sup>	<u>HIIMP</u>	<u>HIIMP Vacancies</u>	<u>Percentage</u>
1 and 3 (senior)	1,706	77	4.5
2 and 4 (intermediate)	14,858	370	2.5
5, 6 and 7 (skilled)	<u>31,186</u>	<u>658</u>	<u>2.1</u>
Totals	<u>47,750</u>	<u>1,105</u>	<u>2.3</u>

According to Table I, HIIMP shortages become progressively more acute at the higher levels with percentage vacancies of 4.5 percent at the senior level, 2.5 percent at the intermediate level and 2.1 percent at the skilled level. This situation is important to manpower planning in Malawi where shortages at the lower levels can be met with relative ease through substitution while shortages at the higher levels and, particularly among the senior professionals, are not amenable to substitution and will continue to pose a severe problem. These shortages reflect a specific and urgent demand for qualified Malawians.

MS-71 is a sophisticated mathematical model of demand growth. The model is based on the idea of a non-linear but positive relationship between manpower and output, amended so that the stock of manpower in any one year is a function of the combination of the growth in GDP, the HIIMP elasticity level and the wastage percentage level.

The HIIMP elasticity is a measure of change in the relationship between manpower demand and GDP output. A HIIMP elasticity of one means that both projected growth rates of GDP and manpower demand are equal. A HIIMP elasticity greater than one means manpower demand rising more rapidly than GDP output. A wastage factor ranging from 2 to 3 percent is subtracted depending on skill level.

<sup>1/</sup> Tables II through VII in this Annex are based upon data presented in this table.

<sup>2/</sup> The basis for occupational coding was the 1968 revised edition of the International Standard Classification of Occupations (ISCO). Code categories used are as follows: Category 1 - top management; Category 2 - middle and junior management; Category 3 - professional occupations; Category 4 - technical occupations; Category 5 - skilled craftsmen and artisans; Category 6 - other office workers; Category 7 - all other occupations. A problem was encountered when it was discovered that the ISCO did not correspond to the category classification established for Malawi's development plans. Data transformations were made which involved a rearrangement of category components.

As mentioned above, coefficients for HILMP elasticity, wastage percentage level and annual growth factor level were derived in order to compute the net incremental demand for HILMP. These coefficients of demand projections were made for five-year intervals, as were the GDP projections derived from DEVPOL. Table II is a reproduction of Appendix A16 from MS-71 which presented the coefficients:

TABLE II

Coefficient of Demand Projections for Agriculture, Forestry, Mining, Fishing and Quarrying, 1970-1980

Annual G.D.P. Growth Rate Percentage (Output)	HILMP Elasticity			Annual Growth Factor		
	Level <sup>3/</sup>			Level		
	1	2	3	1	2	3
10.8 (1970-75)	0.8	1.0	1.0	0.086	0.108	0.108
9.0 (1975-80)	0.9	1.5	1.5	0.091	0.135	0.135

The net results of the Manpower Survey's projections are reproduced in Table III below. These projections are presented according to ISCO classifications. In addition, the net incremental demand for HILMP is presented with annual projections.

TABLE III

Net Incremental Demand for HILMP

	Level 1	Level 2	Level 3	Totals
1971	162	1,582	3,756	5,500
1972	178	1,737	2,140	6,055
1973	188	1,888	4,491	6,567
1974	205	2,055	4,981	7,241
1975	223	2,422	6,017	8,662
1976	314	3,966	9,953	14,238
1977	317	4,578	11,578	16,473
1978	352	5,284	13,668	19,304
1979	391	6,104	16,051	22,546
1980	434	7,053	18,845	26,332
	<u>2,704</u>	<u>30,669</u>	<u>93,485</u>	<u>132,918</u>

According to Table III, demand for (level 1) graduates is forecast to rise in the 10-year period by about 2800. Diplomates (level 2) demand will rise during this period by 37,000.

- <sup>3/</sup> Level 1 refers to ISCO Categories 1 and 3  
 Level 2 refers to ISCO Categories 2 and 4  
 Level 3 refers to ISCO Categories 5, 6 and 7

University of Malawi Assessment Committee's  
Appraisal of Manpower Survey, 1974 (UMAR)

The MS-71 has been criticized by many including a UM Manpower Assessment Committee who prepared UMAR. UMAR found the Manpower Survey's HIIIMP elasticity level for diplomates of 1.0 and 1.5 unrealistic. Their basis for this opinion is related to the situation during the pre-independence period when an adequate stock of manpower was not trained in Malawi and therefore the figures based on that period are not appropriate for current consideration. At the time of independence Malawi did not have an adequate supply of trained intermediate manpower. As Malawi's economy expanded UMAR indicated it seemed reasonable, that during this period, an employment elasticity ratio for diplomates, anticipating a 1.5 percent rise in employment for each one percent rise in national output, is likely to apply. The Committee recommends that in the immediate future a 1:1 ratio is realistic.

The wastage factor used in MS-71 of 2.0 percent per annum for graduates and ranging from 3 to 4 percent for diplomates, was also viewed by the Assessment Committee as too high. They recommended using a 1 percent figure noting that in Malawi's case, and over time, the manpower supply would have a lower average age than when MS-71 was prepared.

Another area of MS-71 which is challenged by the UM Assessment Committee is in the area of allocation of trained manpower between the public and private sectors. The MS-71 reported the distribution of the HIIIMP between the public and private sectors as 54 percent public and 46 percent private. This analysis has not been borne out by other surveys. A report of the Educational Planning Division (EPD) of the Ministry of Education (ME) shows that in 1973 about two-thirds of the graduate output went to the public sector and one-third went to the private including statutory bodies. Examining placement of diplomates covered in this 1973 survey shows 70 percent went to the public sector. The UMAR found the public sector demand growing at 14 percent per annum.

In 1972, the latest available Civil Service staff lists showed 30 percent of established senior posts unfilled. In addition, 60 percent of the three top level civil service posts were occupied by expatriates, a further factor increasing future demand for graduates. UMAR also found that in the period 1967-1971, a 1 percent rise in government recurrent expenditure was accompanied by a 1.75 increase in the senior staff employment, these being in the categories of superscale professional officer, administrative officer, executive officer and technical officer.

UMAR elected to forecast trained manpower needs based on a 8.2 percent growth rate in government expenditure, a 1.25 percent employment coefficient, a 1 percent wastage factor, plus an additional one-third to accommodate the demand by the private sector and statutory bodies. Table IV presents UMAR's projections for graduate manpower. For purposes of comparison, MS-71 projections are also shown.

TABLE IV

Net Country-Wide Incremental Demand for Graduates

<u>Year</u>	<u>MS-71</u>	<u>UMAR</u>
1971	162	--
1972	178	--
1973	188	196
1974	205	219
1975	223	244
1976	314	272
1977	317	303
1978	352	338
1979	391	375
1980	434	409

UMAR projections of the net incremental demand for graduates are not substantially lower than the demand forecast by MS-71.

UMAR indicated the demand for diplomates could have been derived using the same method if adequate and accurate base data had been available. Although the MS-71 indicated that there were over 15,000 level 2 personnel in 1971, UMAR noted that this group contained substantial numbers of technical positions not requiring diplomate qualifications. Because of this, UMAR concluded it was necessary to use a ratio between diplomates and graduates as a means to estimate intermediate skill needs as was done earlier in an analysis made in Uganda. The 4-1 ratio between degree and diploma holders this plan employed is used. Table V below sets forth the UMAR projections for diplomates compared with the MS-71 figures.

TABLE V

Net Country-Wide Incremental Demand for Diplomates

<u>Year</u>	<u>MS-71</u>	<u>UMAR</u>
1971	1,582	--
1972	1,737	--
1973	1,888	784
1974	2,055	876
1975	2,422	976
1976	3,966	1,088
1977	4,578	1,212
1978	5,284	1,352
1979	6,104	1,500
1980	7,053	1,636

Table V shows the wide discrepancy between the UMAR and MS-71 projections. The difference of 5,417 by 1980 can be attributed to the varying coefficients utilized and the assumptions used in the projections. This proposal does not rely on these widely varying analyses since subsequent refinements of these studies have been performed recently.

Clark's First Projections (1972)

E. K. Clark, Principal Agricultural Officer, Ministry of Agriculture and Natural Resources, selected categories in rural sector from MS-71 for which degrees and diplomas in agriculture are needed. Table VI below sets forth the categories so identified.

(See page 42 )

Table VI

Manpower Survey of 1971 Categories for whom  
Degrees or Diplomas in Agriculture are Needed (1972)  
in the Public Sector

<u>Degree Needed</u>	<u>Total Govt. Posts</u>	<u>Held by Malawian</u>	<u>Held by Ex-Pat</u>	<u>Vacancy</u>
<u>Description</u>				
Farm Manager (General)	14	0	14	0
Farm Manager (Tea)	34	1	31	2
Farm Manager (Tobacco)	54	3	51	0
Agronomist	131	42	65	24
University Teacher Appd Science - 20% of the category taken)	<u>13</u>	<u>1</u>	<u>12</u>	<u>0</u>
Total Graduate Posts	<u>246</u>	<u>47</u>	<u>173</u>	<u>26</u>
<u>Diploma Needed</u>				
Farm Manager (General)	24	10	14	0
Farm Manager (Tea)	82	47	33	2
Farm Manager (Tobacco)	62	25	33	4
Agronomic Technicians	<u>207</u>	<u>140</u>	<u>24</u>	<u>43</u>
Total Diplomate Posts	<u>375</u>	<u>222</u>	<u>104</u>	<u>49</u>

From Table VI, Clark projected the incremental demand for graduates and diplomates by 1980/81.

Table VII

Yearly Net Incremental Demand for Graduates and Diplomates

<u>Qualifi- cation</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
Degree	23	25	27	30	32	45	45	51	56	62
Diploma	40	44	48	52	61	100	114	134	154	178

11. Clark's Second Projections on Agricultural Manpower Needs (1972)

Clark presented another projection in 1973 which is compared with the data presented in Table VII above. He felt this second projection was necessary since his original analysis contained the same MS-71 assumptions relative to base line data which UMAR also found to be unacceptable. His second projection also takes into account a realistic time-phased replacement of expatriate staff as well as vacancies. Clark used data only from the Ministries of Agriculture and Education since they were considered to be the major users of agriculturally trained manpower in the public sector. Table VIII presents this information.

Table VIII

Number of Graduate and Diplomat Posts and a  
Breakdown of Incumbents

	<u>Oct. 72</u> No. of Posts	<u>Nov. 1975</u>			<u>% Increase in Posts 1972-75</u>	
		<u>Malawian</u>	<u>Expat.</u>	<u>Vacant Total</u>		
Superscale	46	16	26	10	52	14
Professional	69	43	34	12	89	29
Graduate Total	115	59	60	22	141	22
Technical (Diplomat)	286	246	19	37	302	6
Min. of Ed. (Graduate)	1	1	-	-	1	
(Diplomat)	12	12	-	-	12	
<hr/>						
Total Public Sector						
(Graduate)	116	60	60	22	142	22
(Diplomat)	298	258	19	37	314	9

Clark utilized the totals listed in Table VIII for baseline data to project demand for graduates in the Ministries of Agriculture and Education through 1979/80. Table IX is Clark's projection for graduates. Note: A 30% addition is provided to accommodate the needs of the private sector.

Table IX

Projected Demand for Agricultural Graduates in Ministries  
of Agriculture, Education and in the Private Sector (1973-1980)

<u>Year</u>	<u>Total No. of Posts</u>	<u>Growth in Posts</u>	<u>Total Posts Held by Malawians</u>	<u>Wastage Among Malawians Incumbents</u>	<u>Expat or Vacant (-)</u>	<u>Public Posts Available</u>	<u>Private Posts Available (30% of Public)</u>
1973	142	5	60	-	82	5	2
1974	147	9	68	2	79 3	14	4
1975	156	8	88	2	68 11	21	6
1976	164	8	103	3	63 5	16	5
1977	172	9	126	3	46 7	29	9
1978	181	9	148	4	33 13	26	8
1979	190	20	169	5	21 12	37	11
1980	210	9	187	6	13 8	23	7
Total		77		25	69	171	52

In summary, it can be seen that this analysis shows the total number of posts in the Ministries and the private sector will increase by 223 by 1980. This figure is obtained by adding the total growth of posts, 77, wastage among Malawians during this period, 25, decrease in expatriates in posts and fewer vacancies, 69, and the private sector intake of 52.

The annual projections of number of public posts can be calculated in the same manner and annual totals, private and public also ascertained as shown in tables following. Clark also projected the demand for diplomates in the same manner as used for graduates in the public sector, 30% increase to accommodate the needs of the private sector. Table X sets forth these projections.

Table X

Projected Demand for Agricultural Diplomates in Public  
and Private Sectors (1973-1980)

<u>Year</u>	<u>No. of Posts</u>	<u>Growth Rate in Posts</u>	<u>Total Posts Held by Malawians</u>	<u>Wastage Among Malawian Incumbents</u>	<u>Expat or Vacant (-)</u>	<u>Public Posts Available</u>	<u>Total Private Posts Available</u>
1973	314	11	258	-	56	11	3
1974	325	20	292	9	33 23	52	16
1975	345	17	322	12	23 10	39	12
1976	362	18	344	13	18 5	36	11
1977	380	19	365	14	15 3	36	11
1978	399	20	385	15	14 1	36	11
1979	419	21	405	15	14 -	36	11
1980	440	18	422	18	18 4	32	10
Total	144			96	38	278	85

As shown in Table X, the number of diplomate posts will increase by 363 from 1973 to 1980. This increase is derived in the same manner as previously noted.

As has been shown herein several methods have been utilized by Clark to forecast net incremental demand for diplomates and graduates. Manpower experts would differ as to which method is the most reliable. Consequently, Clark's demand which he first derived from the MS-71 (Table VII), and Clark's demand based on his second analysis (Tables IX and X) are compared below. It will be noted there are substantial differences in estimates of needs of both graduates and degree holders. This illustrates the difficulty in developing a hard, data-supported, position from the studies available.

Table XI

Comparison of Cumulative Net Incremental Demand  
from Clark's First and Second Analyses

	<u>71/72</u>	<u>72/73</u>	<u>73/74</u>	<u>74/75</u>	<u>75/76</u>	<u>76/77</u>	<u>77/78</u>	<u>78/79</u>	<u>79/80</u>
<u>Degree</u>									
First Analysis	48	75	105	137	182	239	278	334	396
Second Analysis	-	7	26	52	73	111	145	193	223
<u>Diploma</u>									
First Analysis	88	136	188	249	349	463	597	751	929
Second Analysis	-	14	82	133	170	217	264	311	353

This proposal uses Clark's second analysis, as reported herein, as being most realistic and practical evaluation of the demand for agricultural trained manpower.

C. Bunda's Enrollment Projections (Output)

The AID Funds Requirements Analysis (footnote 5) presented student enrollment projections from 1973 to 1979/80. These projections are shown in Table XII below.

Table XII

Bunda College of Agriculture Student Enrollment  
Projections 1973-1980

<u>Course</u>	<u>Year</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>
Diploma	1	62	50	55 <sup>1/</sup>	105	105	105	105
	2	55	61	50	55	105	105	105
	3	<u>43</u>	<u>52</u>	<u>60</u>	<u>48</u>	<u>50</u>	<u>100</u>	<u>100</u>
		160	163	165	208	260	310	310
Degree	2	22	26	25	-			
	3	16	21	24 <sup>2/</sup>	24			
	4	<u>9</u>	<u>15</u>	<u>20</u>	<u>23</u>	<u>23</u>		
	4					25 <sup>3/</sup>	25	30
	5						<u>22</u>	<u>24</u>
		47	62	69	47	48	47	54
Total Enrollment		207	225	234	255	308	357	364

- 1/ The joint diploma/degree curriculum (3/5 years) is planned to begin in Sept., 1975. The last intake of degree students from Chancellor College into the second year at Bunda will be in September, 1975.
- 2/ The last entry (upgrading) into the second year of the degree course will be 1975.
- 3/ In the 1977/78 Session 25 upgraders (Diplomates with field experience) will be enrolled in the fourth year of the 2/5 year curriculum to enable the College to have a degree output in July, 1979.

These projections are made on the assumption that there will be increases in staff and physical facilities from September, 1976.

Under the joint degree/diploma curriculum, upgrading of Colby certificate holders and Bunda diplomates will be as follows: a) certificate holders will enter the second year of the 3/5 curriculum; b) diplomates will enter the fourth year of the 3/5 curriculum.

From Table XII above the following cumulative figures on output can be derived:

Table XIII

Bunda Output, Degree and Diplomat at 5%  
Wastage (Cumulative)

<u>Course</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>
Diploma	43	95	155	203	228	303	373
Degree	9	24	44	67	90	112	136

These projections utilize a 5% wastage factor (recommended in the Bunda Requirements analysis) which does not reflect prior wastage experience for Bunda's student body presented in Table XIV below.

TABLE XIVBunda College Wastage

Intake Year	67/68	68/69	69/70	70/71	71/72
Intake	48	66	69	75	52
Output	30	48	32	64	42
Wastage	18	18	27	11	10
Percentage	37.5	27.3	39.1	18.3	19.2

As noted above, Bunda's actual wastage has been declining and is presently shown to be about 20%. This is substantially above the 5% level used by the AID Funded Report (footnote 5) and therefore, this proposal finds it more realistic to use the wastage factor of 15% as used in UMAR forecasts as shown in Table XV.

TABLE XV

Bunda College of Agriculture Student Enrollment  
Projections 1973-1980 (UMAR)

<u>COURSE</u>	<u>YEAR</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>
Diploma	1	61	50	55	105	105	105	105
	2	55	56	45	47	95	95	95
	3	42	55	53	44	47	90	90
		<u>158</u>	<u>161</u>	<u>153</u>	<u>196</u>	<u>247</u>	<u>290</u>	<u>290</u>
Degree	2	23	25	25				
	3	15	21	23	23			
	4	9	15	20	23	23		
	4					20	30	30
	5						20	30
		<u>47</u>	<u>61</u>	<u>68</u>	<u>46</u>	<u>43</u>	<u>50</u>	<u>60</u>
Total Enrollment		<u>205</u>	<u>222</u>	<u>227</u>	<u>242</u>	<u>293</u>	<u>340</u>	<u>350</u>

From Table XV above, the following cumulative figures on output can be derived:

Table VII

Bunda Output, Degree and Diplome at 15% Wastage (Cumulative)

<u>Course</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>
Diploma	42	97	150	174	234	294	354
Graduate	9	24	44	67	90	110	140

D. Comparison of Manpower Demand and Supply

This analysis will indicate a consistent shortfall in Bunda graduates at both diplomate and degree levels. This condition, if deemed serious during project life, can be ameliorated in 2 ways: 1) the wastage factor may be reduced below the 15% envisioned; 2) larger numbers of applicants, including Colby graduates may be admitted, and in this process, some male dormitory space may need to be occupied by three students rather than two. Following is a summary table showing this proposal analysis of demand and output.

Table XVII

Summary of Projected Demand and Output of Bunda Graduates

<u>Year</u>	<u>Course</u>	
	<u>Diplomate</u>	<u>Graduate</u>
	<u>Demand/Output</u>	<u>Demand/Output</u>
1973/74	82/42	26/9
1974/75	133/97	52/24
1975/76	150/150	73/44
1976/77	227/174	111/67
1977/78	274/234	145/90
1978/79	321/294	193/110
1979/80	363/354	223/140

B - . . . Basic Job Description for Technical Assistance Staff

b

1. Crop Production Department

1) Lecturer in Horticulture

(a) Qualifications: A MS or PhD degree in Horticulture with post-graduate experience in Horticulture. Teaching experience desirable but not essential.

(b) Duties of the Post:

- (i) To develop and implement a teaching programme in Horticulture
- (ii) To develop a fruit and vegetable demonstration unit at the College Farm
- (iii) To initiate and develop practical development-oriented research in Horticulture relevant to the needs of Malawi.

2) Lecturer in Agronomy

(a) Qualifications: A PhD degree in Agronomy with special interests in soil fertility and fertilizers and farming systems.

(b) Duties of the Post:

To teach Agronomy and to initiate and develop practical research in farming systems suitable for the smallholder farmer.

3) Lecturer in Pasture and Range Management

(a) Qualifications: A MS or PhD degree in Pasture and Range Management with appropriate post-graduate practical field experience. Teaching experience, while desirable, is not essential.

(b) Duties of the Post:

- (i) To develop and implement a teaching programme in pasture and range management relevant to the needs of the livestock industry of Malawi.
- (ii) In conjunction with the Livestock Production Department staff to initiate and develop practical research in pasture and range management.

b. Rural Development Department

1) Lecturer in Agricultural Economics

(a) Qualifications: A PhD degree in Agricultural Economics with specialization in Farm Management. A good background in development economics and teaching experience in farm management are essential.

(b) Duties of the Post:

- (i) To develop and implement a teaching programme in Farm Management suitable for Malawi with particular reference to smallholder farming.
- (ii) To initiate and develop farm management investigations to assist in the development of smallholder farming.

2) Lecturer in Agricultural Extension

(a) Qualifications: A first degree in Agriculture and a MS or PhD in Agricultural Extension. Practical field experience in extension and ability to develop extension methods suitable for integrated rural development programmes are essential. Experience in agricultural extension in a developing country would be an advantage.

(b) Duties of the Post:

- (i) To teach Agricultural Extension with emphasis on practical methods of introducing the desired changes in smallholder farming.
- (ii) To develop methods of extension methods suitable for rural development programmes.

3. Lecturer in Home Economics

(a) Qualifications: A first degree in general Home Economics and a MS or PhD degree in Home Economics or Home Economics Education. Practical field experience in home economics extension is desirable.

(b) Duties of the Post:

- (i) To develop and implement teaching programmes in general home economics extension with emphasis on the integration of the social sciences and

agriculture with home economics skills and their application for rural development.

- (ii) To initiate and develop practical home economics research in order to obtain essential material to enrich the teaching programmes.

B - 3. Schedule for Participant Training

<u>Group</u>	<u>EST Start for U.S.</u>	<u>No. of Partici- pants</u>	<u>Subject</u>	<u>Approximate Man-Years of Training</u>
1	December 1976	3	Animal Science Home Economics Pasture and Range Management	6
2 and 3	June and September 1977	10	Agricultural Engineering Agricultural Economics (2) Agronomy Entomology Plant Breeding Soil Science (2)	20
4	December 1978	7	Statistics Home Economics Agronomy (2) Extension Agricultural Economics Dairy Science	14
TOTAL		<u>20</u>		<u>40</u>

4. Detailed Physical Description of Capital Component of Project

A. The campus area on which the buildings will be built is sited on land which slopes 3 - 4% to the East. Proposed buildings will be oriented on an east-west axis with individual sites terraced as necessary to facilitate construction and drainage requirements. The subsoil is lateritic in nature and no problems should be experienced in the construction of building foundations.

The structures are of load bearing brick work with 4" concrete floor slabs and a light weight roof of corrugated sheet metal supported by timber roof trusses. Non-load bearing walls and partitions are also of brickwork. External walls will consist mainly of exposed brick and internal walls will be plastered and painted. Low maintenance finishes will be used on all buildings. Windows will have wood frames and glass louvers or steel casement windows. Doors will have steel frames and flush wood doors.

B. 1. Senior Staff Housing

* House type - Principal's house	-	1 ea.
- B-2	-	6 ea.
- B-3	-	7 ea.
- CH-10	-	<u>7</u> ea.
		21

2. Junior Staff Housing

* House type - 4-100-A	-	6 ea.
- 4-085-H	-	7 ea.
- 3-070-C	-	21 ea.
- 2-050-A	-	<u>30</u> ea.
		64

- \* These are standard G.O.M. designs which also have been constructed in past projects financed by AID and other donors.

Standard government house types are recommended with construction of load bearing brickwork plastered internally on concrete strip foundations, with galvanized corrugated sheet metal roofing on timber trusses. Windows are standard metal section, doors are timber semi-solid flush type in metal frames and floor finish granolithic. Ceilings are of soft board. (Floor plans for these houses and the other projected construction are available from AFR/ESA.)

C. Laboratories and Lecture Theaters

Animal Science Laboratory and Offices	4240 sq. ft.
Soils Science Laboratory and Offices	4240 sq. ft.
125 Seat Lecture Theatre	1425 sq. ft., excluding toilets
200 Seat Lecture Theatre	2300 sq. ft., and storage

Construction

Foundation	- Pad and strip concrete.
Structure	- Part load bearing brick work plastered internally, part light steel (RHS) frame with steel room trusses.
Roof	- Galvanized corrugated sheet metal.
Floors	- Woodblock on screed on reinforced concrete slab.
Windows	- Adjustable glass louvers in aluminum frames in hardwood subframes.
Doors	- Semi-solid in timber frames.
Ceilings	- Softboard (celotex).

Laboratories include water, gas and electrical services in timber/formica faced benches, fume cupboards, etc. There are 3 cold rooms incorporated to serve the 2 laboratories.

D. Engineering Buildings and Maintenance Unit 9270 sq. ft.

Construction

Foundation	- Pad and strip concrete.
Structure	- Steel framed building, load bearing brickwork on concrete pad and strip foundations.
Roof	- Galvanized corrugated sheet metal on steel trusses on 15' center.
Walls	- Galvanized profiled sheet metal and brickwork plastered internally.
Floors	- Granolithic (woodblock in offices 7 classrooms).
Stairs	- Reinforced concrete.
Courtyard	- 1" tarmecadam on a 6" crushed rock base.
Doors	- Steel framed with semi-solid wood for offices, classrooms, storerooms, etc.
Windows	- Translucent acrylic profiled sheeting and glass louvers in aluminum frames in timber sub-frames.
Ceiling	- Softboard (celotex) in offices.

E. Student Hostels 4 ea. 5840 sq. ft.

The success of the 2 bed student rooms and the comparative lack of success of the galleys in the University dormitories at Zomba, along with site conditions, suggested a redesign, utilizing the same bed units and study desks, incorporating a modest common room with a patio entrance at the nodal point of the building. The design involves 28 2-bed units on levels 1, 1a and 2 utilizing the gentle slope on the site and efficiently equating "out and fill" to economize on excavation. Level 1 incorporates student rooms, showers, toilets, laundry, drying area and storage. Level 1a is totally devoted to student bedrooms and Level 2 incorporates toilets, one galley, and a common room with patio entrance in addition to student rooms. The basic planning is identical for both the men's and women's halls. The only difference occurring is in the toilet facility where urinals are replaced by additional water closets. The floor space of 105 sq. ft. per student room was ample in previous design; however, the total circulation area per student is 208 sq. ft.

Construction

- Foundation - Concrete strip foundations with reinforced concrete slab.
- Structure - Load bearing brickwork.
- Roof - Profiled galvanized sheet metal overlaid with ceramic fire clay tiles supported by steel purlins.
- Stairs - Reinforced concrete.
- Walls - Brickwork plastered internally.
- Windows - Adjustable glass louvers in aluminum frames in timber sub-frames and with aluminum screening externally.
- Floors - P.V.C. tiles in student rooms and common room granolithic elsewhere on reinforced concrete slab.
- Doors - Semi-solid flush timber ply doors in metal frames in bedrooms and toilets. Glass doors to entrance and framed ledged and braced timber doors to laundry and storeroom entrances.
- Ceilings - Softboard (celotex).

F. Extension to Students Union 1600 sq. ft.

Proposed expansion is an extension of the facilities provided at present in the Junior common room.

Construction:

- Foundation - Concrete strip foundations with reinforced slab.
- Structure - Load bearing brickwork internally and externally.  
Part of the roof area is raised on a light steel frame to provide clerestory lighting.
- Roof - Galvanized corrugated sheet metal on steel purlins; translucent acrylic sheeting at clerestory.
- Windows - Glass louvers.
- Floors - Granolithic on reinforced concrete slab.
- Doors - Timber glass doors in hardwood sub-frames.

(See floor plan in Annex.)

G. Renovations

The following work is included: increasing the services such as water and gas to biology and plant laboratories, conversion of womens hostel to administration block, conversion of auditorium by removing central stage and lighting to north wall, thus creating a more flexible assembly area.

H. Sewer and Drainage

The existing system of septic tanks is to be replaced by a piped gravity flow disposal to oxidation ponds. All new structures will be connected to this system.

I. Electrical System Expansion

The existing switch room is adequate in size to extend the switch gear for Phase III development and probably for the overall scheme on the Master Plan. The consultant's plan calls for the main distribution to be housed in the existing switch room and sub-panels provided for certain areas such as hostels, housing, etc. The local electrical supply is adequate with the proposed extended lines.

J. General Siteworks and Surface Water Drainage

This work will include service roads and car parks to the same standards as existing facilities. Paths and surface water drains will be provided where required based on area disturbed for cut and fill during construction. This work will also include general landscaping after final construction is completed.

K. Sports Field

This is a new sports field as the present sports field will be turned into the students residential area according to the Master Plan. Allowance is made only that the area be levelled, topsoiled and grassed. No provision is made at this time for dressing rooms or equipment. The cost estimate is based on the local rate of 92 cents per square yard for levelling, topsoiling and planting grass.

L. Detailed Cost Estimates

Detailed cost estimates of the various capital components, housing, hostels, sewers and drainage, etc. are available in AFR/ESA. A summary is provided in the following table.

Cost Estimates - Bunda College (January 12, 1976)

	<u>Foreign Exchange</u>	<u>Local Cost</u>	<u>Total Cost</u>
1. Technical Assistance			
Senior Staff	\$1,215,000	\$ ---	\$1,215,000
Short-Term Consultants	37,000	---	37,000
Participant Training	400,000	---	400,000
Rural Devel. Conferences	---	75,000	75,000
Lab Equipment	<u>273,000</u>	<u>---</u>	<u>273,000</u>
	1,925,000	75,000	2,000,000
2. Recurrent Costs			
Teaching and research	---	88,500	88,500
Student Living	---	159,765	159,765
Maintenance	---	58,675	58,675
Transportation	---	69,575	69,575
Student Allowance	---	88,668	88,668
Salaries and supplements	<u>---</u>	<u>353,564</u>	<u>353,564</u>
	---	818,747	818,747
3. Construction Costs			
Construction			
Housing	359,318	578,582	937,900
Labs and Workshops	132,825	195,730	328,555
Hostels and Student Union Ext.	288,363	398,763	687,126
External Work	87,458	271,723	359,231
Renovations	<u>18,400</u>	<u>18,400</u>	<u>36,800</u>
Construction Sub-Total	886,364	1,463,248	2,349,612
Architect's Fees	---	312,000	312,000
GOM Inspection Services	-	89,700	89,700
	886,364	1,864,948	2,751,312
Contingency (15%)	<u>132,955</u>	<u>279,742</u>	<u>412,697</u>
	1,019,319	2,144,690	3,164,009
4. Total	\$2,944,319	\$3,038,437	\$5,982,756*

\* Differs from Table X total by \$991 due to rounding.

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

(INSTRUCTION: THIS IS AN OPTIONAL FORM WHICH CAN BE USED AS A GUIDE TO ORGANIZING DATA FOR THE PAR REPORT. IT NEED NOT BE RETAINED OR SUBMITTED.)

Life of Project: 5 years  
From FY 1976 to FY 1981  
Total U.S. Funding: \$4,000,000  
Date Prepared: Apr. 15, 1975

Project Title & Number: Bunda Agricultural College

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes: (A-1)</p> <p>The broader objective to which this project contributes:</p> <p>To assist the GOM in removal of constraints to development in the rural sector.</p>	<p>Measures of Goal Achievement: (A-2)</p> <p>Improvement in agricultural productivity/income, in part attributable to project impact.</p>	<p>(A-3)</p> <p>Professional judgments as to increase in Malawian skills and performance in execution of rural development programs and by noted improvements in agricultural productivity/income in part attributable to project impact.</p>	<p>Assumptions for achieving goal targets: (A-4)</p> <ol style="list-style-type: none"> <li>The GOM will continue to support rural development programs.</li> <li>Skilled manpower will find development related posts in the public and private sectors.</li> </ol>

ANNEX C  
C-1

PROJECT DESIGN SUMMARY  
 LOGICAL FRAMEWORK

Life of Project: 5 years  
 From FY 1976 to FY 1981  
 Total U.S. Funding \$4,000,000  
 Date Prepared: Sept. 15, 1975

Project Title & Number: Bunda Agricultural College

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Purpose: (B-1)</p> <p>To build a modern, localized agricultural training institution (The University of Malawi's Bunda College of Agriculture) which is capable of providing competent and skilled manpower sensitive to the technical, social, and managerial problems influencing rural development.</p>	<p>Conditions that will indicate purpose has been achieved: End-of-Project status. (B-2)</p> <p>1. Bunda's faculty and facilities are expanded to accommodate an increased student output.</p> <p>A. Adequate laboratory hostel and field space provided for student needs.</p> <p>B. 90% of faculty Malawians.</p> <p>2. Bunda's localized faculty disseminates skills/knowledge relevant to Malawi's rural sector needs.</p> <p>A. New 3/5 year curriculum in use.</p> <p>B. Proper relevance achieved between classroom, laboratory, and field teaching.</p>	<p>(B-3)</p> <p>1. On-site inspection of facilities and faculty.</p> <p>2. Professional judgments regarding the quality and capability of Bunda to produce diplomates and graduates capable of filling Malawi's rural sector needs.</p>	<p>Assumptions for achieving purpose: (B-4)</p> <p>1. Paralleled TA and capital support will remain available from AID and GOM.</p> <p>2. Budget support for capital and recurrent costs will be provided per Project Paper Section - <u>Financial Analysis</u>.</p> <p>3. University of Malawi and Bunda leadership will continue to be sensitive to and incorporate rural development related materials in course offering.</p> <p>4. Participants for training will be provided for schedules determined.</p>

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project: 5 years  
From FY 1976 to FY 1981  
Total U.S. Funding \$4,000,000  
Date Prepared: Sept. 15, 1975

Project Title & Number: Bunda Agricultural College

PAGE 3

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS									
Project Outputs: (C-1)	Magnitude of Outputs: (C-2)	(C-3)	Assumptions for achieving outputs: (C-4)									
1. Manpower	<table border="0"> <tr> <td></td> <td style="text-align: center;">End of</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">Present</td> <td style="text-align: center;">Project</td> </tr> <tr> <td></td> <td style="text-align: center;">Status</td> <td style="text-align: center;">Status</td> </tr> </table>		End of			Present	Project		Status	Status	1. See A, B, and C of previous columns - Bunda records and professional evaluation.	1. GOM and OSARAC (AID) will coordinate support and inputs.
	End of											
	Present	Project										
	Status	Status										
A. Trained students (annual output).	1. A. <u>Bunda Status</u> Diplomas each year 42 65	2. See above. REDSO/EA records.	2. Required capital TA and recurrent costs will be provided by AID and GOM.									
B. Teaching Staff	Degrees each year 9 23	3. Professional Evaluation.										
C. Trained Bunda teaching staff	B. Senior staff increased from 26 to 36. No. of Malawians in posts increase from 6 to 32.	4. A. Bunda records	3. AID will place participants at the proper time.									
2. Facilities		B. Contract staff records and reports										
3. Curriculum	C. 20 new Malawians with U.S. training in staff positions at Bunda.											
4. Quality of Training												
A. Revised curricula, lesson plans, teaching materials	2. See Project Paper, technical analysis for details and AFR/ESA for further details.											
5. Classroom instruction	3. Curriculum											
	A. Adoption of new 3/5 year curriculum											
	4.A. Increased content of practicals in diplomate course (up approximately 25% from 1974 to 40% in 1980.											
	B. Expect 6 senior contract members to carry full teaching load for a period of 4 to 5 years.											

C-3

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

1976 5 years 1981  
\$4,000,000  
Sept. 15, 1975  
Page 4

Bunda Agricultural College

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	BY WHAT AGENCY/IES
<p>I. <u>GOM</u> A. Recurrent Budget: \$818,747. GOM will expand recurrent budget levels during project life and provide basic salary and supplements for staff. B. Capital Investments \$1,164,000.</p> <p>II. <u>AID</u> A. Technical Assistance \$2,000,000. It is proposed that AID provide financing for the following: 1. 27 man-years of senior staff @\$45,000 (\$1,215,000) 2. Consultancies @\$7,400/MY for 5 MY (\$37,000) 3. 40/MY participant training (\$400,000) 4. Rural development conferences (\$75,000) 5. Lab equipment (\$273,000) B. Capital investments (\$2,000,000). It is proposed that AID finance 100% of the</p>	<p>Implementation targets, time frame and discussions are included in Project Paper implementation arrangements section.</p>	<p>I. AID Project Agreements II. AID Project Agreement and PIO/Ts, PIO/Ps and PIO/Cs.</p>	<p>Adequate GOM recurrent budget resources.</p>

(continued)

PROJECT DESIGN SUMMARY  
 LOGICAL FRAMEWORK

1976 5 years 1981  
 \$4,000,000  
 Sept. 15, 1975  
 Page 4

Project Title & Number: **Bunda Agricultural College**

NARRATIVE SUMMARY	OBJECTIVELY MEASURABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>foreign exchange and 35% of the local costs.</p>			
<ol style="list-style-type: none"> <li>1. AID foreign exchange expenditure \$1,019,000</li> <li>2. AID local costs expenditure \$981,000.</li> </ol>			

## ANNEX D

CHECKLIST OF STATUTORY CRITERIA

In the right-hand margin, for each item, write answer or, as appropriate, a summary of required discussion. As necessary, reference the section of the Capital Assistance Paper, or other clearly identified and available document, in which the matter is further discussed.

The following abbreviations are used in the checklist:

FAA - Foreign Assistance Act of 1961, as amended

FAA, 1973 - Foreign Assistance Act of 1973

App. - Foreign Assistance and Related Program<sup>s</sup> Appropriation Act, 1974

M<sup>a</sup> - Merchant Marine Act of 1936, as amended.

I. FULFILLMENT OF STATUTORY OBJECTIVES

A. Needs Which the Loan is Addressing \*

1. FAA Section 103. Discuss the extent to which the loan will alleviate starvation, hunger and malnutrition, and will provide basic services to poor people enhancing their capacity for self-help.

2. FAA Section 104. Discuss the extent to which the loan will increase the opportunities and motivation for family planning; will reduce the rate of population growth; will prevent and combat disease; and will help provide health services for the great majority of the population.

3. FAA Section 105. Discuss the extent to which the loan will reduce illiteracy, extend basic education, and increase manpower training in skills related to development.

4. FAA Section 106. Discuss the extent to which the loan will help solve economic and social development problems in fields such as transportation, power, industry, urban development, and export development.

To the extent that the grant proceeds allow Bunda College to increase its output of trained agriculturalists for work in the private & public sector, there will then exist an expanded manpower pool to confront & mitigate, to a larger degree than before, those structural bottlenecks in the economy which have blocked efforts to alleviate hunger & malnutrition.

Not applicable.

Purpose of grant is to expand the facilities at Bunda Agricultural College. Grant funds will be used to fund participant trainees and technicians, the latter to serve on the faculty at Bunda in order that students receive best possible education. A measure of self-help will be achieved as some graduates return to Bunda as teachers

Not applicable.

\* Wherever the word "Loan" appears, read "Grant".

5. FAA Section 107. Discuss the extent to which the loan will support the general economy of the recipient country: or will support development programs conducted by private or international organizations.

Malawi is predominately an agricultural economy. The proposed assistance will have the effect of providing the manpower, trained in technical skills, necessary to expand output over a broad segment of the economy.

#### B. Use of Loan Funds

1. FAA Section 110. What assurances have been or will be made that the recipient country will provide at least 25% of the costs of the entire program, project or activity with respect to which such assistance is to be furnished under Sections 103-107 of the FAA?

See financial section.

2. FAA Section 111. Discuss the extent to which the loan will strengthen the participation of the urban and rural poor in their country's development, and will assist in the development of cooperatives which will enable and encourage greater numbers of poor people to help themselves toward a better life.

Funds go towards training agricultural specialists who, in turn, will be able to assist Malawian farmers meet their problems.

3. FAA Section 112. Will any part of the loan be used to conduct any police training or related program (other than assistance rendered under Section 515(c) of the Omnibus Crime Control and Safe Streets Act of 1968 or with respect to any authority of the Drug Enforcement Administration of the FBI) in a foreign country?

No.

4. FAA Section 113. Describe the extent to which the programs, projects or activities to be financed under the loan give particular attention to the integration of women into the national economy of the recipient country.

1. Student enrollment.
2. Course work.
3. Dormitory space.

5. FAA Section 114. Will any part of the loan be used to pay for the performance of abortions as a method of family planning or to motivate or coerce any person to practice abortions?

No.

## II. COUNTRY PERFORMANCE

### A. Progress Towards Country Goals

1. FAA §§201(b)(5), 201(b)(7), 201(b)(8), 208. Discuss the extent to which the country is:

(a) Making appropriate efforts to increase food production and improve means for food storage and distribution.

GOM maintains its basic pre-independence economic strategy, as posed in its Statement of Development Policies, 1971-1980, of concentrating on raising the productivity of small farmers.

Allocation of public sector investment remains roughly constant, 36% allocated for transport & power facilities, & 19% for agriculture (comparable percentages in 1964-70 were 40 and 20, respectively).

(b) Creating a favorable climate for foreign and domestic private enterprise and investment;

GOM policies and priorities are set out in three-year development plans which go through annual revisions. Projected development expenditures under the current 3-yr. program (1974/75-1976/77) average about \$US 60 million per year, of which \$US 10 million is financed from domestic resources.

- (c) Increasing the people's role in the developmental process: The proceeds of the grant will be used to expand the training capacity at Bunda College. This, in turn, should have the effect of expanding services available to rural poor by teaching them the requisite techniques to expand production.
- (d) Allocating expenditures to development rather than to unnecessary military purposes or intervention in other free countries' affairs: Projected development expenditures under the current 3-year program (1974/75-1976/77) average about \$US 60 million per year, of which \$US 10 million per year would be financed from domestic resources.
- (e) Willing to contribute funds to the project or program: Yes, see financial section.
- (f) Making economic, social and political reforms such as tax collection improvements and changes in land tenure arrangement; and making progress toward respect for the rule of law, freedom of expression and of the press, and recognizing the importance of individual freedom, initiative, and private enterprise; Satisfied. Within the limits of the segment of its population in the monetary economy a tax system has been established, new lands are developed outside of the traditional tribal holdings. Unable to determine if land tenure is a major problem. See Project Paper Social Cultural Feasibility, other problems.

(g) Responding to the vital economic, political and social concerns of its people, and demonstrating a clear determination to take effective self-help measures. **The OOM has and is continuing in its policy and actions to invest resources to improve the economic and social well-being of its people.**

## B. Relations with the United States

1. FAA Sec. 620(c). If assistance is to a government, is the government indebted to any U.S. citizen for goods or services furnished or ordered where: (a) such citizen has exhausted available legal remedies, including arbitration, or (b) the debt is not denied or contested by the government, or (c) the indebtedness arises under such government's or a predecessor's unconditional guarantee?

**Satisfied. No such indebtedness exist.**

2. FAA Sec. 620(d). If the loan is intended for construction or operation of any productive enterprise that will compete with U.S. enterprise, has the country agreed that it will establish appropriate procedures to prevent export to the U.S. of more than 20% of its enterprises annual production during the life of the loan?

**Satisfied.**

3. FAA Sec. 620(e)(1). If assistance is to a government, has the country's government, or any agency or subdivision thereof, (a) nationalized or expropriated property owned by U.S. citizens or by any business entity not less than 50% beneficially owned by U.S. citizens, (b) taken steps to repudiate, or nullify existing contracts or agreements with such citizens or entity, or (c) imposed or enforced discriminatory taxes or other exactions, or restrictive maintenance or operation conditions? If so, and more than six months has elapsed since such occurrence, identify the document indicating that the government, or appropriate agency or subdivision thereof, has taken appropriate steps to discharge its obligations under international law toward such citizen or entity? If less than six months has elapsed, what steps, if any, has it taken to discharge its obligations?

**Satisfied. Malawi has not taken such steps or actions.**

4. FAA Sec. 620(j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction by job action of U.S. property, and failed to take appropriate measures to prevent a recurrence and to provide adequate compensation for such damage or destruction?

There have been no instances in which it has been necessary that the COM take action in this connection.

5. FAA Sec. 620(i). Has the government instituted an investment guaranty program under FAA Sec. 221(i)(1) 234(a)(1) for the specific risks of inconvertibility and expropriation or confiscation?

Satisfied. Malawi has signed the Investment Guaranty Program.

6. FAA 4620(o). Fisherman's Protective Act of 1924, as amended, Section 5. Has the country seized, or imposed any penalty or sanction against, any U.S. fishing activities in international waters? If, as a result of a seizure, the U.S.G. has made reimbursement under the provisions of the Fisherman's Protective Act and such amount has not been paid in full by the seizing country, identify the documentation which describes how the withholding of assistance under the FAA has been or will be accomplished.

Satisfied. Malawi is land-locked.

7. FAA Sec. 620(a). Has the country been in default, during a period in excess of six months, in payment to the U.S. on any FAA loan?

Satisfied. Malawi is not in default on any FAA loan.

8. FAA Sec. 620(t). Have diplomatic relations between the country and the U.S. been severed? If so, have they been renewed?

No.

C. Relations with Other Nations and the U.N.

1. FAA Sec. 620(i). Has the country been officially represented at any international conference when that representation included planning activities involving insurrection or subversion directed against the U.S. or countries receiving U.S. assistance?

No, as far as is known.

2. FAA Secs. 620(a), 620(n). Has the country sold, furnished, or permitted ships or aircraft under its registry to carry to Cuba or North Vietnam, items of economic, military or other assistance?

No, as far as is known.

3. FAA Sec. 620(u); App. Sec. 107. What is the status of the country's U.N. dues, assessments or other obligations? Does the loan agreement bar any use of funds to pay U.N. assessments, dues or arrearages?

No, Malawi is not in default on its international obligations.

D. Military Situation

1. FAA Sec. 620(i). Has the country engaged in or prepared for aggressive military efforts directed against the U.S. or countries receiving U.S. assistance?

No.

2. FAA Sec. 620(s). What is (a) the percentage of the country's budget devoted to military purposes, and (b) the amount of the country's foreign exchange resources used to acquire military equipment, and (c) has the country spent money for sophisticated weapons systems purchased since the statutory limitation became effective?

- 2. (2) Is the country diverting U.S. development assistance or PL 480 sales to military expenditures? No.
- 3. (3) Is the country diverting its own resources to unnecessary military expenditures? (Findings on these questions are to be made for each country at least once each fiscal year and, in addition, as often as may be required by a material change in relevant information.) No.

III. CONDITION OF THE LOAN

A. General Soundness

Interest and Repayment

1. FAA §§201(d), 201(b)(2). Is the rate of interest excessive or unreasonable for the borrower? Are there reasonable prospects for repayment? What is the grace period interest rate; the following period interest rate? Is the rate of interest higher than the country's applicable legal rate of interest. Not applicable to grant assistance.

Financing

1. FAA §201(b)(1). To what extent can financing on reasonable terms be obtained from other free-world sources, including private sources within the U.S.?

GOM has received financing, in the past, of Bunda College programs from the British Government & private British & German sources. Additionally, the Carnegie Foundation, UNDP & West Germany have been considering financing projects at Bunda.

Economic and Technical Soundness

1. FAA §§201(b)(2), 201(e). The activity's economic and technical soundness to undertake loan does the loan application, together with information and documents, indicate that funds will be used in an economically sound manner?

Yes

2. FAA 4611(c)(1). Have engineering, financial, and other plans in country to carry out assistance, and a reasonable firm estimate of the cost of assistance to the U.S., been completed?

3. FAA 4611(b); Annex 0101. If the loan or grant is for a water or related land-reclamation construction project or program, do plans include a cost-benefit comparison? Does the project or program meet the relevant U.S. construction standards and criteria used in determining feasibility?

Not applicable.

4. FAA 4611(c). If this is a Capital Assistance Project with U.S. financing in excess of \$1 million, has the principal A.I.D. officer in the country certified as to the country's capability effectively to maintain and utilize the project?

Yes. See Annex of project paper.

## B. Relation to Achievement of Country and Regional Goals

### Country Goals

1. FAA 45207, 231(a). What is this loan's relation to:

The grant is institution-building in nature, it funds the expansion of the Bunda School, which will enable Malawi to more effectively meet its needs for growth in agricultural sector.

(a) Institutions needed for a democratic society and to assure maximum participation on the part of the people in the task of economic development?

(b) Enabling the country to meet its food needs both from its own resources and through development, with U.S. help, of infrastructure to support increased agricultural productivity?

Ultimate impact of grant will be felt in the dispersion of extension services to the rural poor which, in turn, will lead to more productive agricultural practices & increased production.

(c) Meeting increasing need for trained manpower?

Grant will finance participants, TA in form of instructors, construction of facilities--all aimed at increasing number of trained Malawi agriculturalists.

(d) Developing programs to meet public health needs?

Not applicable.

(e) Assisting other important economic, political, and social development activities, including industrial development, growth of free labor unions; cooperatives and voluntary agencies; improvement of transportation and communication systems; capabilities for planning and public administration; urban development; and modernization of existing laws?

Not applicable.

2. FAA §201(b)(4). Describe the activity's consistency with and relationship to other development activities, and its contribution to realizable long-range objectives.

Project addresses manpower constraint. This factor affects all agriculture development projects.

3. FAA §201(b)(2). How will the activity to be financed contribute to the achievement of self-sustaining growth?

It will provide (a) the basis for an expanded college faculty, (b) expanded Malawi faculty, (c) more & better trained students. The latter will enter the public & private sectors. This process will aid Malawi meet its public/private sector needs for trained personnel & allow a self-perpetuating expansion of faculty & students at Bunda.

4. FAA §201(f). If this is a project loan, describe how such project will promote the country's economic development, taking into account the country's human and material resource requirements and the relationship between ultimate objectives of the project and overall economic development.

This is not a project loan.

5. FAA §201(b)(3). In what ways does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities?

By providing the trained manpower needed to work through pertinent GOM ministries to provide necessary services to those in agricultural sector (e.g., demonstration of better production or marketing techniques).

6. FAA §221(b). How does the program under which no distance is provided recognize the particular needs, desires, and capacities of the country's people; utilize the country's intellectual resources to encourage institutional development; and support civic education and training in skills required for effective participation in political processes.

The project utilizes existing personnel at Bunda as a base from which to develop the agricultural studies expertise of the college.

7. FAA §601(a). How will this loan encourage the country's efforts to:  
 (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture, and commerce; and (f) strengthen free labor unions?

(a) By providing trained manpower, it is expected that there will be a concomitant increase in production, though most of this will not be in the export sector.  
 (b) Not applicable.  
 (c) Not applicable.  
 (d) Not applicable.  
 (e) Technical efficiency of agriculture sector is strengthened through expansion of training facilities & increased enrollment of students whose careers will be, in part, directed towards removal of institutional & other constraints to increased production.  
 (f) Not applicable.

8. FAA §202(e). Indicate the amount of money under the loan which is going directly to private enterprise; going to intermediate credit institutions or other borrowers for use by private enterprise; being used to finance imports from private sources; or otherwise being used to finance procurements from private sources.

None.

9. FAA §611(a)(2). What legislative action is required within the recipient country? What is the basis for a reasonable anticipation that such action will be completed in time to permit orderly accomplishment of purposes of loan?

Budgetary appropriations for GOM contribution. GOM cable to AmEmb/Blantyre.

### Regional Goals

1. FAA §619. If this loan is assisting a newly independent country, to what extent do the circumstances permit such assistance to be furnished through multilateral organizations or plans?

Not applicable.

2. FAA §209. If this loan is directed at a problem or an opportunity that is regional in nature, how does assistance under this loan encourage a regional development program? What multilateral assistance is presently being furnished to the country?

This grant is not directed at a problem of a regional nature.

C. Relation to U.S. Economy

Employment, Balance of Payments,  
Private Enterprise.

1. FAA 55201(b)(6); 102. What are the possible effects of this loan on U.S. economy, with special reference to areas of substantial labor surplus? Describe the extent to which assistance is constituted of U.S. commodities and services, furnished in a manner consistent with improving the U.S. balance of payments position.
 

None.  
\$1,925,000 out of \$4,000,000.
2. FAA 55012(b); 635(a). What steps have been taken to assure that, to the maximum extent possible, foreign currencies owned by the U.S. and local currencies contributed by the country are utilized to meet the cost of contractual and other services, and that U.S. foreign owned currencies are utilized in lieu of dollars?
 

Not applicable.
3. FAA 5501(a); App. 5103. If this loan is for a capital project, to what extent has the Agency encouraged utilization of engineering and professional services of U.S. firms and their affiliates; If the loan is to be used to finance direct costs for construction, will any of the contractors be persons other than qualified nationals of the country or qualified citizens of the U.S.? If so, has the required waiver been obtained?
 

The Project Paper requests and presents a justification for waiver. See Annex H. U.S. firms and affiliates given equal opportunity.

4. FAA §603(c). Provide information as to be taken to utilize U.S. Government personnel property in lieu of the procurement of new property.

**Excess property will be used if determined appropriate.**

5. FAA §604. What efforts have been made to assist U.S. small business to participate equitably in the furnishing of commodities and services financed by this loan?

**Procurement will be advertised in CED.**

6. FAA §621. If the loan provides technical assistance, how is private enterprise on a contract basis utilized? If the facilities of other Federal agencies will be utilized, in what ways are they particularly suitable; are they competitive with private enterprise (if so, explain); and how can they be made available without undue interference with domestic programs?

**Contracts for technical assistance will be signed with private enterprise. At this point it does not appear that any federal agency will provide services.**

7. FAA §611(c). If this loan involves a contract for construction that obligates in excess of \$100,000, will it be on a competitive basis? If not, are there factors which make it impracticable?

**Yes.**

8. FAA §601(b). Describe the efforts made in connection with this loan to encourage and facilitate participation of private enterprise in achieving the purposes of the Act.

**Competitive bidding will be utilized for all construction work. Technical assistance personnel will be from the U.S. private sector.**

#### Procurement

1. FAA §604(a). Will commodity procurement be restricted to U.S. except as otherwise determined by the President?

**Procurement of laboratory equipment and other teaching facilities will be U.S. only. Procurement of construction materials will be Code 935 if waiver approved. See Annex H.**

2. FAA §604(b). Will any part of this loan be used for bulk commodity procurement at adjusted prices higher than the market price prevailing in the U.S. at time of purchase?

**No.**

3. FAA §604(e). Will any part of this loan be used for procurement of any agricultural commodity or product thereof outside the U.S. when the domestic price of such commodity is less than parity?

No.

4. FAA §604(f). Will the agency receive the necessary pre-payment certification from suppliers under a commodity import program agreement as to description and condition of commodities, and on the basis of such, determine eligibility and suitability for financing?

Not applicable.

D. Other Requirements

1. FAA §201(b). Is the country among the 20 countries in which development loan funds may be used to make loans in this fiscal year?

Not applicable.

2. App. §105. Does the loan agreement provide, with respect to capital projects, for U.S. approval of contract terms and terms?

Yes.

3. FAA §620(k). If the loan is for construction of a production enterprise, with respect to which the aggregate value of assistance to be furnished will exceed \$100 million, what preparation has been made to obtain the express approval of the congress?

Not applicable.

4. FAA §620(b), 620(f). Has the President determined that the country is not dominated or controlled by the international Communist movement? If the country is a Communist country (including but not limited to, the countries listed in FAA §620(f)) and the loan is intended for economic assistance, have the findings required by FAA §620(f) and App. §109(b) been made and reported to the Congress?

Circular 175 Procedure and Secretary's Determination are presently under consideration in Washington.

5. 17A Section 100(h). What steps have been taken to insure that the loan will not be used in a manner which, contrary to the best interest of the United States, promotes or assists the foreign aid projects of the Communist-bloc countries?

**ProAg contains provision prohibiting commingling of Communist bloc and U.S. assistance.**

6. FAA Section 325(i). Will any part of this loan be used in financing non-U.S. manufactured automobiles? If so, has the required waiver been obtained?

No.

7. FAA Section 320(g). Will any part of this loan be used to compensate owners for expropriated or nationalized property? If any assistance has been used for such purpose in the past, has appropriate reimbursement been made to the U.S. for sums diverted?

No.

8. FAA Section 201(f). If this is a project loan, what provisions have been made for appropriate participation by the recipient country's private enterprise?

Not applicable.

9. App. Section 103. Will any funds under the loan be used to pay pensions, etc., for persons who are serving or who have served in the recipient country's armed forces?

No.

10. WMA Section 901.b. Does the loan agreement provide for compliance with U.S. shipping requirements that at least 50% of the gross tonnage of all commodities financed with funds made available under this loan (computed separately by geographic area for dry bulk carriers, dry cargo liners, and tankers) be transported on privately-owned U.S. flag commercial vessels to the extent such vessels are available at fair and reasonable rates for U.S. flag vessels and that at least 50% of the gross freight revenue generated by all shipments financed with funds made available under this loan and transported on dry cargo liners be paid to or for the benefit of privately-owned U.S. flag commercial vessels?

Yes .

11. FAA Section 109. Has the President determined if the recipient country has failed to take adequate steps to prevent narcotic drugs produced or procured in, or transported through, such country from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents or from entering the United States unlawfully?

No.

12. App. Section 110. Is the loan being used to transfer funds to world lending institutions under FAA Sec. 202(d) and Sec. 251(h)?

No.

13. App. Section 601. Are any of these funds being used for publicity or propaganda within the United States?

No.

14. FAA Section 612(d) and Section 40 of PL 93-189 (FAA of 1973). Does the United States own host country excess foreign currency and, if so, what arrangements have been made for its release in compliance with Section 40 (FAA of 1973)?

No.

15. FAA Section 604(d). Will provisions be made for placing marine insurance in the U.S. if the recipient country discriminates against any marine insurance company authorized to do business in the U.S.?

Yes.

16. Section 29 of PL 93-189 (FAA of 1973). Is there a military base located in the recipient country which base was constructed or is being maintained or operated with funds furnished by the U.S., and in which U.S. personnel carry out military operations? If so, has a determination been made that the government of such recipient country has, consistent with security, authorized access to such military base on a regular basis to bona fide news media correspondents of the U.S.

Not applicable.

17. FAA Section 610(c). Will a grant be made to the recipient country to pay all or part of such shipping differential as is determined by the Secretary of Commerce to exist between the cost of shipping such goods or services by air and by sea?

Not applicable.

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 93. Are there any other...  
 94. Are there any other...  
 95. Are there any other...  
 96. Are there any other...  
 97. Are there any other...  
 98. Are there any other...  
 99. Are there any other...  
 100. Are there any other...

Not applicable.

19. Are there any other... 113. Have the House and Senate... in Appropriations been... 15 days in advance of the... obligation of funds... of this project?

Yes.

IV. FOREIGN ASSISTANCE ACT of 1974, As Amended

1. FAA, 1974, Section 103(b) - Is the grant being made with a country whose per capita income is under \$300 p/a and is severely affected by world-wide commodity price increases? Is special attention being given to increasing agricultural productions?

Yes.

2. FAA, 1974, Section 115 - Is the country receiving funds pursuant to the FAA 1961, as amended, sections 103 thru 107, also receiving security supporting assistance, Middle East Peace, or IndoChina Postwar Reconstruction funds? If the country is receiving SSA, IPR, MEP funds, does the proposed assistance fall under the exceptions to the general prohibition of Section 115, to wit:  
 (a) funds made available under Section 104 for purposes of Title X of Chapter 2 of Part I (programs relating to population growth),  
 (b) funds made available for humanitarian assistance through international organizations, and  
 (c) funds obligated for regional programs.

No.

3. FAA, 1974, Section 502B. - If country is to receive Security Supporting Assistance is it engaging on a consistent pattern of gross violations of internationally recognized human rights? If so, has the President notified Congress of the extraordinary circumstances necessitating the assistance?

No.

4. FAA, 1974, Section 620(n) -  
Has the recipient country sold or furnished any equipment, materials or commodities to North Vietnam or permitted ships or aircraft under its registry to transport equipment, materials or commodities to or from North Vietnam? If so, has the President determined that loans, guarantees, grants or any other assistance, or sales are in the national interest of the U.S.?

No.

5. FAA, 1974, Section 659 - Does the recipient have located on it a military base constructed or maintained or operated with funds furnished by the U.S. and with personnel of the U.S. are carrying out military operations from such base? If so, has the President determined that the recipient government has authorized access on a regular basis to bona fide news media correspondents of the U.S. to such base.

No.

6. FAA, 1974, Section 660 - Are funds being provided to give financial support to police, police training, prisons, or other law enforcement forces of the recipient government? If so, are the funds so provided to support programs under Section 515(c) of the Omnibus Crime Control and Safe Streets Act of 1968, an authority of the Drug Enforcement Administration or the Federal Bureau of Investigation which relates to crimes of a nature unlawful in the U.S., or with respect to section 482 of the FAA?

No.

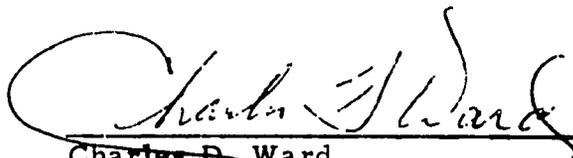
7. FAA, 1974, Section 662 - Will funds be used by the CIA for operations in the foreign country for activities other than mere intelligence gathering? If so, has the President determined, and conveyed this determination to the Congress, that such operations are important for the national security of the U.S.?

No.

## SECTION ONE CERTIFICATION

## BUNDA AGRICULTURAL COLLEGE - MALAWI

I, Charles D Ward, the principal officer of the Agency for International Development in the Southern Africa Region (OSARAC), having taken into account, among other things, the maintenance and utilization of projects in Malawi previously financed or assisted by the United States (specifically earlier AID assistance to the University of Malawi System), the performance of the several Ministries of the Government of Malawi (Education, Works and Agriculture), and the previous assistance from other donors specifically directed to the development of Bunda College of Agriculture, do hereby certify that in my judgment the Government of Malawi has both the financial capability and the human resource capability to effectively maintain and utilize the capital assistance to be carried out under this project.



Charles D. Ward  
Regional Development Officer

Date: 11 September 1975



Department of State

TELEGRAM

ANNEX F: Grantee's Letter Requesting Assistance

C.FILE

CR-017340

ACTION: AID - 20750  
INFO: CHARGE ECON CHRON RE

UNCLASSIFIED  
Classification

CONT RE

08 DEC 73 15:05

R 080845Z DEC 73  
FM AMEMBASSY BLANTYRE  
TO RUEHC/SECSTATE WASHDC 6697  
INFORUEHPCE/AMEMBASSY MBABANE 557  
RUVQC/AMEMBASSY NAIROBI 1611  
BT  
UNCLAS BLANTYRE 1691

017340

AIDAC

ACTION TAKEN

E. O. 11652: N/A

DATE AND ER NOB 12-19-73

SUBJ: MALAWI ASSISTANCE REQUEST: BUNDA COLLEGE

REF: ETATE 227134 AND 231513, BLANTYRE 1621

NAIROBI FOR REDSO/EA

1. BY LETTER DTD DEC 7 GOM SECRETARY TO TREASURY FORWARDED REQUEST FOR USG ASSISTANCE TO HELP PLAN AND EXECUTE BUNDA COLLEGE PHASE THREE DEVELOPMENT. PROJECT DESCRIPTION REQUESTED STATE REFTELS FOLLOWS:

BEGIN QTE:

COUNTRY: MALAWI

PROJECT TITLE: PHASE THREE DEVELOPMENT OF BUNDA COLLEGE OF AGRICULTURE, UNIVERSITY OF MALAWI

PROJECT NUMBER: . . . . .

OBJECTIVE/ACTIVITY: HUMAN RESOURCE DEVELOPMENT

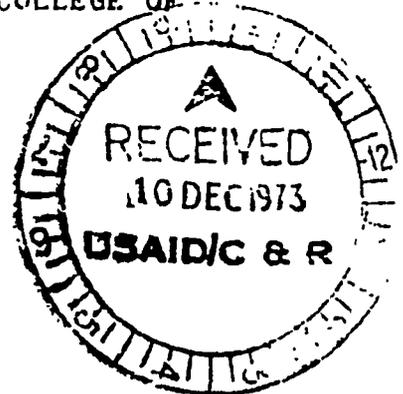
GUNDS: GRANT

INITIAL OBLIGATION: 1974

SCHEDULED FINAL OBLIGATION: 1985

PROJECT TARGET AND COURSE OF ACTION

(I) TO HELP PLAN AND DEVELOPMENT PHASE THREE OF BUNDA COLLEGE OF AGRICULTURE TO ENABLE IT TO MEET THE REQUIRED MAN-POWER OF GRADUATES AND DIPLOMATES IN THE MALAWIAN ECONOMY





Department of State

TELEGRAM

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Classification

02 DEC 73 10:20

FROM 1974 TO 1985 BY FINANCING THE CAPITAL DEVELOPMENT COSTS (EQUIPMENT AND CONSTRUCTION) AND RECURRENT COSTS (PROVISION OF TEACHING STAFF AND LOCAL STAFF DEVELOPMENT).

FOR THE FORESEEABLE FUTURE, THE ECONOMIC VIABILITY OF MALAWI MUST DEPEND ON THE RAPID INCREASE IN AGRICULTURAL PRODUCTION TO MEET THE RISING LEVEL OF LOCAL CONSUMPTION WITH A SURPLUS FOR EXPORT TO WORLD MARKETS.

IN ORDER TO RAISE THE STANDARD OF RURAL LIFE, GOVERNMENT HAS SPONSORED, WITH THE HELP OF FOREIGN AID, A NUMBER OF LAND DEVELOPMENT PROJECTS IN LILONGWE, SALIMA, KARONIA AND LOWER SHIRE VALLEY. THERE ARE OTHER SCHEMES IN BOTH THE PUBLIC AND PRIVATE SECTORS IN ALL PARTS OF THE COUNTRY CONCERNED WITH THE PRODUCTION OF TEA, SUGAR, MAIZE, RICE, TOBACCO, GROUNDNUTS AND ANIMAL PRODUCTS. OTHER SCHEMES ARE IN THE PLANNING STAGE.

THE SUCCESS OF THE ABOVE PROJECTS IS LARGELY DEPENDENT ON AN ADEQUATE SUPPLY OF PROFESSIONAL AND TECHNICAL STAFF TRAINED IN AGRICULTURE, WHICH BUNDA IS ABLE TO PROVIDE.

(II) THE CONCEPTION AND PURPOSE OF BUNDA COLLEGE HAS EVOLVED THROUGH THREE STAGES SINCE 1962. THE COLLEGE WAS ORIGINALLY PLANNED TO REPLACE THE COLBY SCHOOL OF AGRICULTURE ON A NEW SITE. BUILDING PLANS WERE APPROVED FOR FINANCING BY THE USAID. ALMOST IMMEDIATELY IN 1963 THE SECOND STAGE WAS ARRIVED AT WHEN IT WAS REALISED THAT EXTENSION WORK INVOLVED IN VARIOUS AGRICULTURAL DEVELOPMENT PROGRAMMES WOULD DEPEND ON AND REQUIRE STAFF TRAINED AT A HIGHER LEVEL. IT WAS THEN DECIDED TO INTRODUCE A THREE YEAR DIPLOMA COURSE AT BUNDA LEAVING COLBY SCHOOL OF AGRICULTURE TO PROVIDE CERTIFICATE COURSES. A FURTHER BUILDING SCHEDULE WAS APPROVED FOR A SECOND USAID GRANT. THE THIRD STAGE WAS REACHED WHEN IN 1965 IT WAS DECIDED TO INCORPORATE BUNDA COLLEGE INTO THE UNIVERSITY OF MALAWI AND TO OFFER DEGREE AND DIPLOMA COURSES IN AGRICULTURE OF THE UNIVERSITY OF MALAWI. ADDITIONAL BUILDINGS WERE BUILT IN 1968/69 WITH ASSISTANCE FROM THE BRITISH OVERSEAS DEVELOPMENT ADMINISTRATION.

STUDENT ENROLLMENT

DIPLOMA:	1966	1973
	53	133

Classification



# Department of State

# TELEGRAM

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Classification:

03 DEC 73 13:05

DEGREE:	1969	1973
	4	47
STAFF	1966	1973
	6	30

SINCE MOST OF THE COLLEGE BUILDINGS WERE NOT ORIGINALLY PLANNED FOR UNIVERSITY LEVEL COURSES, LABORATORIES, LECTUREROOMS, ETC. ARE NOT SUITABLE FOR DEGREE TEACHING. IN ADDITION THERE WERE VIRUTALLY NO FACILITIES FOR RESEARCH AND THERE IS A CRITICAL SHORTAGE OF HOUSES FOR BOTH SENIOR AND JUNIOR STAFF.

IN ORDER TO MEET PROJECTED DEMAND FOR GRADUATES AND DIPLOMATES IN AGRICULTURE FROM 1974 TO 1985, PHASE THREE PLANS FOR BUNDA COLLEGE ENVISAGE AN INCREASE IN STUDENT ENROLLMENT FROM 206 IN 1973 TO ABOUT 350 IN 1980 WITH AN ANNUAL OUTPUT OF GRADUATES AND DIPLOMATES INCREASING FROM 9 AND 43 RESPECTIVELY IN 1973 TO 28 AND 76 RESPECTIVELY IN 1980. THESE OUTPUT FIGURES ARE STILL BELOW THE PROJECTIONS OF THE MALAWI GOVERNMENT MANPOWER SURVEY.

THE CANADIAN INTERNATIONAL DEVELOPMENT AGENCY HAS SHOWN INTEREST IN FINANCING THE IMPROVEMENT OF LIVESTOCK PRODUCTION TEACHING AND RESEARCH FACILITIES TO THE LEVEL OF K500,000 BUT THERE IS NO FORMAL COMMITMENT TO PROVIDING THE ABOVE SUM OF MONEY.

FUNDING	CAPITAL FUNDS	RECURRENT FUNDS
1974-1976:	K1,665,520	--
1974-1985:	--	K676,730
TOTAL 1974-85	K2,342,250	END QTE.

2. GOM HAS ALSO PROVIDED MORE EXTENSIVE BACKUP DOCUMENT ON BUNDA INCLUDING DETAILED ANALYSIS OF MALAWI AG MANPOWER NEEDS AND ASSESSMENT OF ROLE BUNDA WILL PLAY IN FILLING. COPIES POUCHED ALL ADDRESSEES DEC 7. BREAKDOWN OF COST FIGURES CITED FOREGOING GOM PROJECT DESCRIPTION ARE QUOTED BELOW AS OF POSSIBLE USE IN FORMULATING CONGRESSIONAL PRESENTATION. (WE NOTE POSSIBLE DISCREPANCY IN FIGURE FOR IMPROVEMENT LIVESTOCK PRODUCTION FACILITIES WHICH WE UNDERSTAND IS BEING REQUESTED OF CANADIANS.)

BEGIN QUOTE



# Department of State

# TELEGRAM

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NO.	ITEM	ESTIMATED COST (IN KWACHA)
1.	AGRICULTURAL ENGINEERING FACILITIES	179,000
2.	LIVESTOCK PRODUCTION TEACHING AND RESEARCH FACILITIES	509,700
3.	CROP PRODUCTION TEACHING AND RESEARCH FACILITIES	110,000
4.	STUDENT HOSTEL ACCOMMODATION	144,000
5.	STAFF HOUSING	654,000
6.	LIBRARY EXTENSION	78,000
7.	FACILITIES FOR TEACHING IRRIGATION	43,320
8.	STUDENT RECREATION FACILITIES	15,000
9.	LORALSTAFF TRAINING AND DEVELOPMENT	100,000
10.	CONSTRUCTION OF SEWAGE SYSTEM	46,500
11.	LECTURE THEATRE FOR 100 STUDENTS	30,000
12.	IMPROVEMENT OF WATER SUPPLIES	10,000
13.	VISSAL AIDS EQUIPMENT	20,000
14.	CONSULTANTS FOR THE DEVELOPMENT OF DEGREE, DIPLOMA AND POST-GRADUATE COURSES	50,000
15.	PROVISION OF TEACHING STAFF	500,000
	TOTAL COST 1974/1980	2,342,250
	END QUOTE	

3. WE HOPE ON BASIS FOREGOING MATERIAL ADDRESSEES WILL INCLUDE BOTH BUNDA AND HENGA VALLEY PROJECTS IN CONGRESSIONAL PRESENTATION AND CONTINUE TO PLAN FOR JANUARY RECONNAISSANCE OF BOTH. HENGA PROJECT DESCRIPTION TRANSMITTED SEPIEL. BURDETT

HS

UNCLASSIFIED

Classification

ANNEX G - PROJECT DESCRIPTION TO BE USED IN PRO-AGProject DescriptionA. The Problem

Malawi's agriculture development strategy is based on a nation-wide effort to improve agricultural productivity with superimposed centers of intensive development in the form of major integrated development and settlement schemes. These schemes have high agriculture graduate and diplomate utilization rates which limits the total number of smallholder farmers which can be served. The GOM's efforts to provide qualitative and quantitative improvements in agricultural manpower has been limited by the pressure to localize the costs of obtaining technical assistance to alleviate anything other than shortages of high-level manpower and the output from Bunda College of Agriculture.

B. Plan of Action

This project will work within the University of Malawi to nurture and build up Bunda College of Agriculture to produce competent and skilled manpower sensitive to technical, social and managerial problems influencing rural development. It will accomplish this by financing three major components. First, this project will provide technical assistance to the University of Malawi, Bunda College of Agriculture. Technical assistance in this context includes 27 man years of a senior staff, 40 man years of participant training, consultancies, rural development conferences and laboratory equipment. Secondly, all of the recurrent costs which arise as a result of Bunda's expansion are provided for. These costs include teaching and research, student living expenses, transport and travel expenses, student allowances, salaries and supplements. Thirdly, additional facilities which will be constructed or renovated are provided for. These facilities include student housing (112 rooms), soils/crop laboratory, animal science laboratory, auditorium renovation, staff housing (21 senior staff, 34 junior staff, 30 support staff), student union renovation, maintenance shop, agricultural engineering shop and sports field.

C. The Projected Results

By the end of the project it is anticipated that the following conditions will exist, indicating that the purpose of this project has been achieved.

1. Localization of senior staff from 32.3% to 90.2% by 1980/81.
2. Annual output of 65 diplomates.
3. Annual output of 23 graduates.
4. Adoption of new 3/5 year curriculum.
5. Increased content of practicals in diplomate courses.
6. Facilities expanded to allow total enrollment of 365 by 1979/80.

D. Organization and Management

1. GOM

The GOM management will be provided through regular channels of the University of Malawi. AID capital funds will be channelled through the GOM, Ministry of Finance, to the University of Malawi for specific use at Bunda College as set forth herein.

The University Registrar will be the official AID contact for the capital component of this project. Norman and Dawbarn will provide the architectural and engineering designs for this project. The principal of Bunda College will be the chief supervising officer for US-provided technical staff, although all staff will work within the regularized departmental system of the College. In addition, the principal will be responsible for the initial preparation of participant documentation, equipment lists, detailed job descriptions for staff, required reports to AID (as spelled out herein) necessary work plans, budget estimates for use of seminar fund and other related and required actions.

2. AID

(a) OSARAC: The OSARAC RDO will appoint appropriate technical staff to be responsible for overall project management.

OSARAC will be responsible for final preparation and issuance of PIO/Ts, PIO/Ps, PIO/Cs and the normal Controller functions of approval of payments.

(b) REDSO/EA: REDSO/EA will provide the necessary AID approval and monitoring function for the capital component of the project. They will coordinate with OSARAC and the American Embassy, Blantyre, on visits on capital components with the GOM. Required reports, evaluations, etc. of the capital component of the proposed project will be prepared by REDSO/EA for OSARAC concurrence.

on the local market. This inability to provide requisite repair and maintenance services would apply to all electrical equipment, appliances, plumbing systems and virtually anything mechanical. Requiring U.S. source/origin for such products would mean similar difficulties as that described on the Malawi Dorms project. Thus, it is essential for the purposes of installation, maintenance and repair that houses, hostels and laboratories be constructed using fixtures and materials for which replacement parts and service facilities are readily available in Malawi. Furthermore, since the project will add on facilities to an existing institution, it is necessary that the AID-constructed facilities be consistent with facilities already in existence.

It has been the experience in the past with procurement from the U.S. for projects in Malawi, that such procurement leads to inordinate construction delays and resulting price escalations. We are in the unique position of being able to take advantage of certain experiences from a completed project much similar to the one now proposed. In their final report on the Malawi Dormitories Project (Loan No. 612-H-003) the supervising architects have noted the following problems and recommendations<sup>1/</sup>:

"With an estimated 31.4% content of materials element attributable as foreign exchange, this from the outset, along with the available 935 funding, dictated a materials procurement policy from 941 Geographic Code sources (USA and developing).

International advertising for materials bids proved unresponsive due to the fact, in essence, that the content was of insufficient size to warrant interest. This therefore led to [sic] procurement agency -- The Afro-American Purchasing Centre, New York -- where the response was somewhat better on this latter approach.

Final figures indicate that final materials were delivered to site in July, 1974, some 17 months after the commencement of the work. Notwithstanding the staggered programme requirements of each material, the delays were considerable as self-evidenced by this 17-month period.

By way of comment, this situation could have been minimised by a relaxation on the 935/941 procurement constraints; also it was experienced that materials from U.S., due to freight, shipping, insurance, agents' fees, etc., incurred many extra

<sup>1/</sup> Norman & Dawbarn, Construction of Seven Halls of Residence and Five Wardens Flats at Chirunga Estate, Zomba, Final Report for Loan No. 612-H-003, November, 1975.

## Waivers - Annex H

### Waiver Requirements

1. A waiver of the Code 000 (U.S.) procurement policy applicable to grant assistance is requested to permit procurement of up to \$1.1 million in construction and other materials from Code 935 countries (basically South Africa and the U.K.).
2. Concurrence is requested to allow a deviation from the country contracting procedures specified in Handbook 11 to permit the use of standard Government of Malawi contracting rules, procedures and forms, including, but not limited to, Malawi requirement applicable to contract award, and bid and performance security.

### Justification

#### 1. Waiver to Code 935 for Materials

A waiver of up to \$1.1 million is requested to permit procurement of construction materials from Code 935 countries. In the main, these purchases will be from South Africa and the U.K. It is felt that both past experience on a similar project (Malawi Dorms) and construction difficulties which would result from a denial of the request demonstrate the necessity for approval of the waiver request.

As is the case in most countries formerly governed by the British, items manufactured in the U.S. are not normally compatible with the standards and specifications for construction and other materials used in Malawi. This is particularly the case for all electrical equipment and plumbing facilities to be procured for the project. In this regard, it should be noted that these electrical and plumbing components and related facilities make up approximately 40%, by value, of the foreign exchange component of construction costs. Malawi uses a 220 volt, 50-cycle system which does not make the use of U.S. manufactured products with electrical components possible. Thus, for example, equipment such as motors, switches and appliances must all be manufactured outside the U.S. to comport with existing Malawi facilities. Closely related to this is the capacity of Malawi to properly maintain and repair equipment of U.S. source and origin. Since Malawi is on the metric system, spare parts which can be purchased locally and facilities for repair work are not adaptable for use on U.S.-manufactured items. The example of the Malawi Dormitories project is very instructive in this regard. Toilets of U.S. source and origin were installed in the dorms, but subsequently became inoperable because certain parts had worn out. Replacement from the U.S. of these parts (whole cost was relatively minor) would have taken four to five months, during which time the toilets could not have been used. The GOM was forced to remove the U.S.-manufactured toilets and install British-made products, for which spare parts were available

costs over the estimates . . . It is also to be noted that the 941 classification encourages, in theory, materials procurement from developing countries. In fact, the availability in those countries was minimal."

Estimates by Norman & Dawbarn presently place the delay caused by a requirement for U.S. procurement of construction materials at one year or more. It must be remembered that as a result of Malawi's geographic position, it has necessarily established a trading relationship with suppliers in neighboring countries. This relationship allows for the procurement of construction materials from established sources in South Africa and other countries with a minimal amount of delay in delivery. Similarly, suppliers, since they are located closer to the project site than U.S. firms, will be able to more quickly replace materials which have been damaged or lost in shipment, without causing undue delay in the work on the project. Finally, the nature of the procurement, small quantities of a large number of items, is such that, unless a waiver is granted, experiences (as well as price escalation) will be very similar to those described above by the Malawi Dorms project.

## 2. Contracting Procedures

An examination of Government of Malawi contracting procedures leads to the conclusion that, although slightly different from AID Capital Project Guidelines set forth in Handbook 11, they are workable and adequate to ensure the effective and proper utilization of AID funds to achieve project construction objectives. It is expected that, given the relatively small size of the construction contract, bidders on the contract will be local Malawi firms. There are approximately ten such firms who would be able to bid on the work. Consequently, it does not seem reasonable to insist on compliance with all AID procedures which are unfamiliar to Malawi officials and local contractors and which could lead to lengthy delays in project implementation. With the deviation requested herein, use of GOM contracting rules is at AID's discretion.

## 3. Capital Disbursements

Disbursements for the capital component of this project will be made within a 36 month period thus avoiding violation of Section 110(B).

ANNEX I

Preliminary Commodity List

Commodities will be provided in three major areas, (1) to equip the Agricultural Engineering shops and workshops, (2) to equip the

ANNEX J

Annual AID Obligations (FX and Local Costs, \$000)

	FY 76		FY 77		FY 78		Other Years		All Years	
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC
1. <u>Technical Assistance</u>										
Staff	\$ 405	--	\$135	--	\$540	--	\$135	--	\$1,215	--
Participant Training	30	--	100	--	170	--	100	--	400	--
Consultancies	--	--	9	--	15	--	13	--	37	--
Rural Development										
Conferences	--	5	--	20	--	30	--	20	--	75
Commodities	--	--	273	--	--	--	--	--	273	--
Sub-Total	\$ 435	\$ 5	\$517	\$ 20	\$725	\$30	\$248	\$20	\$1,925	\$ 75
2. Capital	\$ 600	400	\$419	581	--	--	--	--	\$1,019	981
Total	\$1,035	\$405	\$936	\$601	\$725	\$30	\$248	\$20		
3. Yearly Total	\$1,440		\$1,537		\$755		\$268			
4. Grand Total	\$4,000									

ANNEX J

Annual AID Obligations (FX and Local Costs, \$000)

	FY 76		FY 77		FY 78		Other Years		All Years	
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC
1. <u>Technical Assistance</u>										
Staff	\$ 405	--	\$135	--	\$540	--	\$135	--	\$1,215	--
Participant Training	30		100		170		100		400	--
Consultancies	--	--	9	--	15	--	13	--	37	--
Rural Development										
Conferences	--	5	--	20	--	30	--	20	--	75
Commodities	--	--	273	--	--	--	--	--	273	--
	<hr/>		<hr/>		<hr/>		<hr/>		<hr/>	
Sub-Total	\$ 435	\$ 5	\$517	\$ 20	\$725	\$30	\$248	\$20	\$1,925	\$ 75
2. Capital	\$ 600	400	\$419	581	--	--	--	--	\$1,019	981
Total	\$1,035	\$405	\$936	\$601	\$725	\$30	\$248	\$20		
	<hr/>		<hr/>		<hr/>		<hr/>		<hr/>	
3. Yearly Total	\$1,440		\$1,537		\$755		\$268			
4. Grand Total	\$4,000									