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FROM - **NAIROBI**

SUBJECT - **Population Dynamics, Project No. 615-11-580-141**

REFERENCE - **M.C. 1025.1**
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Country - Kenya Project No. 615-11-580-141

Submission Date Amendment - 4

Project Title: Population Dynamics

US OBLIGATION SPAN - FY 1969 THROUGH FY 1974

GROSS LIFE OF PROJECT FINANCIAL REQUIREMENTS:

US \$659,000

OTHER AGENCY

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PAGE	PAGES
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APPROVED BY: *CLD*
CLDoggett, Acting Director/USAID

AID AND OTHER CLEARANCES

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Summary Description

A. General

The Government of Kenya has begun an official family planning program. To date, few resources have been committed to the program. Most commodities and operational personnel have been furnished by foreign donors. USAID is only one among many donors in this field. It is anticipated that foreign aid will be necessary in family planning for a good many years. USAID initially supplied a varied list of commodities intended to assist the GOK to get the official program off the ground. Original efforts on the part of the donors were fairly disjointed. The family planning section of the Ministry of Health is currently attempting to coordinate the aid from the various donors. Certain areas of responsibilities are being assigned to each donor. USAID will be asked to concentrate its efforts in the Health Education Unit and to continue its demographic work with the 1969 population census. As the family planning program grows in scope, it is anticipated that USAID will continue in the two areas of training and demographic assistance.

B. Necessity and Justification for Project

1. Necessity

In late 1965 the Population Council made a study of population growth in the country. As a result of this study, the Government of Kenya adopted family planning as an official policy. Training and family planning education programs were recommended as two of the initial steps in implementing a full-scale family planning program. The Population Council in its recommendation stated that

"Immediate attention should be given to training personnel for this program both locally and abroad.... Agricultural extension workers, home economics workers, community development workers, and similar types of personnel active in local areas and concerned about individual and community welfare, should have both pre-service and in-service instruction to inform them about the consequences of rapid population growth and to prepare them for disseminating information and stimulating interest in the problem."

If the family planning program is to be effective in this country, it is essential that Government facilities and personnel be involved in training and demonstration programs. The variety of training, educational, and informational techniques in family planning and their collective importance must be developed in the health education program. In addition, a general program is required for improving the quality of census and demographic data so that more accurate POPULM population and related projections can be mad

2. Justification

Since the Government of Kenya officially adopted a family planning policy, it has provided free services in all governmental medical facilities and has set up clinics in connection with the MCH programs.

Extensive technical assistance; e.g., administrators, advisory staff, professional medical staff, and researchers, has been given. The administrative and clinical inputs are filling some of the gaps in the family planning program. Other problem areas, such as training, public information, and education, need to be improved.

In order for the family planning program to have a full effect in Kenya, it will be necessary to train key personnel in Government ministries; improve the information network; and develop educational materials. The lack of training and educational materials both for health personnel and population limits the effectiveness of the family planning program in reaching operational targets.

Kenya does not have the technical expertise in family planning to overcome the obstacles in its overall programming. It must seek external assistance. The United States, because of its experience in public health education, is in a unique position to train and advise on production of training materials.

The need for improved demographic data is just as evident. The last population census was conducted in 1969. As part of the United Nations efforts to obtain a worldwide census in 1970, Kenya decided to conduct their census in August 1969. The tribe, race, sex, age, marital status and location of the Kenya population will be measured. Once the raw data is collected through final computer tabulations, it will be analyzed on a number of different matrices so that development needs can be fixed more accurately. Expatriate advisors are needed to work with the temporary census staff.

C. Project Goals and Targets

1. Develop educational materials to train family planning personnel and informational material to motivate the masses to adopt family planning.
2. Pre-test and prepare the material.
3. Train GOK family planning personnel.
4. Design research techniques to guide its effectiveness.
5. Lay the ground work for future census efforts in Kenya to provide a more accurate, complete and effective coverage.

6. Provide a stimulus for advanced training of Kenyan personnel in computer and demographic technology.
7. Publication of census data by August 1971.
8. At phase-out, there should be at least 2 trained ~~MMX~~ audio-visual technicians, 1 health educator, 1 demographer and 1 computer technicians who have been trained as counterparts to continue the functions of the departing U.S. technicians.

D. The Minimum Levels of Output or Achievement

The project goals represent the minimum level of improvement essential to permit the Government of Kenya to further develop its family planning program. The task of lowering Kenya's 3.3% growth rate is so staggering that the project goals must be met.

E. General Approach and Plan of Action

1. General Approach

To provide technical assistance to the Government of Kenya in the health education/family planning field through provision of a direct hire audio-visual technician and a PASA health educator. Audio-visual equipment, vehicles and other commodities for use in the health education program would be necessary. To provide technical assistance to the Government of Kenya in the demographic/census field and a PASA computer programmer. Selected TDY personnel from the U.S. Census Bureau would be required to assist in processing the data.

2. Plan of Action

The health educator and the audio-visual advisor will work in the Health Education unit of the ~~MINISTRY OF HEALTH~~ Ministry of Health to assist in the solution of problems connected with training, information network, and educational aspects of the family planning program. The ~~DEMOGRAPHER AND COMPUTER PROGRAMMER~~ demographer and computer programmer will work in Ministry of Economic Planning and Development with the temporary census staff of the GOK. It is essential that the Government of Kenya provide counterparts to be trained on the job and in more formal programs of instruction. There is much institution-building to accomplish in both areas.

F. Non-availability of Other Resources

Other donor and domestic resources are not available in a sufficient amount to provide the total external assistance required to achieve project goals and targets.

II. Setting Environment

A. General

In late 1965 the Population Council at the request of the Government of Kenya did a study of population growth in the country. They discovered that the rate of growth was 3 per cent and that at the present rate a large percentage of the Government of Kenya's economic growth would be devoted to the task of keeping up with rapidly expanding demands for services. As a result of this report, family planning was adopted as an official policy by the Government of Kenya. Midway in 1967, the Government of Kenya made family planning a free service in all GOK facilities and undertook to set up Government clinics as rapidly as possible in connection with the MCH program. In the latter part of 1968 the Government and the Family Planning Association of Kenya agreed that the Government would take over the clinics and field workers of the Family Planning Association on a phased basis. The International Planned Parenthood Federation (IPPF) would continue to supply assistance in meeting recurrent costs over a period of time.

In 1967 and 1968 a great deal of foreign assistance was granted to the family planning program. The Population Council seconded a doctor to sit in the Ministry of Health and advise the Kenya Government on the organization and clinical aspects of the family planning program. A Population Council demographer was posted to the Institute of Development studies at University College Nairobi to do knowledge attitudes and practices studies related to family planning in Kenya. The Government has posted a demographer and statistician to the Kenya Ministry of Health so that proper evaluatory studies of the family planning program could be undertaken.

On the clinical side, both the Dutch Government and the IPPF have supplied teams of doctors and nurses to do the actual clinical work. The IPPF has seven mobile vans which operate in the different provinces, holding clinics and instructing local medical personnel in the use of family planning devices and techniques. The Dutch teams are also instructing on the local level and in addition are doing research on the effectiveness of the various types of contraceptive devices presently used in Kenya. Although the IUD was recommended by the Population Council as the type of contraceptive that should be used primarily, the contraceptive pill has gained in popularity.

Condomity assistance to the program has been furnished by the IPPF in the form of condoms, by USAID International Development Agency in the form of pills, by USAID in the form of pills, and by the Population Council who supply Lippes loops. Continued supply of condoms and loops has been assured. A supply of pills from the Swedish Government has also been assured.

Overall administration of the program is shared by a Swedish family planning administrator who has extensive experience and a Population Council doctor who handles the clinical aspects of the program. In addition to the above training of paramedical personnel, educational seminars for field personnel in other Ministries is being carried out under the auspices of the Ford Foundation.

The informational and educational aspects of the program remain the weakest link. There are now on paper over 200 clinics offering family planning services. These are hampered by lack of trained staff. However, they are even more hampered by the lack of motivated populace. It is essential that the populace becomes informed of the problems of rapid population growth. Changing conditions, ~~urban~~ urban living, increased dependency on fixed wage incomes and rising expectations for education and the amenities of modern life, are making present fertility patterns untenable. It is necessary to channel information and discussion on family planning through mass media. Educational materials in the form of pamphlets, posters, informational kits, etc., emphasizing the health and welfare benefits of planned families must be produced. Expertise is needed in implementing all-out mass communications for promoting interest in family planning and for training personnel in this area.

B. Factors Which Affect Need for Project

The factors which affect the need for the project are:

1. The necessity for generating support for the family planning program;
2. The prospect of further acceleration of the rate of population growth with the further reduction in mortality;
3. The necessity for producing and disseminating information;
4. The lack of appropriate ~~methods~~ to guide implementation of the family planning program and to evaluate effectiveness;
5. The allocation of a large share of current production to meet the immediate needs of the people;
6. Enormous increases in food supplies, jobs, housing, education, health facilities, roads, communication and public services required to maintain existing living conditions;
7. The necessity for providing all sectors of the population with educational materials that will enable them to make informed decisions regarding their own families;

B. The necessity for trained qualified personnel in family planning.

C. Relationship of Project Goals to Country Development Plan

This project supports the objectives of the Government of Kenya as stated in the Development Plan 1966-1970:

"The population problem has such [redacted] impact on the future development of the country that the Government has decided to place strong emphasis on measures to promote family planning education."

The plan goes on state:

"Fewer children, more widely spaced, would reduce the annual cost to the family of putting children through school and would mean that more children could be carried to higher levels of education. Pressures on housing, and water and food supplies would be diminished, permitting the family a higher standard of living and the possibility of increasing its savings for the fur future."

These statements clearly define what this project endeavors to accomplish.

D. Legislative and Administrative Obstacles

1. Legislative

There will be a legislative problem of additional GOK appropriations in expanding the activities of the Health Education Unit in the family planning sector. The same holds true for the census activities of the Ministry of Economic Planning and Development [redacted]

2. Administrative

To involve Kenyans in the administration of the family planning program. To date, it remains largely an expatriate activity.

E. Major Factors and Problems in Country Situation Bearing Upon Project

1. Need

The need for the assistance envisaged in the project is self-evident.

2. Character

The project is directly related to the character of the family planning program by providing advisory service, training, and supervision of the proposed activities.

3. Priority of Project Goals

The Development Plan 1966-1970 recognizes that an excessive rate of population growth is in itself an impediment to development. Even in the face of concerted programs of economic development, standards of living may stagnate or retrogress if the population of Kenya grows too rapidly. This project must be regarded as having high priority since, if successful, it will make an important contribution to the effectiveness of the family planning program in Kenya.

To provide technical assistance and commodities to the GOK family planning program as administered by the Ministry of Health. The Family Planning Section is currently staffed by three expatriates - (1) an M.D. (2) an administrator (3) a secretary. It is vital to the success of family planning in Kenya that family planning be Africanized. The provision of two U.S. technicians to the Health Education Unit will accomplish two objectives. Firstly, health and paramedical workers will be trained to assume family planning responsibilities. Secondly, informational materials will be developed to motivate the general public to adopt family planning. Until there is greater acceptance and demand for family planning services, the Ministry of Health will not be voted larger budgets to hire more Africans to work in family planning. The expatriates in the Family Planning Section are attempting to get additional budget to hire and train counterparts for themselves. To date, there has been little institution-building within the Ministry of Health.

The two U.S. technicians will also coordinate informational and educational activities with the voluntary Family Planning Association of Kenya. The FPAK, an IPPF affiliate, has been given a leadership role in the development of popular information programs. In order to avoid the rivalry which has characterized GOK-FPAK relations in the past, it is essential that the Health Education Unit cooperate with the FPAK.

The demographer and computer programmer will work with statisticians and temporary census personnel at the Ministry of Economic Planning and Development. There is presently no permanent census staff. The U.S. technicians will assist in the enumeration, tabulation, and analysis of the 1969 Kenya Census. They will train counterparts and familiarize Kenyans with efficient procedures for conducting a census. The demographer will formulate plans for establishing a permanent demographic capacity within the MEPD. There is a great need for annual population change statistics for accurate development planning and as an indicator of the progress of the family planning program. The census activity is viewed as only a beginning of demographic activities.

B. Method

Recruit an audio-visual technician, a health educator, a demographer, computer programmer, and selected TDY census experts. Supply needed commodities.

C. Extent and Manner of Contribution to U.S. Goals

This project addressed a high U.S. priority.

D. Alternative Approaches or Techniques

It is not necessary to consider alternative approaches or techniques for the implementation of this project.

E. Cooperating Country Leadership

The Government of Kenya leadership has supported this project with the setting of family planning as a priority Government policy and the request for technical experts to assist in filling certain gaps in such a program. The assistance extended under the project will better promote family planning in Kenya.

Planned Targets, Results, and Outputs

1. (Production of a wide range of audio and visual materials in local languages including posters, filmstrips, pamphlets and narratives. At least 50 separate items will be produced each year, with approximately 600,000 pieces of printed pamphlets being produced, two television presentations, 8 posters, with an average run of 4000, 20 vernacular narratives and filmstrips.
2. (Training of two Kenyan audio-visual technicians in technology and design of audio-visual activities.
3. (Institution of a mobile audio-visual program to reach the more remote areas of the country.
4. (Training of at least one Kenyan in U.S. techniques of health education.
5. (Training COK nurses, midwives, physicians, and paramedical personnel in family planning.
6. (Producing accurate census data by August 1971.
7. (Training at least one Kenyan in computer programming techniques as a counterpart.

8. (Training at least one Kenyan in demographic/census techniques as a counterpart.

B. Improvement of Quality of Cooperating Country Resources and/or Performance

The Health Education Unit should be better equipped and staffed at the conclusion of the project. The demographic/census capabilities of the MEPD should be improved by the example of the operational U.S. census personnel.

C. End Results

1. The Situation at Beginning

- a. The national audio-visual laboratory is under-utilized.
- b. The Health Education Unit is scarcely functioning following the departure of the Asian who headed the Department.
- c. There is no permanent census staff. Demographic skills are scarce in MEPD.

2. The Situation at End

- a. Audio-visual laboratory is staffed by skilled Kenyans who are turning out informational and training materials. U.S. equipped audio-visual team is bringing messages to remote areas.
- b. The Health Education Unit is fully staffed by competent Kenyans. In-service training and public information programs are being carried-out.
- c. The nucleus of a census staff is created within the Ministry of Economic Planning and Development. Current demographic indices are computed on a regular basis.

3. Time Span

- a. The census activity will be from FY 69 through FY 71 - two year tours for both the demographer and the computer programmer.
- b. The Health Education activity will be from FY 70 through FY 74. The audio-visual advisor will stay two years, and the health educator will be required for four years.

Course of Action

A. Time-Frame Sequence of Action

1. a. MCH Commodity Assistance

USAID in the earliest stage of the GOK family planning program, offered 2 station wagons, 200 filing cabinets, 100,000 disposable gloves, and 50 baby weighing scales to help the fledging program get off the ground. The commodities are to be used in the clinical program. Similar clinical equipment was solicited from a variety of donors.

b. Census

The demographer and computer programmer are to supervise the enumeration, coding, computer runs, and final tabulation of census data from June 1969 to June 1971.

c. Health Education

The health educator and audio-visual technician have been severely delayed through recruitment difficulties. They are expected to arrive in June 1970. Materials produced would be produced in local languages as well as English and Swahili. This will greatly increase the effectiveness of the family planning program as many Kenyans speak only one of the 33 vernacular tribal languages. The audio-visual van would be used in conjunction with the mobile teams and would be operated on a pilot basis. The audio-visual technician would evaluate the effectiveness of this van in order to ascertain whether this approach is valid in the Kenyan family planning program. Teaching and instructional aids would be produced by this center to train several different categories of field workers and teachers. Community Development workers, agriculture extension workers, health inspectors, secondary school teachers and provincial information authorities are several of the groups for whom materials would be produced.

2. Cooperating Country

The Government of Kenya will be asked to provide counterparts for on-the-job training and participant training. They will pay for one-half of the international travel cost to the U.S. for key personnel selected to receive such training. The GOK will also assume that staff are available for in-service training.

3. Other Donors

(IPPF, Population Council, Ford Foundation, Sweden, Norway, Netherlands and U.K. are providing assistance to family planning in Kenya.

B. Interrelationship of Inputs in Terms of Substance and Scheduling

There is a relationship between the inputs of the U.S. and the cooperating country in terms of the minimum period of "in-service" training to be attended by each scheduled staff member and the international travel costs portion to be provided by the Government of Kenya. If problems arise in this area of the project, then consideration may be given to decreasing the number of key personnel for training in the U.S.

C. Self-Help Actions

Kenya has adopted an official family planning program and Government spokesmen have publicly supported family planning. The GOK approach remains cautious. Many key politicians are ambivalent. The Ministry of Health is hampered by lack of trained personnel. There has been a tendency on the part of the GOK to allow donors to make most of the financial, staff, and commodity inputs into the family planning program. The GOK needs to make more money and staff available. Self-Help efforts could stand much improvement.

D. Cooperating Country Resources

Kenya does lack trained manpower, clinical facilities and medical supplies. Much of the expertise and commodities will have to be provided by foreign donors. However, Kenya does have the resources to commit more of its annual budget to family planning. The MOH should hire more Kenyans to replace foreign experts as rapidly as possible.

Appropriateness of Scale of Project

family planning program develops more enthusiasm among the leadership and the public, the modest scale of the project as presently constituted is appropriate.

Ability of Country to Absorb, Support, and Utilize Results

There is no problem of absorption of the staff trained under this project due to the lack of trained personnel in family planning.

Need for a Research Component

A research component is required under the project in order to guide future development in demographic studies, audio-visual activities, and family planning.

(US \$000)

	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>TOTAL ALL YEARS</u>
<u>Personnel</u>							
Direct Hire	-	5	30	30	-	-	65
PASA	19	121	120	30	30	30	350
PARTICIPANTS		-	24	24	20	20	88
COMMODITIES	78	-	-	-	-	-	78
Other Costs	36	18	12	10	6	6	88
TOTAL	133	144	186	94	56	56	669

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NON-CAPITAL PROJECT PAPER

(PROP)

POPULATION DYNAMICS 615-11-580-141.2

(Demographic Studies Unit)

Drafted by: RMyers/CEllis/SSilberstein

Approved for Submission


Director, USAID/Kenya

Date: 7/16/71

NON-CAPITAL PROJECT PAPER (PROP)

Country	Kenya	
Project Number	615-11-580-141	
Submission Date	7/16/71	
Project Title	POPULATION DYNAMICS (Demographic Studies Unit)	
U.S. Obligation Span	FY 1972 through FY 1976	
Physical Implementation Span	FY 1971 through FY 1977	
Gross Life-of-Project	U.S. Dollars	852,900
Financial Requirements	U.S. owned local currency	
	Cooperating Country cash contribution	267,450
	Other donors	
	Total	<u>1,120,350</u>

I. SUMMARY DESCRIPTION

A. GENERAL

The Kenyan Ministry of Finance and Economic Planning plans to establish, with the cooperation of the University of North Carolina, a Demographic Studies Unit within the Statistics Division of the Ministry.

The Demographic Studies Unit will be established to develop improved methods for measuring population change in order to enhance the reliability of population data and their use in policy formation and economic and social planning.

Although the Unit will be established with the technical cooperation of the University of North Carolina, the Unit will be a Kenyan organization directed by and responsible to Kenyan authorities.

The project is to be jointly financed for a period of five years by Kenyan and AID funds. Since the prime objective of this project is to develop within Kenya the institutional competencies and resources for improved gathering and analyses of demographic statistics, it is anticipated that at the end of five years this project will become a permanent element of the Kenyan statistical organization.

B. Necessity and Justification for Project

Kenya recognizes the great importance of planning for the social, economic, and physical well-being of her people. Although there has been an official family planning program for several years, Kenya lacks a comprehensive population policy. Family planning is considered a health service. The Government of Kenya has set no official population targets for the family planning program. Economic planners now realize that Kenya has no system to provide current information about population change. The absence of a dependable, sufficiently sensitive and economically feasible system for the measurement of population change hampers and often distorts efforts to assess the current situation and to plan for the future. Existing measurement methods do not provide precise answers to the relatively simple questions. How many babies are born? How many people die? Answers to both are essential for the setting of realistic national goals.

To satisfy this type of need AID/W entered into a Basic Agreement with the University of North Carolina (AID csd-2495) to establish an international program for improving statistical resources designed to measure population change and related problems. The Republic of Kenya, with one of the highest growth rates in the world, has recognized the need to extend and sharpen her knowledge of her population. As provided for in the AID/UNC

Basic Agreement, the University of North Carolina has responded by negotiating a sustaining agreement with the Kenyan Ministry of Finance and Economic Planning to establish a Population Laboratory in the Statistical Division to be known as a "Demographic Studies Unit".

This is a particularly appropriate time for Kenya to initiate a long-term study of population growth and its implications for the Nation. Recent disclosures that the Annual rate is at least 3.3% have prompted concern among the Nation's leaders. In releasing the first results of the 1969 census late in 1970 the Minister of Finance and Economic Planning called particular attention to the rate of population growth and warned that its implications should not be dismissed lightly. Leaders in economic planning have expressed their determination to make full use of the Nation's statistical resources in assessing the significance of the growth rate and in preparing sound plans for economic and social development.

Early conclusion of the decennial census activities in Kenya will make available supervisory and clerical staff within the Statistics Division that have hitherto been fully occupied. Valuable statistical materials, including the results of the census itself, provide an opportunity to undertake fruitful analytical studies. These factors and the availability of professional assistance through the UNC Pcplab program will enhance the prospects for a successful program of population studies.

C. Project Goals and Targets.

Through the creation of an independent unit (Demographic Studies Unit) within the Statistics Division of the Ministry, it is the major goal of this project to improve and expand Kenya's Demographic capabilities for collecting and analyzing population data for use in policy formation and economic and social planning. In developing this institutional competence and resource, the following needs must be met:

(1) The need to develop appropriate methodology for Kenya's special conditions.

(2) The need to determine priorities and the most fruitful lines of investigation.

(3) The need for high level expertise to initiate an extended program.

(4) The need for trained Kenyan personnel to develop and maintain a continuing program of work.

D. The Minimum Levels Achievement

The project goals represent the minimum level of improvement essential to permit the government of Kenya to more accurately assess and analyze rates of population change for population policies and for social and economic planning.

E. General Approach and Plan of Action

1. General Approach

The project is to devise and test new techniques for the measurement of population growth and factors connected with growth, to collect substantive data sufficient to measure and assess growth in representative areas of the country, and through sophisticated analysis of existing statistical material to provide a sound demographic basis for population policies and for economic and social planning. An important correlative objective is to establish a flexible and effective facility for demographic analysis, and to develop a trained and experienced staff. To accomplish these objectives it is proposed to establish within the Statistics Division of the Ministry of Finance and Economic Planning a Demographic Studies Unit (DSU), which during its first five years will receive technical support from the Poplab Program of the University of North Carolina and financial support from the USAID Mission.

2. Plan of Action

In carrying out the methodological and data-collecting phases of its work the DSU will designate one or more geographic areas of the Nation as a Statistics Laboratory in which it will mobilize a full complement of statistical devices and techniques for use in developing and testing methods of measurement and in measuring and assessing population change. These will include detailed maps, dwelling identification systems, economic and sociological analysis, records of vital events, periodic household surveys and other aids that can contribute to a complete description and evaluation of population developments. In its analysis of existing demographic statistics the DSU will include data for the entire country and all of its component areas.

The DSU program will be one of several projects in which the UNC, under its basic agreement with AID, will cooperate in various regions of the world as part of the International Program of Laboratories for Population Statistics (Poplab). It is anticipated that the professional staffs of these projects, together with UNC, will form an international cooperating group to exchange technical experience for the benefit of all. Although participating in the larger group, the DSU will be a Kenyan institution, designed to serve the needs and interests of Kenya. The administration and direction will be Kenyan. UNC will provide technical cooperation and a Resident Advisor. Within this framework it is assumed that the general content of the research program would be discussed in detail with professional staff of the UNC and that a general concurrence would be reached on the methodological and other studies financed with AID funds.

F. Non-availability of Other Resources

Other donor and domestic resources are not available in sufficient

amounts to provide the assistance required to achieve project goals and targets.

II. Setting and Environment

A. General

In view of Kenya's high growth rate of at least 3.3%, a large percentage of Kenya's economic growth will be devoted to the task of keeping up with rapidly expanding demands for services. The explosive growth of population with its demands on Kenyan resources and the adoption of family planning programs as official government policy re-enforce the need for current population information.

B. Impact on the Nation's Development Planning

The results of the DSU program should be of substantial practical value in planning for Kenya's population policies and economic and social future.

Through developing and testing methods of measurement the program should enable Kenya to establish a sensitive and relatively rapid system of growth assessment, at a cost that should not be exorbitant. No African country has yet attained this important goal. Industrial countries that have achieved a satisfactory system of measurement through traditional vital registration have typically required 50 years or more to perfect a system.

The DSU program will not itself yield nation-wide vital statistics. Since it is to be located within the Statistics Division, however, the methods it develops should become immediately available for adoption by existing operational units of that body, and can be incorporated into the ongoing statistical work of the Division when considered appropriate. On the other hand, the studies carried out by the DSU within the selected geographic area should yield key demographic variables for a significant portion of the country almost from the beginning. These data may provide valuable clues as to trends in population growth pending the establishment of a national system by the regular statistical service.

The analytical studies of existing statistics should contribute directly to the formation of national policy and the solution of practical problems.

III. Strategy

The program to be conducted by the Demographic Studies Unit will be of two main types: (a) studies of methods of measuring births and deaths and the factors associated with such changes in population, and (b) analysis of existing demographic statistics, particularly as they contribute to economic and social planning

Improving Vital Statistics

Studies to improve vital statistics will require substantial collection of new demographic data. These data will not be collected within the country as a whole but will be representative of a study area or areas chosen to include a variety of population groups and demographic situations. The area will be sufficiently large that the vital rates obtained, while not representative of the entire country, will provide significant information on the rate of population change. The considerations to be taken into account in selecting the study area are discussed below.

Within the study area, a sample of communities ("clusters") will be selected in which each dwelling unit will be studied. This sample will be selected on a probability basis, in order that the results obtained will be representative of the entire study area. It will also be possible to determine the probable error of the estimates obtained. In total the clusters will number about 30 to 40, depending on the nature of the study area finally selected. They will include a total population of 80,000 to 100,000.

Because of the concern with methodology a variety of methods of measurement will be employed during the life of the project. In the first instance however, the dual record approach, which has been used elsewhere with some success, will be carefully tested. Under this approach births and deaths in each cluster will be measured by two independent statistical systems, the results matched, and statistical estimates prepared of the total number of births and deaths, including those missed by both systems.

Careful preparatory work must be done before these systems can be initiated. This will include the preparation of detailed maps of the sample clusters, the assignment of house numbers to all houses, and the preparation of descriptive notes regarding the topography of the location, its economic and social characteristics, etc. An initial "census" of the clusters will be made to provide a denominator for the vital rates to be prepared and to yield other needed information.

When these preparatory steps have been taken the first measurement of vital events can begin. In one of the statistical systems established, which may be called the continuous surveillance system, a recorder will record all births and deaths within a given cluster on a day-to-day basis. In the other system, the retrospective survey, enumerators will visit each household in the sample clusters every six months to learn of births and deaths that have occurred during the past year or six months. The results of the two measurement systems will be painstakingly matched, to determine which events have been identified by only one system, which by the other, and which by both. By use of the Chandrasekaran-Deming formula an estimate will then be made of the number of events that have been missed by both systems. The total number of events that occurred will then be estimated and the error of estimated computed.

Eventually, as has been noted, alternative measurement systems will be tested and the effectiveness of the various systems compared. Even from the beginning, however, various study techniques will be compared

in the different stages of the study process. For example, the effect of memory lapse on the reliability of household survey data will be tested, various methods of map designing will be tried, and the relative effectiveness of full-time and part-time field workers will be compared. A part of questionnaire used in the semi-annual household survey will be designed to obtain information that will help to explain population change and its variation from one population group to another. For example, information on attitudes toward family planning could be included.

B. Analysis of Existing Data

Once the work to improve vital statistics is under way, work will begin on the second phase of the project, namely the analysis of existing demographic statistics. Use will be made of sophisticated and intensive methods of analysis designed to enhance the value of existing demographic data, particularly for purposes of social and economic planning.

Analysis of existing data will not be confined, to any single sector of the country, but will apply to the country as a whole or to any of its parts. The decennial census, results of which are now becoming available, will be the major source of materials for analysis. The recent Household Budget Survey and the Manpower Survey of 1968 also contain valuable demographic information.

Considering the wide variety of studies that may be undertaken in this phase of the program, it is not feasible to describe the methodology that will be used. As suggested earlier, however, appropriate attention will be given to new methods of analysis, particularly those that have been used effectively in other countries. Some such methods have been described in a number of recent publications on demographic estimation and analysis. The Poplab program itself is producing an extensive catalogue of "Protocols", suggesting objectives and techniques for a variety of research studies in demography and related fields. Exchange of experience with Poplabs in other countries will also facilitate development and testing of effective methods.

Following are some examples of studies that may be undertaken in this phase of the program:

An early assignment will be to study recent trends in population development through comparison of census results. The respective trends in the various provinces, county councils and districts will be analyzed. Evidence of urban-rural migration will be carefully sifted. If possible crude rates of natural increase by geographic area or by tribal group will be calculated, using methods such as those described in Brass, et al., The Demography of Tropical Africa. An important part of this assignment would be to point out the implications of the indicated trends for national development.

Another worthwhile project might involve a study of household composition, to reveal the number of persons per household, household types, tribal differences in households, etc. An analysis of family formation would be included.

A third study, to be carried out in cooperation with the health authorities, might undertake to determine the cost of health services at some future date. Careful estimates of the future population, by sex and age groups, will be a basic requirement. Also important will be the best estimates of the prevalence of major diseases and ailments, taking account of those associated with particular age or sex groups and perhaps with main types of economic activity. In estimating the requirements for hospital beds, doctors, technicians, nurses, etc., account must be taken of international standards, of actual practice in other countries, of discernible trends in the use of para-medical personnel.

IV. Inputs by Kenya Government

In consideration of the great usefulness of this project to the Nation, and of the technical assistance to be received from the University of North Carolina and from A.I.D., the Kenyan Government is prepared to devote substantial resources to the project and to regard it as a major component in the Government's statistical program. Within the terms of its agreement with UNC and AID, the Government of Kenya is prepared to take the following actions to promote the accomplishment of the study programs:

A. Promptly after agreement is reached on the operation of the project, a Demographic Studies Unit will be established as a separate unit within the Statistics Division of the Ministry of Finance and Economic Planning. The D.S.U. will be concerned with studies and analysis in the field of demography and related areas. Since the D.S.U. will be the only unit of government directly responsible for such work it is understood that that unit may at times undertake demographic studies that are not part of the joint Kenya-UNC program. Such additional activities are to be staffed and financed by the Kenya Government.

B. The Kenya Government undertakes to provide a Director and Deputy Director for D.S.U., with the following minimum qualifications:

Director: Advanced degree in statistics, demography or an applied social science, with several years of responsible experience.

Deputy Director: A university graduate, with sound experience in statistics, demography or an applied social science, and with demonstrated ability. Should it be decided that the Director of the Statistics Division will himself serve as Director of D.S.U. arrangements will be made for him to give a substantial part of his time, estimated at one-third to one-half, to the work of the program.

C. The government is also prepared to furnish the housing allowance of Kenyan staff engaged in the project, to cover an increasing share of the living expenses of such staff when in travel status, to provide computer time, punch cards and tapes as well as normal office supplies, to provide a maximum of three field offices, and to furnish those offices and the central office. In addition the Government accepts responsibility for all normal central services, including access to necessary maps and statistics, the counsel of other professional staff, access to general library facilities

the services of computer and key-punch operators, the recruitment, payroll, and accounting services of Government, etc. The estimated cost of these services is indicated on an attached statement.

V. Detailed Course of Action

A. In accordance with the study plan outlined briefly above, the D.S.U., at an early date following the signing of the Project Agreement, will designate a study area (or areas) which will serve as a population statistics laboratory. Studies of vital rates will be conducted in sample clusters within this area: through an initial benchmark survey, the study of census data, and from other available sources a comprehensive body of related information on the population of this area will be made available.

Designation of the study area will be made after full consideration of pertinent factors, in which staff of UNC will participate. The study area selected will provide an opportunity to test the measurement of vital events among several types of population groups and under different conditions. Both urban and rural areas will be included, probably both mountains and plains. Different tribal groups will be represented. The area should not be so far from the Central Office of DSU that access is unduly difficult or expensive. Moreover, the study area should be sufficiently significant that the results obtained will in themselves be of value in the formulation of national policy and in national planning. It is apparent from a demographic map of Kenya that the major concentrations of population are in and around Central Province near Nairobi, the Coastal Province near Mombasa, and Nyanza and Western Provinces near Lake Victoria. Doubtless one of these areas should be included. In addition it will be desirable to include an adjacent sparsely settled area. The boundaries of the study area will coincide with political boundaries, in order that census data for the area will be available.

B. Upon selection of the study area, within about three months of signing of the Project Agreement, the DSU will embark on the continuous study of vital rates within the area. This important phase of the work, however, has many aspects and cannot be fully underway for a period of months. A list of the more important tasks to be undertaken will illustrate this:

- Develop sample frame for selection of clusters. This will require services of an outside sampling expert.
- Selection of sample
- Preparation of maps of clusters
- Assignment of house numbers
- Development of questionnaires and instructions for continuous surveillance

- Recruitment of Senior Field Supervisor
- Seminars on measurement of vital rates for top staff
- Recruitment and training of field staff for continuous surveillance
- Establishment of field offices
- Initiation of continuous surveillance
- Development of questionnaires and instructions for retrospective survey
- Recruitment and training of enumerators
- Field test of questionnaires and instructions
- Revision of questionnaires and instructions based on results of field tests
- First retrospective household survey
- Matching of vital events recorded in continuous surveillance with those in retrospective survey
- Field verification of differences
- Preparation of estimates of vital events, with probable error
- Preparation of first six-month analysis of findings

It will be apparent from the above that the study will be complicated and time-consuming. First results, in the form of vital rates, will not be available until the second year of the project.

As part of the study of vital rates the Kenya Government will conduct tests of various techniques of measurement that will be of interest not only in Kenya but also to other countries participating in the Poplab program and to demographers elsewhere. These tests will include, at the minimum, tests of memory lapse and the effectiveness of different types of recorders and enumerators. Other tests will be made as the need becomes apparent.

C. The study program will be reviewed jointly by DSU and UNC after the first three months of operation and periodically thereafter. Revisions will be made as necessary to enhance the value of the results.

D. After about the first six months of operations detailed plans for the first analytical study will be made. It is probable that this first study will involve the intensive analysis of census data for planning purposes. The economic staff of the Planning Division of the Ministry will, of course, be consulted. The DSU will complete at least three substantial analytical studies during the first two years of the project.

E. Subject to its initial approval of the Resident Advisor nominated by the UNC, DSU will assign the Advisor appropriate quarters in its office, will make available, insofar as possible, necessary equipment, supplies, and statistical materials, and will accord to him the privileges normally accorded to a highly qualified member of the staff.

F. Within the limits of available funds the DSU will recruit competent staff and train them as necessary. The training of staff and the establishment of continuing competence in the field of demography are recognized as important objectives of the project.

G. The DSU expects to cooperate fully in the international Poplab program and to profit from the exchange of methodological information. To this end, insofar as circumstances permit, it will send qualified representatives to the annual Poplab Conferences, exchange correspondence on methods with other Poplab institutions, and publish the results of its methodological findings.

H. The Kenya Government will make payments for those AID financed local cost items identified in Part A of Budget and will be reimbursed by AID under one of the following:

- a. GOK makes disbursements from own funds, and periodically requests reimbursement from the AID Mission Controller, or
- b. AID makes an advance of funds to an imprest fund to be managed by the GOK and the GOK makes disbursements therefrom for the agreed expense items, and periodically requests replenishment from the AID Mission Controller.

The GOK will request reimbursement on Voucher SF 1034 supported by a brief schedule of payments and certified by a responsible official of the Ministry of Finance & Economic Planning. The Ministry will maintain the usual complete GOK documentation for all disbursements and will maintain those documents available for AID/GAO audit

VI. Cooperative Assistance by UNC

Within the terms of its agreement with AID the UNC undertakes the following:

A. To provide a qualified full-time Resident Advisor; as well as short-term specialist advisors to assist in highly technical operations, such as sampling, map making, matching, and computer programming. The qualifications of the Resident Advisor are to be as follows:

UNC Advisor: Ph.D. in demography or statistics, or in an applied social science with special training in demography or statistics or survey methods, plus at least five years of responsible experience in the collection and analysis of demographic data. Additional high-level experience may be substituted for part of the academic qualifications.

The Resident Advisor will be primarily responsible for giving sound counsel on the professional and technical aspects of the project. But in a broader sense he will share responsibility with the top staff of DSU for maintaining efficient project operation and promoting the successful development of the study program.

All of the advisors supplied by UNC will be subject to prior approval by the Kenyan Government.

B. UNC will conduct annual conferences for the benefit of top staff of all participating Poplabs. Participants from Kenya will, of course, be invited to attend such conferences.

C. UNC will develop, through its publications program, manuals, original scientific writings, and reprints of important outside writings to give technical aid to Kenyan participants in the Poplab program.

D. Through its Resident Advisor and specialist advisors the UNC will contribute to an important degree in on-the-job training of Kenyan staff. At a later date, with additional support from AID, the UNC may be prepared to arrange for special courses in demography in an American University for one or more DSU staff members.

E. As appropriate, the UNC will assist the Kenyan Government in preparing specifications for procurement and in preparing other arrangements and documents connected with this program.

F. UNC will regularly submit progress reports and financial reports as required in its Basic Agreement with AID.

VII. Schedule of Outputs

1st Year - Formally establish Demographic Studies Unit, designate and assign Director, Deputy Director, and UNC Resident Advisor; complete financial procedures and submit specifications for purchase of equipment; establish DSU central office; recruit staff. In participation with UNC select study area for vital statistics; begin continuous study of vital rates within area; make detailed plans for first analytical study; complete preparations for final retrospective survey of vital statistics, conduct field test for household survey and review results.

2nd Year - Produce final vital rates for study area and establish measurement system on a continuing basis; begin drawing conclusion from experimental studies of alternative methods, etc.; complete first analysis based on existing demographic statistics and initiate new studies. Prepare and publish report on experience with project during first two years of operation. Intensive staff training on-the-job.

3rd Year - By this year experimental studies will have demonstrated superiority of certain techniques, organization, etc., warranting changes in operation of the continuing vital rate measurement system. Other experimental studies will need to be initiated, however, since the scope of the operation will not permit experimentation on many different subjects at the same time. Early in this year a decision must be reached on whether to initiate an alternative measurement system, perhaps based on experience in another Poplab; it seems probable that at least one other system will be tried, presumably in only a part of the sample area. Analysis of existing data will continue, with longer studies be yielding an appreciable flow of methodological and substantive reports, for publication as appropriate. Training continues. Possible fellowship for foreign study.

4th Year - Measurement of vital rates continues (through one or more systems); by this time a great deal of information will have been accumulated on factors that help to explain differences in fertility, etc., and this aspect of the study should receive major attention. Additional changes should be introduced into the measurement system as a result of continuing experimental work; considerable attention should be given to the probable error of estimates and efforts made to reduce this error if it seems too high. This year or early in the following year it will be desirable to settle on a single measurement system if more than one has been in use. Analysis of existing data continues and by now plays an important part in social and economic planning. Continuing training; continuing publication.

5th Year - By this year a satisfactory system for measuring population change in Kenya should have been developed and much of the year will be spent in perfecting it and preparing for its extension to the Nation as a whole. Actual use of the system in areas outside the study area will be included in the program. Experimental work in this year will deal with special problem areas, such as the measurement of population change among nomads. Analysis of existing data will enter new fields, and with the prospect that work beyond the fifth year will give even greater emphasis to such analysis. The fifth year should see the drawing of conclusions regarding all previous work, issuance of significant reports on findings, and development of programs for future studies.

VIII. Financing

A. Funds in Support of Kenya Operation

The total cost of the study program in Kenya (excluding UNC contract costs) is estimated at \$138,000 during the first year of operations and at \$613,000 during the five-year life of the project. During the first year, when purchases of equipment are planned, the Kenya Government will be able to provide goods and services valued at \$50,000, or 36 percent of the total cost. Thereafter the Kenyan contribution will increase to about 49 percent in the final year. A summary of estimated costs is provided in the attached table. (Budget Estimate Part A)

Major contributions by the Kenya Government will consist of the services of a Director and Deputy Director, housing allowances for all Kenyan staff (a normal payment in addition to salaries in public service and most other employment), an increasing share of living costs for staff in travel status, and other direct costs totaling about \$26,000. In the attached table it is assumed that the Director of the Statistics Division will serve as Director of the DSU, with half of his gross salary attributed to that project. Other costs to be carried by Kenya during the first year are as follows:

Rental of 3 field offices	\$ 2,500
Utilities for field offices	500
Computer time (1 hour per week)	2,100
Computer cards and tapes	500
Printing	1,000
Office supplies	1,000
Purchase (or value) of furniture for Central Office and 3 field offices	5,300
Central Office Services (Consultation with Permanent Secretary and other professional staff of Ministry, payrolls, accounting, procurement services, computer operator, key-punch services, general library facilities, postage, etc. Calculated at 25% of total salaries of Kenyans working on project.)	13,600

AID Funds: Excluding UNC contract costs, the largest amount of AID funds requested is needed to pay the salaries of Kenyan staff other than the Director and Deputy Director. These include a Senior Field Supervisor, a Chief Analyst (to be concerned with the analytical studies described earlier), a Secretary and a Typist, and other staff as follows:

	<u>First Year</u>
5 Clerks in Central Office	\$ 3,875
1 Junior Clerk in Central Office	350
16 Enumerators for retrospective surveys at \$560	9,000
20 Recorders for continuous surveillance work at \$560	11,200

	<u>First Year</u>
6 Field supervisors at \$1,400	8,400
4 Drivers	2,250
3 Junior Clerks for field offices	1,050

In determining the number of enumerators allowance has been made for 50 household visits per enumerator per week, or 200 per month, 1,200 per six-month period. Thus 14 enumerators would cover about 17,000 households (80-90,000 population) twice each year. Two enumerators are included for replacement of those sick or on leave.

The estimate of 20 full-time recorders assumes 40 clusters, with each recorder covering two clusters. In practice, however, a large number of recorders may be employed, with some of them on a half-time basis and covering only one cluster.

AID funds are requested to provide per diem for Kenyan employees (other than the Director and Deputy Director) in travel status. After the first year, however, the Kenyan Government expects to cover an increasing part of this cost.

Equipment: Equipment costs will be substantial during the first year but minor thereafter. Funds are requested to purchase four vehicles, of which three will be of the Jeep type and operate out of the three field offices. The fourth will be for use by the Senior Field Supervisor and other central office staff when travelling in the field.

Other equipment to be purchased during the first year is tentatively scheduled as follows:

- 1 Savin or Zerox or MMM copying machine
- 1 Mimeograph-type machine
- 4 Printing calculators
- 1 Electronic calculator
- 2 Portable tape recorders
- 1 35 mm camera
- 1 Slide projector
- 1 Overhead projector
- 2 Typewriters (1 electric, 1 manual long carriage)
- 2 Printing adding machines
- Miscellaneous small items (\$500)

Provision is also made for purchase of demographic books and documents.

Other Costs: Aside from the above, funds are also requested to supply petrol, oil and maintenance for the four vehicles. This provision has also been found necessary in other Poplabs. Provision for such needs from

regular government sources is so inadequate that without special dollar support there is danger that the vehicles will often remain idle.

The provision for rental of a central office (but not the field office) from AID funds is also based on existence of unusual circumstances. Office space within the Kenyan Government is highly inadequate, and often of unsatisfactory quality. It is the judgment of UNC and of the USAID Mission that rental from dollar funds is essential to assure the project a reasonable degree of separation from other bustling activities, some protection against diversion of staff to extraneous activities, and an opportunity for orderly and effective staff work.

B. Funds in Support of UNC Operations

The cost of UNC operations, which is estimated on the basis of experience in other Poplabs, is calculated at \$102,800 in the first year and \$507,000 over the five-year life of the project. Of the first year total the major part (nearly \$50,000) represents the salary, fringe benefits, and allowances of the Resident Advisor. Provision is also made for professional back-up staff (one half time of one professional) and for essential administrative work.

The funds for consultants will provide, during the first year, for a visit by a small UNC team to participate in the selection of a study area (or areas) and to assist in a review and revision of program. Provision is also made for an extended visit by a sampling expert, and for professional and technical assistance in map making and matching. In following years much of the consultation will relate to specialized techniques of analysis, such as methods of projecting birth and death data, the development of life tables, and application of the "Brass technique".

The estimated cost of travel includes a total of \$2,400 per year to transport two Kenyan officers of DSU to the site of the annual Poplab Conference.

Other costs consist largely of a small part of the Poplab office rental, communications, and supplies. The provision for UNC overhead is consistent with the terms of the university's current agreement with AID/Washington.

DETAILED BUDGET ESTIMATES

Part A. Estimated Costs of Demographic Studies Unit
(In U.S. Dollars)

Item	1 Jul 71 to 30 June 72	1 Jul 72 to 30 Jun 73	1 Jul 73 to 30 Jun 74	1 Jul 74 to 30 Jun 75	1 Jul 75 to 30 Jun 76
1. Kenya Personnel					
Director (50%)	(4,760)	(4,900)	(5,040)	(5,180)	(5,320)
Deputy Director (100%)	(6,350)	(6,550)	(6,750)	(6,950)	(7,150)
Field Supervisor	2,600	2,700	2,800	2,900	3,000
Chief Analyst	2,600	2,700	2,800	2,900	3,000
Secretary (1) and typist (1)	2,100	2,200	2,300	2,400	2,500
Other Office and field staff (see attached)	36,100	36,800	37,500	38,200	38,900
Housing allowances	(12,000)	(12,000)	(12,000)	(12,000)	(12,000)
Per diem for staff in travel s status	5,700	4,700	3,700	2,700	1,700
Ditto - paid by Kenyan Govt.	(-)	(1,000)	(2,000)	(3,000)	(4,000)
Total salaries and allowances	49,100	49,100	49,100	49,100	49,100
2. Commodities					
Vehicles (4)	15,000	-	-	-	-
Office and field equipment	9,700	1,000	1,000	500	500
Total Commodities	24,700	1,000	1,000	500	500
3. Purchase of books and Documents					
Total	2,000	1,000	500	500	-
4. Other Costs					
retrol, oil, maintenance, etc.	6,000	7,000	7,000	7,000	7,000
rent of Central Office and misc.	6,900	6,900	6,900	6,900	6,900
Data processing, office supplies, printing, rent of field offices, etc. (see attached)	(26,500)	(23,700)	(26,900)	(30,000)	(31,400)
Total other costs	12,900	13,900	13,900	13,900	13,900
5. Total U.S. \$ (excludes figures in parenthesis)					
	68,700	65,000	64,500	64,000	63,500
6. Contribution of Kenya Govt.					
	49,610	48,150	52,690	59,130	59,870
7. Per cent of grand total					
	36	42	45*	47*	49*
7. Grand total					
	138,310	113,150	117,190	121,130	123,370

Footnote - G.R. inputs shown in parenthesis

DETAILED BUDGET ESTIMATES

Part B. Estimated Costs for UNC Technical Support
(In U.S. Dollars)

Item	1 Jul 71 to 30 Jun 72	1 Jul 72 to 30 Jun 73	1 Jul 73 to 30 Jun 74	1 Jul 74 to 30 Jun 75	1 Jul 75 to 30 Jun 76
1. Personnel					
Statistician-Demographer (100%)	26,000	26,000	27,300	28,700	30,000
Supporting staff (50%)	13,000	13,000	13,000	13,000	13,000
Administrative Assistant (20%)	3,500	3,500	3,700	3,900	4,100
Sub total	42,500	42,500	44,000	45,600	47,100
Fringe benefits (14%)	6,000	6,000	6,200	6,400	6,600
Allowances, including moving	18,000	13,000	13,000	13,000	18,000
Consultants	7,000	7,000	7,000	7,000	7,000
Total salaries and allowances	73,500	68,500	70,200	72,000	78,700
2. Commodities					
Total	2,000	1,000	1,000	1,000	1,000
3. Travel					
Equivalent of 6 R.F. overseas @ \$900	5,700	5,700	5,700	5,700	5,700
Travel to Poplab Conference	2,400	2,400	2,400	2,400	2,400
Subsistence, etc.	4,000	4,000	4,000	4,000	4,000
Total	12,100	12,100	12,100	12,100	12,100
4. Other Direct Costs					
Car rental, communications, supplies, office rental, etc.	5,000	5,000	5,000	5,000	5,000
5. UNC Indirect Costs					
(33.16% of on-campus salaries, and 18.94% of off-campus)	10,200	10,200	10,500	10,800	11,100
Total	10,200	10,200	10,500	10,800	11,100
6. Grand total					
	102,800	96,900	98,800	100,900	107,900