PN-AAG-915

A SURVEY OF INSTITUTIONAL DEVELOPMENT ACTIVITIES AND NEEDS IN SUB-SAHARAN AFRICA: COUNTRY REPORTS

THE POPULATION COUNCIL

JANUARY 1975

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D. C. 20523

BIBLIOGRAPHIC INPUT SHEET

FOR AID USE ONLY

1. SUBJECT CLASSIFICATION

A. PRIMARY: Population — PC00-0000-G110

B. SECONDARY: Family planning--Africa South of the Sahara

2. TITLE AND SUBTITLE

A survey of institutional development activities and needs in Sub-Saharan Africa: country reports

3. AUTHOR(S)

(101) Population Council, New York, N.Y.

4. DOCUMENT DATE	5. NUMBER OF PAGES	6. ARC NUMBER
1975	286p.	ARC AFR301.3207.P831

7. REFERENCE ORGANIZATION NAME AND ADDRESS

Pop. Council

8. SUPPLEMENTARY NOTES *(Sponsoring Organization, Publishers, Availability)*

9. ABSTRACT

10. CONTROL NUMBER	11. PRICE OF DOCUMENT
PN-AAG-915	

12. DESCRIPTORS

Family planning education
Population policy
Demography
Medical education
Universities
Institution building
Educational facilities
Universities
Africa South of Sahara

13. PROJECT NUMBER: 931096700

14. CONTRACT NUMBER: AID/csd-3435

15. TYPE OF DOCUMENT

AID 590-1 (4-74)

SURVEY OF INSTITUTIONAL DEVELOPMENT

ACTIVITIES AND NEEDS

Sub-Sahara Africa

CONTENTS

CONTENTS

CAMEROON

CAMEROON

Noel Guillozet and Nancy Garrett

I. COUNTRY SETTING

Cameroon is the only official bilingual (French and English) country in West Africa. This quality could make Cameroon an ideal site for institutional development.

The estimated mid-1973 population of Cameroon was 6.2 million of which 39 percent were under age 15. The crude birth rate is estimated at 43 and the crude death rate at 23, resulting in a 2 percent rate of natural increase. The per capita gross national product was estimated to be US$180 in 1973.

The current development plan emphasizes the need to improve social conditions in the rural sector through development of agriculture (seed cotton, bananas, coffee, cocoa, ground nuts, forestry and connected industries). The main industry is related to processing of aluminum from Guinea. The two main cities are Douala (estimated population 250,000) and Yaoundé (178,000).

II. HEALTH POLICY AND PROGRAMS

Cameroon, as other countries of Central Africa, has the usual health problems typical of low income, largely agrarian, developing countries. Endemic infectious and parasitic diseases, widespread latent malnutrition, high infant and maternal mortality (infant mortality is 137 per 1,000 live births) reduce life expectancy at birth (41 years). To face such problems, it is estimated that there is one physician per 38,000 population. The Ministry of Health is plagued by the classic scarcity of money, manpower, and lack of infrastructure.

Table I indicates the percentage of allocation of resources to health and social welfare and to education in the total budget of the third Five-Year Plan. While health represents a smaller percentage of the total budget (2.4 percent) than education (7.7 percent), the rate of increase of health expenditure appears to grow faster, and foreign aid represents slightly more than one-sixth of the five-year budget.

Table I

BUDGET PROJECTIONS FOR

THIRD FIVE-YEAR PLAN, 1971-76

(In millions of dollars
at US$1 = 240 CFA)

	1971 -72	1972 -73	1973 -74	1974 -75	1975 -76	Five-Year Plan Totals	Percent of Budget
Health and Social Welfare	3.75	5.41	5.62	6.04	7.29	28.12*	2.4
Education	13.28	13.91	17.68	21.11	24.12	90.14	7.7
CUSS	.18	.33	.53				
TOTAL BUDGET	200.35	234.96	239.17	239.35	252.83	1,166.67	

External aid: $295.42 m. (49% compared to 65% during second plan)

* Government contribution: 23.12
Bilateral and private aid: 5.0

Table II provides some indication of the allocation of money during the present Five-Year Plan for curative versus preventive medicine and for health manpower development.

Table II

BUDGET ALLOCATIONS FOR

THIRD FIVE-YEAR PLAN, 1971-76

(In millions CFA)

	Total	Bilateral
Curative medicine	5,549	1,929
Preventive medicine	1,371	374
Special operations medicine	3,111	575*
Social affairs	1,110	321*
Common services	6,265**	
Manpower development	1,848	458
Medical research	300	300
Total five-year plan	19,554	3,957 (23%)

* Also includes some Cameroon government funds
** Data undifferentiated as to amount received through external aid.

The third plan has ambitious objectives for the training of physicians and paramedical personnel (see Table III). While the training objectives for physicians (1 physician per 15,000 population) appear to be within reach, the objectives for paramedical personnel seem more remote.

Table III

PHYSICIANS, NURSES, AND MIDWIVES

Five training schools (including one private)

	Objectives	Existing	In Training	To Be Trained	Cost Per Year (mil. CFA)
Registered nurses (Diplomés)	1,298	656	97	128	154
Nurses (brevetés)	2,762	952	130	336	128
Nurses aides	4,990	580	185	845	80
Physicians (1 MD/15,000 persons)	400	250*	209		

* 87 Cameroonian, 163 foreign

It appears that Ministry of Health and government policy will be subordinate to more visibly successful efforts in controversial areas. The government seems receptive to divergent viewpoints and open to new ideas. This would seem to apply to research efforts in health problems (including population issues) as it has to conference topics.

The government endorses the politics of rural medicine and guarantees that at least the earlier "Centre Universitaire des Sciences de la Santé" (CUSS) graduating classes will settle in semi-rural, if not rural, areas. Experiments in rural health will be gladly undertaken, as is now occuring in the DASP zones where the Chinese, Canadians, and the UNDP direct programs of their own design.

CUSS is integral to the government's third Five-Year Plan for health care services and some implicit but unspecified research expectations. Although separate from the Ministry of Health, the latter is quite proprietary about CUSS and able to demand from it certain actions to meet its own ends, such as the Première Journée Medicales (first Cameroonian International Medical Confer-

ence). CUSS often takes advantage of its prestigious position to gain financial and other special treatment. The attention of the developed world seems to have turned on Yaoundé, evidenced by the number of countries and projects involved in CUSS and in the rural projects of the Ministry of Health. Offers are being considered and accepted with something less than enthusiasm or serious interest.

The desire for distinction among Western and other African nations is a major preoccupation of the Ministry of Health and [redacted] CUSS. There is no other explanation for the rapid series of four Yaoundé-based international medical meetings held over a span of five months during late 1973 and early 1974, with their attendant and largely unreimbursed costs at a time of budget crisis and inability to meet normal operative costs of the Ministry of Health and CUSS.

Two influential members of the Ministry of Health are worth a special mention as they relate frequently with CUSS.

Dr. Peter Charles Mafiamba, a fluently bilingual Cameroonian, received his preliminary education in Nigeria and India and did his medical studies at Lucknow and Calcutta. He returned to Cameroon in 1961 and served as medical officer in five major rural and urban hospital posts through mid-1966. He was in Great Britain from 1966-69 for the study of obstetrics, and he received the F.R.C.O.G. in early 1970. Dr. Mafiamba was appointed Chief of Service of PMI (Protection Maternele et Infantile) in late 1969 and was immediately transferred to a remote hospital in the north. In mid-1970, he returned to Yaoundé as one of a small handful of truly bilingual people in the Ministry of Health. In late 1972 he was appointed Deputy Director of Health with special responsibility for teaching matters (School of Nursing) and liaison with CUSS. Dr. Mafiamba is in an excellent position to make innovations in the delivery of maternal and child

health services and to collect data relating to the health care services provided by the Ministry of Health. The ministry operates the major hospitals and dispensaries in the Cameroon and will employ the physicians graduating from CUSS and the nurses graduating from the several schools.

Madame Delphine Tsanga is a French trained nurse who was a deputy in the Assembly for five years and has been vice-minister of Health for three years. She is well known as a supporter of the broadest definition of family planning, including infertility treatment and diagnosis, and has frequently spoken publically on the subject. She is president of the Union of Women and is devoted to the education of women in all areas. She privately supports the inclusion of family planning training for all health personnel in appropriate services but maintains that the government has never officially recommended curricula changes in training institutions. On previous occasions she has indicated that medical and paramedical personnel were expected to give classes to secondary students in contraceptive methods during the summer courses in sex education organized by the Union of Women. There is an expressed need for sex education in the schools.

III. POPULATION POLICY

The population policy of Cameroon appears to favor population growth and at the same time tolerates family planning services for health reasons. Cameroon, which has never conducted a census, is among the African nations participating in the UNFPA-funded Four-Year African Census Program. Cameroon has also received assistance from the UNFPA to study the causes of sterility in the eastern region of the country. While the government takes a pronatalist stand in regard to population, the Ministry of Health is devoted to reducing infant and maternal mortality and morbidity and in this context permits private family

planning services, prescription sale of contraceptives, and education to health professionals. Similarly, from a legal point of view, an anticontraceptive law condemns the advocacy of contraceptive information, but physicians are allowed to prescribe contraceptives and pharmacists to fill medical prescriptions. In August 1974 the Minister of Health declared at a National Seminar on Cooperative Education and Population that "Cameroon, while acknowledging that the rapid growth of the world's population represents a major problem of our time, estimates that its own realities of a large country, rich in natural resources and partially underpopulated, fully justify its pronatalist policy... Nevertheless, such a choice does not mean that we neglect individual cases; it should not either imply the proliferation of large and needy families."[1]

IV. UNIVERSITY AND INSTITUTIONAL DATA

This report deals primarily with the University Center for Health Sciences (CUSS). There is no comparable national program in demography and related social sciences within the federal university. Information about the United Nations-sponsored regional population institute in Yaoundé (IFORD) can be found in the regional overview on demography and related social sciences in Africa.

University Center for Health Sciences

CUSS was founded in 1969 at Yaoundé as one of the schools of the University of Cameroon for the training of physicians and other health personnel. WHO efforts, dating from 1963, when the government requested a study of the feasibility of creating a school of medicine, were central in delineating the medical needs and assets of Cameroon and its closest neighbors. The creation

---

1. Translation by the Population Council

of a planning commission for the faculty in 1965 and the appointment of a WHO advisor on medical education culminated in September 1969 in the establishment of the school with a modest faculty and a first year enrollment of thirty-nine medical students. This class will complete the sixth or internship year in September 1975 and will at that time enter the services of the Ministry of Health for a term of obligatory salaried service in the hospitals and clinics of the government. The students receive generous and ascending stipends for all six years. This is followed by a provisional obligation of ten years at sites to be chosen by the government. The strongly stated commitment of the government to provide better health services in the more rural areas will, if acted upon, assure a wide dispersion of graduates to district hospitals.

Candidates for studies in medicine have received the British General Certificate of Education, advanced level, with a science emphasis or the equivalent of the French baccalaureat. They must show facility in either English or French with competence in the second language. Their choice is based on complex formulae including their region of origin in Cameroon. Of the 209 enrollees in 1974, there are only six medical students from other countries.

Several aspects of the school distinguish it in theory from more traditional medical faculties. There is an absence of rigid departmental structures with professorial chairs in an effort to discourage specialization. Emphasis on community and rural medical endeavors begins in the second year and increases in each subsequent year through the sixth. This is intended to encourage the formation of broadly trained general practicioners able to meet effectively the physician manpower demands of the nation in the next decade. The success of a faculty in inculcating these desirable goals has yet to be seen. (A faculty educated in large part in urban France,

England, Senegal, and Nigeria, with graduate training in specialities and a paucity of rural Cameroonian and African experience.) Another intention of the curriculum worthy of comment is the training of different types of medical personnel to work in teams. The desirability of new graduates of different skills sharing common approaches to patient care needs at the outset of their joint service is obvious.

CUSS currently trains four non-physician disciplines. Since 1972 the Centre d'Enseignement Superieur en Soins Infirmiers (CESSI), a WHO funded program (two year), has provided advanced nursing training with approximately twenty nurses per class, of whom a large part (70%) originate in other francophone African nations. Acceptance into the program usually requires a three-year course in nursing (yielding the diploma d'état degree), a minimum of two years nursing experience and successful completion of the entrance exam. These students share certain curriculum aspects with medical students, including a six week shared rural clerkship in Northwest Cameroon (1972-73 and 1973-74).

The enrollment of laboratory, pharmacy, and sanitation technicians was seventeen in 1973-74 and will double in 1974-75. The first year of the three-year program is common to all technicians. The last two years are spent in a specialty.

In 1974-75 joint programs are to be initiated through CUSS and the Ministry of Health for the production of six or seven nurse anesthetists per year, and with the Center for the Re-education of the Handicapped of Yaoundé and CUSS for the training of physiotherapists. CUSS has also slated health education training at the master's level by 1976 and is committed to the training of dental technicians able to perform basic dental services at a future

date.

Of the 214 medical students enrolled initially, 209 are presently in the program (1974 exam results are not available) making an average of 41 enrolled per year, as can be seen on the following table.

Table IV

NUMBER OF STUDENTS BY YEAR AND SECTION

	1973-74				
Section	1st Year	2nd Year	3rd Year	4th Year	5th Year
Medicine	42	38	51	41	36
CESSI	24	21			
Health Technicians	17				

For the first time, in the fall of 1974, Cameroonian hospitals and health centers, public and voluntary, will have the benefit of thirty-six interns as the first class enters its sixth year. They will rotate through a newly created community emergency service at Central Hospital and widely scattered provincial hospitals. Potentially they will help guide the new fifth-year students and add to the support and instruction of fourth-year students. The fourth-year students will have a longer clinical experience before their fifth-year rural clerkship in West Cameroon. (Previously, students went in their fourth year.)

The first class of CESSI students graduated in June 1974. Most of those from Cameroon are in new teaching and administrative posts. Currently, less qualified teachers are [redacted] applying for CESSI training, recognizing their inadequacy when new graduates are assigned. The Ministry of Health is relentlessly trying to raise the appallingly low standard of nursing in Cameroon. Interestingly, Cameroon has the only school of nursing in tropical francophone

Africa directed by a nurse instead of a physician.

Expansion of the CUSS influence into a new training area will start in September 1974 with two rural health centers sixty kilometers from Yaoundé. Fourth-year medical and CESSI students are to live for three days a week at the sites of the two chosen centers, which are inferior, particularly in the quality of the staff and program, to those used in West Cameroon. They may not furnish the best training ground but the CUSS presence should help raise the standards of the centers if sufficient supervision is maintained. Team training will be difficult to sustain because health center staff examples are lacking and CESSI students may be unable to participate. Because of transportation problems and teacher shortage, the national school of nursing will not be able to send students the way its counterpart in West Cameroon has done, thanks to German technical aid and transport. However, the national school will be integrated for the first time in the community medicine program at Mvolye -- the CUSS annex semi-rural health center bordering Yaoundé.

Research studies carried out by students in the new area called the Mefou, are likely to receive strong encouragement, since this was one of the areas recommended for research by the UNDP evaluation team in March 1974. Probably the recent decision to import research advisors to guide students who must present a thesis to qualify for an M.D. also originates from the team's recommendation that an advisor with field and teaching experience be recruited for three months in two successive years.

The new teaching unit at the Central Hospital has been completed and used for case presentation, outpatient clinic teaching, and lectures -- events not possible previously. It is the site of the new Harvard University project in maternal and child health training. Students at last have a place free from the

pressures of patient care in which to learn about health care, read and prepare cases, and to eat and sleep while on duty. With such a facility there is hope of launching some research projects, whereas previously the hospital was overburdened with competing pressures that led to error and prejudiced perception.

Construction has begun on the new University Community Hospital unit, a $6.4 million, 150-bed teaching hospital, financed by Cameroon, French, and American funds. Clinical teaching of outpatient medicine should have greater impact starting in 1975 when part of it should be functioning, than it can have in the present hospital where much of what is taught is negated by the environment and the practices therein.

The faculty increased sevenfold in four years -- from a total of seven in 1969-70 to fifty in 1973-74. The breakdown in terms of origin follows:

Year	Total	Cameroonians	Technical Assistance
1969-70	7	3	4
1970-71	22	10	12
1971-72	22	10	12
1972-73	40	19	21
1973-74	50	26	24

The technical assistance faculty derives from WHO, France, Canada, and the United States, and terms of service vary from two to four years.

A. TRAINING AND RESEARCH INTEREST IN DEMOGRAPHY, MCH, OBSTETRICS AND RELATED BASIC SCIENCES

In regard to curriculum, all medical and paramedical students receive twenty hours of population studies. Medical students have an additional seven and one-half hours on sex education and family planning and eight to ten hours on contraceptive methods. Major emphasis is placed on problems of infertility. The problems of sickle cell disease and hemoglobinopathies are discussed with

genetic counselling. The importance of demographic training is acknowledged, and CUSS has proposed that IFORD be incorporated into the university's system to improve the quality of training and statistical credibility, a nationally weak area.

1. Public Health and Community Medicine

Dr. Daniel N. Lantum is well-known to several people at the Population Council. He received his M.B.B.S. at London in 1962, a diploma in Tropical Medicine from Liverpool in 1965, and both a master's degree and doctorate in public health from Tulane in 1968-1970, where Dr. Joseph Beasley served as his advisor. At CUSS Dr. Lantum is coordinator of the Public Health Unit, one of the three units of CUSS, and professor of community health since 1970. He has been chief of service from 1972-74 at the Grande Messa Dispensary, a major ambulatory public adult clinic. Dr. Lantum, an anglophone, is well-known in the Cameroon both through his relatively long tenure in government hospitals and CUSS, and through his diverse writings in popular Cameroonian publications on folklore, sociology, paganism, Christianity in African expression and contemporary politics. Few topics escape his commentary, but demography and population problems predominate. His health-oriented publications tend to focus on health issues with strong overtones of social commentary. His research consists of an abortion study begun in 1971, with aspects presented at Journées Medicales de Yaoundé and at the IPPF Conference in 1971 in Accra, and a KAP survey on ideal family size among West Cameroonian women in 1972-73.

He is responsible for the health and demographic survey (including fertility study) of the Mbandjock area requested of CUSS by the government. If he can get funds he would like to do a comparative study using the same variables in West Cameroon in an attempt to discover, among other things, factors influencing the wide differences in the number of living children per woman.

Dr. Gladys Martin is associate professor of community medicine in charge of the CUSS annex at Mvolye, a primary community teaching facility for medical and nursing students. Trained primarily at Ibadan, she completed a year of pediatrics residency at the University of Rochester in 1969-70, followed by an M.P.H. at Harvard School of Public Health. She is anglophone and an energetic proponent of family planning, an enthusiasm that led to her arrest in Victoria several years ago at a time when family planning was a still less acceptable topic of public discussion than it is in 1974. She has written several papers. The most recent being a paper submitted for the 1974 International Pediatrics Conference in Buenos Aires. She is well-disciplined, interested in community medical problems, demography, and the practical matter of village health. She has done a detailed health survey of Mvolye, a village peripheral to Yaounde, and has already detailed the reproductive history as well as the health status of virtually all stable families in the village. Intended as an "open laboratory" for medical students of the fourth-year, it would readily lend itself to a number of longitudinal studies should Dr. Martin wish to pursue them.

She is aided by a second anglophone, a bilingual, qualified midwife, Grace Walla, who shares her broad interests in community medicine centered around the young family. Mrs. Walla is presently doing the data collection on interpregnancy interval. Both encourage students to do genetic counceling where sickle cell disease is a problem.

Dr. Martin has written two proposals which she would like to see funded:

The Trend in Mortality of Children from Birth to Five Years in Mvolye Community, 1969-74.

Haemoglobin Concentration in Children Born at the Mvolye Maternity from Birth to Six Months of Age.

2. Obstetrics and Gynecology

Dr. Boniface Nasah is an anglophone Cameroonian who, since 1972, has served as Chief of Service in Obstetrics and Gynecology at Central Hospital in Yaoundé. He has served as lecturer at CUSS since 1969 and is under current discussion for promotion to professor of obstetrics and gynecology. He is considered the best obstetrician and gynecologist in Cameroon and is an excellent technician and teacher. He is perhaps one of the most important conveyors of the art of patient care to the student body at Yaoundé. Dr. Nasah received obstetrics and general surgical training from 1964-66 at Ibadan; a year at the University of Liverpool as registrar in obstetrics and gynecology from 1967-68. He passed the M.R.C.O.C. in 1968.

Dr. Nasah has published several papers concerned with subfertility, infertility, and socio-cultural and pathological conditions affecting fertility in Cameroon. He has research underway on the pathogenesis of oligospermia and the utility of fetol in the anemia of pregnancy. He runs an infertility clinic and has a good balance of clinical interests, including a concern for the availability of family planning services which he makes available to the extent that his time allows. His time and counsel is probably more sought after than that of any other doctor in Yaoundé.

In 1969 he was the Cameroonian representative to a workshop on fertility and population problems in Africa held in Addis Ababa. He remarked that he was asked by the government to talk on "anything" and to say that the government was "not interested" in any family planning activities. He sees a mellowing of attitude and virtually no resistance to making services available to those who request it. He was a guest in 1970 at a USAID sponsored seminar on family planning management in Washington and in 1973 at an Ibadan conference sponsored by ECA

and IDRC on the correlates of subfertility and infertility in Africa. He serves on a WHO task force addressing the same topic and as consultant to the International Federation of Gynecology and Obstetrics and International College of Midwives on the training of midwives and auxiliaries in Africa.

Dr. Nasah has appalling responsibilities, the cardinal one being responsibility for a dreadful 9,000 delivery per year central maternity that lacked running water for a three-month period last year, and in which the bulk of women have had little or no prenatal care. He has also received in 1973-74 the first in-service medical students, with the subsequent demand for teaching supervision and has had very little assistance with the task. Improved facilities and the arrival of one or two well-trained obstetricians and a teaching midwife should be of great help in the next few years. He welcomes the availability of obstetric services and the opportunity to upgrade the practice and has the capability for sound clinic-based research. What will be required is time to accomplish it.

Dr. Ferdinand Pensy-Nsere is a Cameroonian. He returned to Cameroon in mid-1973 where he took up the post of assistant chief of service at the Maternity Unit of Central Hospital. He also holds the post, charge d'enseignement at CUSS. He is a Bordeaux graduate of 1966 and completed a residency in obstetrics and gynecology at the University of Geneva in Switzerland in 1972. He would like to pursue his interests in family planning and demography, masculine and feminine infertility, and prevention of postpartum infections. He teaches all methods of contraception from Ogino to sterilization, and claims a commitment to teaching all medical and paramedical personnel basic family planning methods.

Dr. Moyo Kamdom, a Cameroonian who returned from France in 1973 to take up his post at the Central Hospital Maternity, is chargé d'enseignement at

CUSS. He has an M.D. and a diploma of Tropical Pathology from Strasbourg Medical School. In addition to a certificate in gynecology and obstetrics, he holds a certificate in hygiene and health and social action for which he wrote a paper on contraceptive failure. He qualified as a specialist in gynecology and obstetrics in 1973, probably at Strasbourg, when he wrote his thesis on low birth weight infants. In 1973 he taught six hours on contraception to third-year medical students and one class to nursing students.

3. Biochemistry

Dr. Gilbert Cotand is French and a member of the WHO teaching faculty at CUSS in the field of biochemistry. He is Paris trained, expected to stay at least an additional two years in Yaoundé, and has authored several papers on metabolic problems. He presented a review paper, "The Prostaglandins," in conjunction with Poll-Gouater, Aquaron and Eben-Moussi at Premières Journées Medicales de Yaoundé in December 1973. He has a research endeavor underway in the area of prostaglandins. Dr. Cotand's efforts are entirely in the teaching area and include no clinical responsibilities.

4. Support Considerations for CUSS and its Faculty

The funding and manpower problems of CUSS are perhaps growing more rapidly than the institution. Funds for travel, medical journals, research interests, secretarial service, and other aspects of professional support are in short supply and hinder most people. The need for direct financial subsidy on an institution-wide basis is well recognized by most technical aid personnel, apart from the need for improved management practices.

The existence of CUSS and its teaching needs, along with the needs of a growing population (a sevenfold increase in Yaounde in thirteen years) have been cited in the Third Five-Year Plan as the justification for the construction a new

general hospital with over 1,000 beds and a 150-bed university hospital funded by multiple donors and currently under construction. These capital assets, if they materialize, will vastly increase future Cameroonian institutional support costs and probably compound the funding problems of CUSS.

The importation of foreign-manufactured equipment, while at times indispensible for research and initial outfitting, is extremely troublesome for the faculty in face of the inadequacies of the CUSS administrative structure and the government dependency on import tariffs for over 80 percent of its operative budget. For these reasons, direct financial support rather than supply of equipment is least troublesome for Cameroonian nationals. Availability of dollars and sterling, obviating the French franc bloc exchange problems, would be a further convenience in paying for disbursements outside Cameroon and could easily be used for conferences, tuition, and travel expenses.

B. TECHNICAL ASSISTANCE PROJECTS

1. The Harvard University Project

This is a projected four-year USAID Title 10-funded institution-building work project intended to provide full-time faculty support for a four-person team in maternal and child health. The team is to have a pediatrician, obstetrician-gynecologist, nurse-midwife, and extended role pediatric/public health nurse. They will serve to teach, strengthen the curriculum, and directly render services to patients within the framework of CUSS and its related teaching institutes (Central Hospital, Yaoundé; CUSS Annex, Mvolye).

A central activity of the team will be to introduce in September 1974 a well-mother and child clinic open to medical and nursing students at Central Hospital -- the medical hub of Yaoundé and the principal teaching site. They intend to follow a limited number of pregnant women and assure their prenatal

care, the administering of fundamental vaccines, growth monitoring during the first year of life, and provision of family spacing guidance and assistance. These services generally are not provided to the community and are rarely taught to medical and nursing students. This bodes ill for a student body that should have the principles of preventive medicine in practice inculcated early and repeatedly if they are to effectively change the health standards of the Cameroon and its neighbors.

An expected outgrowth of the Harvard Project will be the opportunity to study mothers and children who enjoy unusually good health and to focus on preventing infectious disease and malnutrition. Development of a Cameroonian growth curve for children is intended and the opportunity to add factors relating to hemoglobinopathies, hemoparasites, and birth intervals will present themselves both during the life of the project and in later follow-up that may be pursued by interested faculty.

Funds provided for the prospective training of Cameroonians at CUSS and related governmental agencies may also be deployed for the training of candidates from other African countries. Expected fields of study for Cameroonians will be in maternal and child health areas and in health care organization and delivery.

2. The Canadian Project

The Canadian International Development Agency's (CIDA) bilateral program has been responsible for the major financial burden in connection with the Public Health Unit building opened in 1973. It has also provided nine teachers since launching the public health project in 1969. With the help of WHO teachers at CUSS, in 1972, the Canadian team initiated the Health Care Demonstration Training (HCTD) project in northwest Cameroon at Bamenda. In keeping with the

government health priorities for the development of integrated basic health services and increased numbers and quality of personnel, the program was created to train medical and paramedical students to work in teams in rural areas. The students would learn to apply their skills and knowledge in a village situation. Both theoretical and practical teaching would be provided by CUSS and local teachers. The students would be under the direction of the health center staff headed by a nurse, including a midwife or two, a laboratory technician, and a leprosy worker.

Fourth year students were distributed among six health centers, along with CESSI and Bamenda's two-year nursing students, under the tutelage of a public health nurse educator, a WHO rural health specialist, and a sociologist. Teaching assistance was also provided by a Cameroonian doing his thesis research on local health practices, the director of the nursing school, the Canadian chief medical officer for preventive and rural medicine for the DASP zone, and visiting teachers from the Public Health Unit at CUSS. Only one tutor remained in Bamenda during the last six months. The shortage of permanent teaching staff is only one of the many problems afflicting the program. Nonetheless, it is still considered by many as the high point of CUSS and CESSI field training. The program has been suspended for fourth-year students, so 1974-75 will see no students in the HCTD program. It is to be reinitiated for fifth-year students in 1975-76. In the meantime, the Canadian team will concentrate its efforts on developing the team spirit and practices in the two Mefou health centers to be developed for rural experiences in community medicine.

Mr. Draper, a medical sociologist with the Canadian team at CUSS, has begun work on "le milieu physique et la population du Cameroon," which will touch on environment (natural resources, climate, geologic formation), the human and

social dimensions of the nation (ethnic, linguistic, religious, tribal dispersion, distribution), and a major demographic study. He anticipates laying heavy emphasis on fertility and infertility, migration, influence of sexual mores, and job status. For his available resources formal census materials are lacking, but he will be aided by OCAM (Organisation Commune Africaine Malgache et Mauricienne) and IFORD, the United Nations demographic research and training center for francophone Africa, both based in Yaoundé. Perhaps more important will be his opportunity to avail himself of the newly initiated Canadian team involvement in a demographic survey being made of Mbandjock, north of Yaoundé, as part of a government effort to develop a new industrial and population center there.

3. University of North Carolina Project

The government of Cameroon has approved the establishment of a regional office for the University of North Carolina's African Health Training Institutions Project (HTIP) to be based at CUSS. The regional director will be Dr. Jean Martin. This is a USAID Title 10-funded institution-building project intended to heighten the awareness of African institutions to the concerns of family health. It will include teaching methods of fertility management, social and psychological aspects related to child spacing, and the diagnosis and treatment of infertility. The program, which has the official approval of the Association of African Medical Schools, aims at increasing the capability of academic health professionals in Africa to teach family health, develop and test new techniques and teaching aids, and improve health curricula through various short courses, field work, consultants, foreign training, conferences, and publications. The project is to run for five years, and the culmination of these efforts should be a pool of teaching techniques, tools and aids appropriate to the needs of the individual countries, and a body of trained health science teachers capable of integrating the various aspects of family health into maternal and child health programs.

If the University of North Carolina Project is well-executed, CUSS will benefit from the presence of much needed expertise. If it is received favorably in Africa, CUSS, desiring to gain credence in a university not yet of age, will be gratified. The potential prestige, rather than the inherent family planning elements (of which not a word has been publicly spoken or written), is the reason for acceptance.

C. INSTITUTIONAL DEVELOPMENT MANPOWER NEEDS

Thoughtful, long-term plans made by WHO have done much to prepare Cameroonian teachers for the Cameroonian health structure. Ten candidates have been sent for training abroad. Several have already returned, and a number of others will return within the Third Phase (1974-77). WHO has funded two Cameroonian CESSI teachers to go to the United States and Canada for two years' academic training to qualify for CESSI faculty posts.

The French Technical Assistance Agency has twenty-eight students currently in France on training stipends, of which six are students of public health in Rennes, eight are studying medicine, ten are in pharmacy and two in dentistry.

CIDA has funds which are earmarked for training in public health-related areas and is currently subsidizing one nutritionist and is seeking other government proposed applicants.

USAID also has generous funds that have not yet been committed.

It has proved difficult to locate training sites in keeping with language capabilities and with donor demands. Fear of excessively long (or permanent) absence is a consideration that may or may not be contributory to delays of one to two years in attaining government approval by candidates for departure. Time-locked technical assistance programs often find it difficult

to commit themselves to support training which may not be started for several years and which could outspan their own duration.

In regard to clinical medicine and medical and social disciplines, it seems to be a diminishing necessity to consider subsidized training in these areas. The presence of CUSS has generated a wealth of inquiries from Cameroonians in foreign residence and training. Most seem to be seeking an opportunity to return and establish themselves in the CUSS structure.

To meet the need for teachers of fundamental preclinical disciplines and clinical specialty areas, UNDP has arranged funding and, contingent on availability, has planned a formidable list of resident teachers to continue through 1977 for periods of two months to two years. A UNDP mid-project evaluation team that visited CUSS in March 1973 recommended continuation through 1978.

Of a more worrisome character are the areas of visible managerial incompetence reflected by faulty money management and failure to meet commitments to students, faculty, and suppliers. The poor maintenance of buildings, grounds, and costly equipment falls into the same category. These are problems compounded by the lack of a competent manpower infrastructure inherent in non-industrialized countries. This seems unlikely to change rapidly. Virtually all technical assistance groups are ready to send managerial consultants to assist management of CUSS and the Ministry of Health and to train Cameroonians. These offers have not yet received local acceptance.

In summary, the institutional manpower needs of CUSS now reflect the careful planning efforts made at the outset. Remaining needs may now be met in large part by the drawing power of CUSS and the interests of non-resident Cameroonian health professionals. The managerial problems are another issue. As long as nepotism and non-qualification factors strongly influence the development

of financial and administrative management, graduate training for Cameroonians and consultant efforts will be of limited value.

V. CONCLUSIONS

CUSS is a young and innovative institution commited to the training of a health team whose responsibility will be to provide basic health services to most of the population of Cameroon.

The faculty is anxious to receive support for its research interests. Apart from a handful of people already receiving grants (UNDP/WHO) in areas not related to population issues, virtually everyone is plagued by difficulty in obtaining all domestic supportive services. This is apart from the difficulty in obtaining funds for travel and maintenance experienced by all but a few politically high-ranking members.

As Africa's newest medical school, CUSS is trying very hard to establish its credibility. The government is solicitous and it is perhaps as much an effort to be innovative and responsive to legion local needs as it is to self-aggrandizement.

CUSS in a decade should enjoy the prestige of Ibadan or Dar es Salaam, and in the face of the magnitude and diversity of donor support should have an easier time enroute. Cameroon, although smaller and less wealthy than many countries, does have a certain balance of resources and developing industry.

While the government outwardly shares the views of its many poor African neighbors on population planning, it is so hungry for recognition and distinction as a medical leader that they will host virtually any respectable health endeavor that speaks to a broadly perceived need of the developing world. The broader the better.

SOURCES OF INFORMATION

1. 1973 World Population Data Sheet. Population Reference Bureau, Inc.

2. Statistical Yearbook 1972, Table 202, p. 747.

3. Dr. Guillozet and Mrs. Garrett are in residence at CUSS.

September 1974

CONTENTS

ETHIOPIA

ETHIOPIA

Joel Montague

I. COUNTRY SETTING

The empire of Ethiopia covers an area of approximately 1,274,737 square kilometers and has a population of approximately 25 million people. It should be noted that there are no accurate figures on population in Ethiopia because a census has never been taken, and there is no system of vital registration. However, the Ethiopian Government Central Statistical Office has undertaken rural population surveys and a National Sample Survey. The first round of a National Sample Survey (1964-1967) estimates the crude birth rate at 50 per thousand and the crude death rate at 25 per thousand with a rate of natural increase of 2.5 percent per year. A general fertility rate of 215, a total fertility rate of 6.6 and a gross reproduction rate of 3.2 were calculated. A national census will be taken in 1974 with the assistance of the United Nations. Several small and localized surveys were conducted in Gondar and other areas, which show a birth rate from 38.9 to 47.4 and infant mortality rate from 115 to 152. The population of Ethiopia has been estimated to increase at 2.5 percent yearly on average and at 6.5 percent in urban areas. The population density is low, with an average of about 20 persons per square kilometer. The vast majority of the population live on the highland plateau, which is relatively free from acute infectious diseases such as malaria. The population is scattered and is a mostly rural one (91.4 percent). Only

8.6 percent of the population is urban and lives in about 200 cities and towns with more than 2,000 inhabitants.

Economically, Ethiopia is still one of the least developed among developing countries with per capita GNP at about U.S. $80 in 1973. Furthermore, it is characterized by a large young population with 45.7 percent of the population under 15 years of age. Ethiopia is still an agricultural country, with 83.7 percent of its total population engaged in subsistence agriculture, and 7.7 percent of the population engaged in commercial agriculture. Out of the total land area of 1,274,737 square kilometers, 68.8 percent of it is arable land with only 10.9 percent of the total being cultivated. Fertile low lands are not usable because of infestation with malaria, bilharziasis, and other acute infectious diseases. New land under commercial agriculture will only grow about 4 percent yearly, and under subsistence agriculture (pastoral areas not included) by not more than 2 percent yearly, according to the Planning Commission.

The Ethiopian government has undertaken a series of planned development areas. The First Five-Year Development Plan covered the period of 1957-61, the Second, 1963-67, while the Third extends from 1968-73. The Third Five-Year Development Plan targeted a 6 percent rate of growth (at constant prices) and real income per head growing at 3 percent per year. However, most of the Third-Year Plan targets proved to be ambitious and impossible to meet. The health sector had prepared a modified three-year health plan to cover the third part of the Third-Year Plan in more realistic and practical ways. However, it includes no family planning activities.

A good indicator of Ethiopia's problems is educational statistics. Presently, the participation rate for primary schools is only 12 percent and only 2.5 percent for secondary schools, with roughly only one-quarter of them being girls. Furthermore, due to the high drop-out rate, only about 4 percent of all children in the first grade eventually enter the twelfth grade. Therefore, the literacy rate in Ethiopia is very low, with an average of 6.6 percent for total population, 11.6 percent for male and only 1.7 percent literacy rate for females.

In 1962 there were 701 government schools with 6,154 teachers, 199 mission schools with 1,207 teachers, 193 private schools with 999 teachers, 99 church schools following the Education Ministry curriculum with 288 teachers, and 170 schools with 511 teachers, which were run under community control. A large percentage of all teachers are foreign, and a relatively small percentage of teachers are women. Primary education accounted for the highest proportion of all students -- 410,000 out of the 477,000 in 1967. Two tendencies can be seen in the elementary level; namely, that there is a growing proportion of females at this level, and that there is a sharp drop, sometimes as much as 40 percent per year, in the total number of students at the elementary level. In the academic year 1966-67 there was a total of 2,105 schools with 11,983 teachers and a total of 476,686 students.

II. HEALTH POLICY AND PROGRAMS

Life expectancy at birth is estimated to be 37-38 years. The national health services in Ethiopia have been likened to a pyramid, with

the health stations at the base, the health centers in the middle, and the hospitals at the apex. All are supervised and coordinated by the provincial health department in each province. The provincial health departments are under the overall guidance of the Ministry of Health in Addis Ababa. At the present time the system is composed of some 94 hospitals, 82 health centers, and 527 health stations and clinics. The basic philosophy underlying the system is that decentralized and generalized health services should be provided to the majority of Ethiopians in rural areas. However, the development of basic health services is still rudimentary and probably covers not more than 20 percent of the total population. The government appears to lack resources to staff the existing centers or to staff new ones. While all health centers and health stations are operating under the Ministry of Public Health, only 43 of the 94 hospitals are run by the Ethiopian government, while the rest are run by various ministries, and so forth. Of the 51 nongovernmental hospitals, many are run by the Haile Selassie I Foundation, missionary groups, and private firms. Except in Addis Ababa and Asmara, there are practically no private health practitioners covering the practice of modern medicine. Because of inadequate government public health services, there are many illegal but accepted local drug stores and medical practitioners of a traditional nature. The traditional healers work in the field of herbal medicine, religion, and spirit healing.

Although MCH services are considered an integral part of the health centers program, they are reported to be poorly organized, and it is doubtful that many Ethiopian children under five years old benefit from

their services. It is estimated that the infant mortality rate is 195 per 1000 live births. It is also reported that not more than 7 percent of all expectant mothers receive any kind of skilled medical attention. It has been estimated that among the more than 1,250,000 deliveries a year, there will be 26,000 infant dead under twelve months old and more than 2,500 maternal dead during delivery per year. Needless to say, a vast majority of deliveries are attended only by village midwives who are usually older women or neighbors of the pregnant woman. Local trained midwives exist only in very small numbers.

The health manpower shortage is a key factor and, to a large extent, has contributed to the weakness of the present system. A Public Health College and Training Center was established in Gondar in 1954, with a unique training program for health personnel who were to work in local areas. The Faculty of Medicine was established in 1963 and, as of the present time, has graduated 48 physicians. These physicians comprise almost 40 percent of the total number of Ethiopian doctors, and they are occupying key positions in the health system. Nonetheless, the distribution of graduates is extremely poor, with the doctor/patient ratio in Addis Ababa being, perhaps, 1:3,000. The ratio for the rest of the country is 1:100,000-250,000.

There is also an absolute shortage of all other categories of health personnel. These personnel tend to be concentrated in urban areas, as is the situation with physicians. Other categories of personnel, such as Health Officers, Community Nurses, Sanitarians, and Dressers are available in large numbers.

III. POPULATION POLICY AND PROGRAMS

Ethiopia has no population policy. Moreover, family planning is a politically sensitive issue. The Orthodox Church, which has considerable influence both on the attitudes of high government officials and on the population, looks unfavorably on any family planning program. The fact that the emperor did not sign the World Leader's Statement has been interpreted by some to mean that he is against family planning. Although some high officials realize the importance of the population issue and the need for family planning in Ethiopia, no one is willing to take responsibility for making decisions. Therefore, there is no government policy or program in family planning in Ethiopa so far.

The last two years have seen a somewhat more favorable attitude toward family planning among government officials, and several family planning clinics now operate in Addis Ababa and other large cities. Government officials in the health sector are interested in developing limited family planning programs as part of the basic health services, particularly with MCH services. The Planning Commission, although not supporting family planning programs in the country, has agreed to support urgent basic research "into ways and means of persuading families to space their children wisely so as to protect the health and welfare of the family."

Family Guidance of Ethiopia, a voluntary association operating under the auspices of the Haile Selassie I Foundation, was created in 1966. It started with one family planning service at a hospital in Addis Ababa, but it was not until 1969 that it started operating systematically in Addis Ababa and parts of the interior of the empire. Although the government does not support family planning and does not approve of any

kind of mass media information and advertisement, family planning services are allowed if they are integrated as part of MCH services.

Family planning sessions have been integrated in MCH centers, community centers, hospitals, and other health centers. About sixteen clinics and hospitals in Addis and thirty-four clinics and hospitals in the provinces are giving family planning services by the Association or with the assistance of the Association.

The staff of the Family Guidance Association consists of seventeen full-time and five part-time employees. four physicians, four nurses, two social workers, and two dressers. Most of the staff members have had a number of years of experience in their respective fields, and they have undergone a training program in Kenya under the sponsorship of the Association.

TOTAL CONTRACEPTIVE ACCEPTORS BY METHOD

Year	Pill	Loop	Injection	Other
1970	6102	3653	218	--
1971	8968	3472	86	154
1972 (6 months)	6054	903	54	180

The Orthodox Church has agreed to the limited availability of family planning services in large cities provided there is no propaganda. Several international and bilateral agencies have been interested in recent years, notably WHO, UNICEF, ILO, World Bank, USAID, SIDA, and others.

IV. UNIVERSITY AND INSTITUTIONAL DATA

Institutions of higher education in Ethiopia are Haile Selassie I University in Addis Ababa and a new Catholic university in Asmara established in 1967. There is also a Polytechnical Institute at Bahir-Dar. Discussions on Ethiopia held in the United States indicate that there was relatively little interest or possibility of activity in the field of population at the University of Asmara and the Polytechnical Institute. Therefore, no site visits were made to those intitutions. A list of all medical, public health, and auxiliary medical and public health training schools is available in Table I to this section (courtesy of the Department of Preventive Medicine and Public Health, Faculty of Medicine, HSU I -- dated May 1970). Information on population activities conducted under the auspices of Haile Selassie I University at its Public Health College at Gondar are included in the following section.

Haile Selassie I University

Haile Selassie I University began in 1961 with seven colleges and faculties and an enrollment of 948 students. The following table shows the university's instructional units in the order of their establishment.

	Name	Year Established
1.	Faculty of Arts - U.C.	1951
2.	Faculty of Science - U.C.	1951
3.	Faculty of Technology - College of Engineering	1953
4.	College of Agriculture (Alemaya)	1954
5.	Building College	1954

	Name	Year Established
6.	College of Public Health (Gondar)	1954
7.	Faculty of Education	1962
8.	School of Social Work	1959
9.	Faculty of Theology	1960
10.	University Extension	1962
11.	College of Business Administration	1963
12.	Faculty of Law	1963
13.	Faculty of Medicine	1966

All but two of the faculties or colleges of the university are located in Addis Ababa. The two colleges outside the capital are the Agricultural College at Alemaya, about 500 kilometers from Addis Ababa, and the Public Health College at Gondar, 748 kilometers from the national capital.

Under the university charter, H.I.M., the emperor is chancellor of Haile Selassie I University. The president, appointed by the emperor, reports to the board of governors, the policy makers for the university.

The university is a chartered government institution and relies on government appropriations. The annual operating budget of this university is about Eth.$2,000,000, of which 25 percent is financed by gifts and grants from external sources.

Admission requirements to Haile Selassie I University are a grade point average of 2.0 in Ethiopian School Leaving Certificate and in five subjects including English language, mathematics, and Amharic. Degree requirements include 130 total credit hours for a bachelor's degree, as well as a cumulative grade point average of at least 2.0. Degrees awarded

are B.S. in Agriculture (four years); B.A. in Arts (four years); B.A. in Business Administration (four years); B.A. or B.S. in Education (four years); LL.B. in Law (five years); M.B.Ch.B in Medicine (five years); B.S. in Science (four years); B.Th. in Theology (four years); B.S.W. in Social Work (four years); and a Deploma in Building (three years). The school library contains 95,000 volumes in the main library and 85,000 volumes in branch libraries. The John F. Kennedy Library is a very impressive building and is quite obviously frequented by the students. The total university enrollment in 1967-68 was about 4,000. The university is free to all Ethiopian students.

Department of Preventive Medicine and Public Health

The focus for interest in population activities at Haile Selassie I University has been entirely in the Department of Preventive Medicine and Public Health. There seems to be relatively little interest in other divisions. Needless to say, potential for work in the population field does exist in the Institute of Development Studies at the university.

At the present time there are four full-time teachers in the Department of Social and Preventive Medicine at the university. These are: Prof. Wen Pin Chang, WHO professor and head of the departm nt; Dr. Yayehyirad Kitaw, lecturer and deputy head of the department (counterpart to Dr. Chang); Ato Hadt-Ab Zerit, MPH; G. Uhlman, Ph.D. (overseas intern from Johns Hopkins University); a part-time assistant is Dr. E. Nordeberg, assistant professor in the Nekemte project; Dr. R. A. Rankin, resident field supervisor, Nekemte project.

Several departments of the medical faculty are actively participating in the teaching of comprehensive community health both in Addis

Ababa and the Nekemte rural area. The concept of utilizing medical students as a team to work in rural community health is useful. In the Nekemte project, supported by SIDA, base line surveys in the community have been undertaken, and demographic, sociological, nutritional, and epidemiologic studies, supported by SIDA and others, are underway. There is also a WHO research grant, financed by the UN Population Fund, being negotiated to study the impact of health education and family health. Basic studies in population dynamics in Ethiopia are being undertaken in conjunction with Dr. L.P. Chow of the Department of Population Dynamics at the Johns Hopkins University School of Hygiene and Public Health with support from USAID.

Dr. Chang has pioneered population activities in Ethiopia in conjunction with the medical faculty. A KAP study undertaken by Dr. Chang and Dr. L. Pausewang, which was supported by the Population Council, has been completed and the medical section of the study will be published in a Journal of Ethiopian Studies.

A copy of the initial study undertaken by Dr. Chang's department and the Johns Hopkins University School of Hygiene and Public Health in the Nekemte area is available. Notable are the questions related to pregnancy and attitudes toward family planning. Given the support from Johns Hopkins University to Dr. Chang's department, there seems to be relatively little need for additional activities at this time unless the situation, according to Dr. Chang, warrants additional support. A considerable amount of credit for the development of new and innovative ideas in public health in Ethiopia can be attributed to Dr. Chang's work at the university and, of course, to the work of Dr. Prince in the field of public health generally.

Institute of Pathobiology and Institute of Development Research

The activities of the Institute of Pathobiology are only indirectly related to population. The director of this institute is Dr. Aklilu. The institute is doing basic research on parasitology, entemology, malariology, and radiobiology. The Institute of Development Research has potential for doing work in the population area in the future. Its research program is outlined in the following document: Institute of Development Research Activities, Haile Selassie I University, January 1973.

At the present time the Director of the Institute of Development Research is Dr. Assefa Mehretu. Three research associates work with him: Dr. Eric Rahim, Mr. Gerard Gill, and Mr. Richard Disney. He has an administrative staff of five and a board of advisors numbering thirteen, who are chosen from the university and various government ministries. The main research so far completed is the Wonji Socio-Economic Survey, which is an analysis of the Food for Work reforestration program in Tigre and Wollo provinces; an analysis of the phenomenon of faked trade declarations; a summary of studies of the Ada district; and a conceptual framework for a socio-economic baseline survey of the Ada project area. Research is presently underway on rural feed roads, and units of production in traditional agriculture in the Ethiopian economy. It is contemplated that The Journal of Developmental Research will be published. The institute has received financing from Haile Selassie I University, the Inter-university Council, USAID, and the Ford Foundation.

The Institute of Development Research Activities lists as their research objectives (a) the development of a conceptual framework for the study of demographic processes, family formation, migration, and projections of population growth and mobility; (b) research on differential fertility,

infant mortality, population growth, population structure, mobility, family planning, and other relevant variables as they are affected by area of residence, socio-economic characteristics for representative sample areas all over Ethiopia; and (c) publication of and training on demographic and population problems in Ethiopia.

Given the limited staff and commitments of the Institute of Development Studies, it is entirely unlikely that they will be able to conduct research in the area of demography and studies in population growth and mobility as they had planned to do in the immediate future.

Institute of Ethiopian Studies and Statistical Training Center

The Institute of Ethiopian Studies is headed by Dr. Pankhurst. The Population Council supported the Ethiopian KAP study previously mentioned. The grant was made available to the institute, though the work was actually done by Dr. W.P. Chand and Dr. S. Pausewang. The Institute of Ethiopian Studies was established in 1963 to operate a special library of books, pamphlets, articles, and archival material and maps on Ethiopia and works such as manuscripts produced in the country itself. It was also designated to run the university's museum of ethnographic and historical interest in music and other tape recordings. Lastly, it was to coordinate, encourage, and conduct research on Ethiopia. The institute has a number of publications including its useful Register of Current Research on Ethiopia and Most of Africa and a List of Current Ethiopian Periodicals. The institute processes most of the visiting scholars attached to the universities and handles questions of visas, and so on. It is doing no work specifically related to population at the present time, but remains ready to assist individuals who

wish to do doctoral work or other research in the field. The Statistical Training Center, as of June 1973 (Statistics No. 378), covered the following subjects: (1) sources and types of demographic data with special emphasis on Ethiopian data; (2) elementary demographic rates and ratios and their interpretation (sex ratio, child/woman ratio, different ways of calculating population growth, crude rates, age specific rates, infant death rate, various fertility and reproduction rates); adjusted and standardized demographic rates, examples from Ethiopia and other African countries; (3) introduction to detection and revision of errors in population data; (4) the life table for one and five year groupings, synthetic and actual cohorts, calculation of life table from real life data; (5) introduction to differences and problems involved in measuring mortality and fertility; (6) theoretical population models, calculation of stable population, population projections using life table techniques; (7) statistics on migration and miscellaneous other problems. The books utilized are: Barclay, Techniques of Population Analysis, CSO, Statistical Abstracts, (most recent issue); Population in Ethiopia, CSO, United Nations Demographic Yearbook.

Other courses taught are in statistics, probability, computer and programming courses, data processing, sampling and survey methods, experimental design, social accounting, field work, econometrics, operations research, simulation and systems analysis, and so on.

There was no evidence that the Statistical Training Center considers population as a priority component of its program.

Public Health College at Gondar

The Public Health College and Training Center at Gondar was established in 1954 by the Imperial Ethiopian Government with the coopera-

tion and assistance of the WHO, USAID, and UNICEF. It became one of the chartered colleges of Haile Selassie I University in 1961. The objective of the school was to train middle-level health workers to deliver health care to the rural population of Ethiopia in an integrated, curative, preventive, and promotive health service utilizing the health team approach. The core of the health team was a health officer, community nurses, and sanitarian. The health officer was and is admitted through the regular channels of Haile Selassie I University after completing the 12th grade. He is given a specially designed four-year course that enables him to earn a B.S. in Public Health. The community nurses and sanitarian are trained at the same school and, in many cases, in the same classes. The community nurse is given a comprehensive three-year nursing course with particular emphasis on maternal and child health, midwifery, and so on. At the present time she is recruited after completing the 10th grade. The course for the sanitarian is also a three-year program with particular emphasis on environmental health subjects such as the protection of water resources, construction of simple sanitary facilities, vector control, food and milk sanitation.

All three categories of students undergo an internship during their last year of training. During the period of internship the students are assigned to one of the rural training health centers located within 100 kilometers of Gondar for six to eight months. The internship program is designed to give the students practical and realistic experience under close supervision by senior faculty members. Upon completion of their internship, the Ministry of Health assigns the students as a health team to a rural health center in one of the eighty-five health centers in the empire. All eighty-five health centers are staffed by graduates of the

college. In addition to training the three categories of health workers, the college has also trained laboratory technicians and, at irregular intervals, midwives. The enrollment of these two categories has been about fifteen to five students per year, respectively. During the period 1958-72, the number of graduates by category were: 352 health officers, 357 community nurses, 32 community nurse-midwives, 314 sanitarians, 108 laboratory technicians.

Dressers were also trained from 1965-68, and a total of 80 graduated. At the present time the teaching staff is entirely Ethiopian, and the total force is about 40. The college is located in the same compound with a 200-bed hospital, which is the only medical facility for the province of Begmdir and Semiem.

The graduates of the Public Health College are the mainstay of the government's health service in rural Ethiopia. A health team should consist of two health officers, two to four community nurses, and two sanitarians per health center. Due to the shortage of graduates, however, most health center teams consist of one health officer, one or two nurses, and one sanitarian. Since 1958 there has been a considerable slippage among the Gondar graduates. More than 60 percent in all categories have gone into other occupations. Health officers, most notably, have gone to medical school. Statistics provided in a government report indicate that out of the total number of graduates, as of 1972, there are only 207 health officers, 221 community nurses, and 200 sanitarians employed by the Ministry of Public Health who were Gondar graduates. It is therefore apparent that, in order to meet the health personnel needs, the college must produce more health workers than it is doing now, or make working conditions sufficiently

attractive so that its graduates stay in government service. Presently the maximum enrollment in the college is about forty-five health officers, forty nurses, thirty-five sanitarians, and twelve laboratory technicians per year. Enrollment cannot be expanded with the present teaching staff and facilities and given the posture of the major donor organizations toward the public health college, it would seem unlikely that its staff facilities can be improved.

Because of the problems that the Public Health College was having with regard to its graduates, a Presidential Committee for the Evaluation of Programs was formed. It issued a report on July 1, 1971. Members of the committee included: Dr. Assefa Tekle (director of the Imperial Central Laboratory & Research Institute), Dr. W.P. Chang (professor of Preventive Medicine & Public Health, HSU), Ato Lulsegeb Nengiste (Director-General for Training, Ministry of Public Health), Dr. Zelleke Bekele (dean, College of Public Health), and Professor R.O. Whipple (dean, Faculty of Science, HSU). Without going into details (the report is available), the major recommendations of the team were that:

(1) The present structure of bachelors' degrees for health officers, diplomas for community nurses and sanitarians should be retained. However, the degree should be changed from B.S. to B.P.H.

(2) The entry level of sanitarians and nurses should be upgraded.

(3) All three groups should have their curricula integrated into common courses as far as possible, especially during the first year of study.

(4) Curricula for all groups should be modified so as to have a large measure of applied social science, to reduce the basic science component, to increase the practical emphasis in all courses, and to increase

the emphasis on preventive and environmental health throughout the college.

(5) The departments of the college should be reconstructed.

(6) There should be better scholarship support for grant study in public health for interested graduates in preparation for teaching appointments at the Public Health College in Gondar.

(7) A permanent ministry-university liaison committee should be created.

(8) Negotiations with the ministry toward eventual budgetary and administrative separation of Gondar College and its hospitals should take place.

(9) Further external support from interested agencies should be solicited to provide much needed additional facilities.

The above recommendations were based on the committee's opinion that the major defect in the existing training program was not too much instruction, but instruction of the wrong kind. They indicated that the health officers showed some ineffectiveness in the field due to gaps in their training, particularly in comprehension of community social structure and dynamics. The report also noted that part of the relative ineffectiveness of many Gondar graduates in the field could be traced in part to defects in the ministry's organization and operation. These were, in turn, related to deficiencies in the financial resources faced by the government and, more importantly, a tendency on the government's part to treat problems of hospitals and medical doctors with more urgency than those of health centers and health officers. In short, the usual conflict between clinical and preventive medicine exists. The report also noted that the facilities of the Gondar Public Health College were in no way adequate. At the

present time some family planning is taught, but demography and population dynamics are not taught. In 1971, Mr. Cole of AID recommended instruction in obstetrics, gynecology, and family planning at the Public Health College. The dean endorsed the proposal, which was sent to USAID in Addis Ababa. The proposal was not accepted. Subsequently, a group of Meharry Medical College visited Gondar and also recommended work in family planning and a cooperative staff exchange with Meharry in Nashville. Nothing seems to have developed on that. The staff of the Public Health College greeted the report of the President's commission with little enthusiasm and feels that many of the statements in the report are unsubstantiated.

In short, there was much dissatisfaction among individuals involved in Gondar. Morale is generally low. Given the above factors, one finds it surprising that any effort is being put into family planning, except that there are a number of dedicated staff members. It seems unlikely that these activities can be expanded, given the government's posture on family planning, the lack of resources, and general problems at the Public Health College. Cumulative service statistics have been requested by mail.

SOURCES OF DATA:

Site visit to Addis Ababa and Gondar, May 1973; mimeos from Department of Preventive Medicine and Public Health, Haile Selassie I University, September, 1972.

Population of Ethiopia: Results from the National Sample Survey, first round, 1964-67. Central Statistics Office, Addis Ababa, 1971.

May 1973

TABLE I

MEDICAL AND PARAMEDICAL TRAINING FACILITIES IN ETHIOPIA

Medical and Public Health Training Facilities

Name of School	Town	Owner-ship	Course	Class - Enrollment 1st	2nd	3rd	4th	Intern	Total
1. Medical Faculty H.S.I. University	Addis Ababa	IEG	a. Medical Doctors	14	18	21	10	4	67
			b. Pharmacists	-	13	6	11	12 (5th yr.)	42
2. Public Health College, H.S.I University	Gondar	IEG	a) Health Officer 4 yrs.	43	42	40	43		168
			b) Community Nurse 3 yrs.	28	29	40			97
			c) Sanitarians 3 yrs.	22	25	30			77
			d) Lab. Technician Junior 2 yrs.		11				11

Nurses Training Facilities

Name of School	Town	Owner-ship	Class: Grad- Year	Enrollment 1st 1973	2nd 1972	3rd 1971	4th 1970	Total
1. Princess Tsehai Hosp.	Addis Ababa	MPH		23	26	21	23	93
2. Empress Zewditu Hosp.	Addis Ababa	SDAM		9	0	13	11	33
3. Army Hosp.	Addis Ababa	MOD		22	16	13	0	51
4. Itegue Menen Hosp.	Asmara	MPH		40	33	26	31	132
5. Tafferi Makonnen Hosp.	Nekemte	MPH		10	0	9	10	29
6. Red Cross	Addis Ababa	Red Cross		0	0	16	15	31
7. Duke of Harrar Hosp.	Addis Ababa	MPH		26	0	0	0	26
8. St. Paul Hosp.	Addis Ababa	MSIF		20	0	0	0	20
TOTAL				150	77	98	90	415

Abbreviations:

IEG - Imperial Ethiopian Government
MPH - Ministry of Public Health
APM - American Presbyterian Mission
GHM - German Hermansburgh Mission
HSIF - Haile Selassie I Foundation
MOI - Ministry of Interior
MOD - Ministry of Defense
NLM - Norwegian Lutheran Mission
SIM - Sudan Interior Mission
SDAM - Seventh Day Adventist Mission

TABLE I (Continued)

Technicians

Province	Town	Name of School	Type of Training	Enrollment
Shoa	Addis Ababa	Medical Auxiliary Training School-Menelik II Hospital	1) Junior Laboratory Technicians Course	12
			2) Junior X-Ray Technicians Course	15
			3) Hospital Pharmacy Attendants Course	19
Shoa	Addis Ababa	Imp. Central Laboratory	Senior Laboratory Technicians Course	9

Dresser Training Schools 1969/70

	Province	Town	Name of School	Ownership	Type of Training and Enrollment Elem.	Advanced
1.	Shoa	Addis Ababa	M.A.T. Menelik Hosp.	MPH	34	26
2.	Shoa	Addis Ababa	Police Hosp.	MOI	37	--
3.	Shoa	Ambo	Door of Life Hosp.	SDAM	12	8
4.	Shoa	Nazareth	H.M.M. Mohamid Hosp.	MM	--	13
5.	Wollega	Demi Dollo	Demi Dollo Hosp.	APM	--	4
6.	Wollega	Aira	Aira	GHM	--	3
7.	Illubabor	Mettu	Mettu Hosp.	MPH	14	--
8.	Harer	Dire Dawa	H.S.I. Hosp.	MPH	13	--
9.	Wollo	Dessie	Asfa Wosen Hosp.	MPH	14	--
10.	Tigre	Mekelle	Luel Ras Seyoum	MPH	11	--
11.	Eritrea	Asmara	Iteque Menen	MPH	20	20
12.	Gojjam	Debre Marcos	Debre Marcos Hosp.	MPH	16	--
13.	Arussi	Asella	H.S.I. Hosp.	MPH	14	--
14.	Sidamo	Yirgalem	Yirgalem Hosp.	MPH	--	16
15.	Sidamo	Negelle	Negelle Hosp.	NLM	16	--
16.	Sidamo	Soddo (Wollamo)	Soddo	SIM	25	15
17.	Keffa	Jimma	Ras Desta D. Hosp.	MPH	19	9

CONTENTS

GHANA

GHANA

John C. Caldwell, Rocco A. De Pietro, Jr.

I. COUNTRY SETTING

Ghana lies in the hot, moist lowlands of West Africa. Cocoa, timber, industrial diamonds, bauxite, manganese dioxide, coffee, and gold have in the past made Ghana one of the richest countries in tropical Africa (1973 per capita income was estimated at $310). However, the wealth is not evenly distributed geographically. Cocoa and timber, both in the south, have accounted for over 70 percent of the country's exports in recent years. The savannah country in the north has no such cash-export products. This dichotomy is reflected in many social and economic aspects of the population. The southern three-fifths of the country contain four-fifths of the population. The population in the south tends to be better educated, subject to lower mortality, more likely to live in towns, more likely to know about contraception, and less likely to be predominately concerned with the growing of subsistence crops, than the population in the north.

Ghana'a immediate prospects for economic growth, however, are rather dim. Production of cocoa, its major export crop and valuable source of foreign exchange, is down at a time when world cocoa prices are at their highest in years. The sharp cutback in imported goods has affected even cassava and canned sardines, staples for many Ghanaians. The major government response to the food crisis has been "Operation Feed Yourself," a massive agricultural program designed to increase local production and storage of basic foods. Yet

the gains thus far have been small relative to the acute need. An editorial in the Ghana Times noted: "The per capita income of many families has fallen sharply to the extent that the barest necessities of life cannot even be ... provided ... It's now the order of the day for an average family to be contented with one meal a day in the evening with children literally starving in the morning and afternoon."

By tropical African standards Ghana is highly urbanized, with over 30 percent of the population living in urban centers of over 5,000 inhabitants in 1970. Ghana's crude birth rate is estimated at 47 per thousand per year, the crude death rate at 18, producing a rate of natural increase of 2.9 percent. At this rate the population, estimated at 9.9 million in mid-1973, would double in twenty-four years.

Ghana's present population position is unique in West Africa. It has a population policy and a family planning program, which have existed through three very different government regimes, and which have survived two coups aimed at reversing many existing policies. Most Ghanaians now take it that the family planning program is part of the accepted policy of the country and will remain through political vicissitudes. There is little opposition voiced in the press by public figures. There remains some scepticism as to how culturally acceptable family planning is (especially in rural areas), and hence how hard it should be pushed and how closely one should be identified with it.

The official government position on the role of population in national development planning is presented in detail in the March 1969 policy paper Population Planning for National Progress and Prosperity. The paper notes that Ghana has embarked "on an ambitious programme of planning and development aimed at achieving progressively advancing levels of productivity and

well-being" for the people of Ghana. However, "these objectives are threatened by the current rate of population growth, by trends in rural to urban migration ... and by open immigration and the resulting problems of deployment of non-Ghanaians in the economy." Subsequent sections of the paper describe current population characteristics and trends in Ghana and the adverse consequences of rapid population growth for national development goals. To implement the policy, collaboration between public and private institutions is urged, and special mention is made of the role of the Central Bureau of Statistics and the Demographic Unit at the University of Ghana.

The University of Ghana indirectly played a significant role in the preparation of the paper. It is widely known that the paper drew heavily on the second volume of The Study of Contemporary Ghana, but is less widely known that most of the material in that study was originally analyzed in class exercises in the demography program at the university and that the two Ghanaian civil servants who undertook the sifting of source data for the paper had come from those classes.

Cooperation between the universities and the government in population matters has generally been quite good. As noted below, the Institute of Social, Statistical, and Economic Research (ISSER) is partly responsible for evaluation of the National Family Planning Program. Demographic studies have on occasion been conducted at government request by others at the university. For advice on population movements related to urbanization, manpower planning, and such projects as the Volta Lake Resettlement Scheme, the government has relied heavily on assistance provided by the University of Science and Technology at Kumasi. Thus training and research in population is formally perceived as an integral part of national development planning. In Ghana, the universities have been and remain the most appropriate insti-

tutions through which external agencies can play a role in influencing and assisting in the implementation of official population policies.

II. HEALTH POLICY AND PROGRAMS

The major health problems are malaria, dysentary, and pneumonia, which are the biggest killers of children. Infectious and communicable diseases such as measles, hepatitis, tetanus, and tuberculosis are also leading causes of mortality and morbidity among adults. Many maternal health problems are related to pregnancy and childbirth and their complications. Abortion is also a problem in urban areas among young, unmarried women. With the high cost of living and food shortages, nutritional problems are likely to become more critical in the near future.

Health, which has a relatively low priority in Ghana's scheme of social and economic development, is associated with little creative policy thinking. Although there are plans for the expansion of medical school facilities, basic health facilities, and environmental health schemes, government funds are simply not available for these purposes. The health planning capacity of the government is weak and thus far it has not been ably assisted by the medical school.

Most funds for health are spent for the recurrent expenditures of government health facilities. When funds do become available, they usually go for the construction of new health facilities. Some of these facilities are run jointly by the health ministry and medical school. In such instances, the medical school is able to help revamp the organization and pattern of health services.

The rural health and family planning project, known as the "Danfa Project," is a major medical activity which is being closely watched by the health ministry. The Danfa Project could assist the ministry in setting the

future pattern of family planning growth within the government health structure.

Like Nigeria, Ghana desperately needs more doctors. The Ghana medical school is turning out only fifty-five doctors per year, a level it is likely to maintain over the next five years. There are pressures for a new medical school at Cape Coast, but the government has resisted them thus far due to lack of funds. The country as a whole has only about 600 doctors, most of whom are concentrated in the national capital, Accra, and other major southern cities. The number of registered nurses is about 2,500. Most have some formal midwifery training.

In most large cities and towns, there are general or district hospitals staffed by doctors, nurses, and technicians. The smaller district hospitals are often understaffed, some even without physicians. Nurses form the backbone of rural health services. They run the rural health centers and MCH centers. There are a number of nursing and midwifery schools. Although Ghanaian schools award basic degrees in nursing and medicine, they do not offer many post-graduate degrees. As a result, both nurses and doctors spend considerable time in England and Scotland for post-graduate training.

Ghana's economic prospects have not been aided by its rapid rate of population growth. To help check this rapid growth, the government launched the Ghana National Family Planning Program (GNFPP) in May of 1970, the first West African nation to do so. GNFPP successes have not been spectacular. The number of new contraceptive patients was up to 32,000 for 1973, a 23 percent increase over the preceding year, but the increase was due largely to the addition of new clinics not the improved performance of old ones. Various categories of government personnel have been trained, including family planning nurses and social workers. The persistent problem of coordination

between the GNFPP and other ministries has prevented these personnel from being effectively deployed. While a few very worthwhile projects have been contracted to research organizations and individual social scientists, the program continues to lack the capacity to use researchers and research for its maximum benefit. With the secretariat understaffed in key program areas, staff development is a very high priority.

Research and Evaluation

The GNFPP's research program is action-oriented. It is designed to meet priority program needs. Lacking expertise to plan and execute large research projects, the program has adopted the policy of contracting research to various institutions. For example, ISSER at Legon is paid to prepare monthly reports on family planning acceptors. It is also undertaking a pilot survey (to be followed by a national one) to verify the impact of the GNFPP. GNFPP officials perceive the study as a major program evaluation. Researchers at ISSER consider it another KAP survey with any possible changes in family planning attitudes, knowledge and practice only indirectly attributable to the GNFPP.

GNFPP officials are more or less satisfied with ISSER's performance, although they would like the monthly clinic reports to be prepared on time. ISSER researchers, on the other hand, feel that the program is moving at its own momentum and that it is providing poor leadership in the planning and management of its research activities. Mrs. Maxine Kumekpor, a black American sociologist who is in charge of family planning data analysis at ISSER, believes that the major program need is for a data system -- a means of collecting information on a national basis. She feels that a first step in this direction would be systematizing the patient clinic, referral, and interview forms which currently have different identification numbers making it im-

possible to coordinate patient data. Mrs. Kumekpor's primary concern, however, is that the program acquire the necessary expertise to plan and manage its research activities so that program needs are well-articulated and relevant research findings have a chance to be absorbed.

Mr. S.K. Kwafo, who heads the GNFPP's research and evaluation unit, noted five priority research activities. They are:

1. cost-effectiveness of various family planning delivery systems with different manpower mixes;

2. location of clinics and how distance affects the flow of contraceptives and stock levels;

3. optimum scheduling of training programs consistent with manpower requirements;

4. contraceptive acceptability and effectiveness; and

5. oral contraceptives and sickle-cell anemia

Of the above studies only the fifth one is currently underway. The contract for it went to Dr. Konotey-Ahulu of the Ghana Medical School.

GNFPP's research activities should be considerably strengthened by the arrival of Dr. Abraham David as the new Ford Foundation advisor. One of the key organizers of the Population Dynamics Program at the University of Ghana, Dr David is an able social scientist with experience in developing research and evaluation projects. With his extensive contacts at the university and with the Ford Foundation's strong program interest in the social sciences, Dr. David will be in an excellent position to improve the GNFPP's capacity to generate and oversee needed research. There will still be a need, however, to encourage family planning medical research. Dr. S. Armar, head of the GNFPP, has definite interests in this area. Through his initiative, the sickle-cell and oral contraceptives study was funded.

Training

After more than three years, Ghana still does not have regularized training programs for various categories of family planning program personnel. All programs are hastily pulled together when a fair number of applications or commitments are received, and when trainers at the university and medical school are available. Most applicants are self, rather than institution, sponsored, a factor which helps to explain why many have been unable to use their newly acquired skills after returning to their jobs. Only recently have institutions, such as the Ministries of Health and Information, begun to sponsor staff. Unfortunately, the health ministry has been the least cooperative in releasing staff for training and in effectively deploying trained personnel.

The GNFPP is becoming more rather than less operational in training. It no longer seems willing to depend solely on the medical school or other outside institutions to train its staff. In the next five years, there are plans to develop a national training center at Accra. Adapted from the Indonesian model, the center would emphasize the training of trainers to feed regional centers. Multi-purpose in scope, it would house the five track program and add additional tracks for information, education and communication specialists and fieldworkers.

While Dr. Armar spoke assuringly that the training center would be established, his head of training, Ms. Catherine Addo, was much less certain. Armar might be talking up the notion of a training center to set the stage for some hard bargaining with the medical school which has put forward its own plans for a national family planning research and training center.

Planned Parenthood Association of Ghana (PPAG)

The PPAG is a private organization allied to the GNFPP. It serves about 12,000 new family planning patients annually, about one-third the number

served by the GNFPP. It is extremely well managed, and its executive director has been an outstanding spokesman for family planning in Ghana. Its major role has been to assist the GNFPP in family planning information and education, which it does through its several full-time fieldworkers and information officers in various regional centers.

III. UNIVERSITY DATA

Ghana has three universities: University of Ghana at Legon, University of Cape Coast, and University of Kumasi. The pressures for higher education are strong in Ghana, but the government has resisted them because funds are needed for institutional growth.

Family Planning and Public Health

1. The Ghana Medical School. After a rather stormy beginning, the medical school was established from purely Ghanaian resources in 1963; the first class of thirty-nine medical students graduated in 1969. Since then, the average size graduating class has been about fifty-five and should remain at that level for at least the next five years

The Korle Bu Teaching Hospital, with 1,200 beds, is used for undergraduate and postgraduate teaching. There are plans for a new teaching hospital, but because of the country's poor economic prospects the government has withheld funds for construction.

The medical school has fourteen departments with a staff over 80 percent Ghanaian. Prof. S.R.A. Dodu, the dean, is a soft-spoken intellectual with limited power and resources. Dodu admits that he cannot tell his department heads what to do and must rely on mere suggestion to put forward ideas which he believes are in the medical school's best interest. Within departments, as well, individual physicians set their own research

priorities.

The two departments most directly concerned with public health and family planning research and training are obstetrics and gynecology and community health. Both have contributed significantly to past achievements and both have a significant role to play in the future.

2. Department of Obstetrics and Gynecology. Prof. K.K.O. Bentsi-Enchill, the department head, and Prof. D.A. Ampofo have spearheaded the department's family planning research and training activities. After more than three years of arranging ad hoc training programs for the GNFPP, department leaders now wish to organize training on a regular program basis. Toward this goal, they have proposed the establishment of a national family planning center which would serve as the country's major research, training, and service facility for family planning. The proposed center would be supported by the dean under the following conditions: "that it serves a useful purpose, the responsibility for running it rests with the department of obstetrics and gynecology, and its purposes are clearly in line with the goals of the GNFPP."

Dr. Armar approves in principle the need for such a center but insists that the GNFPP control its growth and development. If Armar can bring the proposed training center under the wing of the GNFPP, he will approve its establishment and welcome funds from outside donors for its support. However, if the department of obstetrics and gynecology are unwilling to make this concession, Armar, with the dean's support, could effectively block the center's establishment.

The proposed center would be the department's major new project. Training would consist mainly of advanced courses in family planning methods for doctors and nurses and clinical training for medical and nursing students.

Research would include studies on menstrual regulation, age and parity analysis of contraceptive patients, family planning continuation rates, use of traditional birth attendants as providers of family planning services, and abortion.

In sum, the department has the capable and committed staff to become a viable resource base for the GNFPP, especially in the areas of training and program-related medical research. A period of sensitive negotiations must ensue between GNFPP and medical school officials before plans for the center can advance further.

2. The Department of Community Health. According to Dean Dodu, public health in Ghana has had a less than glorious past Physicians have not sought public health positions out of keen interest, but have come to them by virtue of their seniority of age. The acting department head, Dr. J.K.E. Amorin, would seem to fit this discription. Amorin is one of the few French-speaking Ghanaian physicians, a fact which makes him an attractive candidate for a high paying WHO job in West Africa

The second most senior department member, Dr. S. Ofosu-Amaah, is quite the opposite. Of the same faculty ranking as Amorin, he seems the more dynamic and dedicated to public health. A trained pediatrician, he has both the clinical and community experience which make him a doubly valuable public health physician. While committed to a number of activities, including a large nutrition study, Ofosu-Amaah's principle work for the next few years will be the development of the Mamprobi Health Center. An urban center serving about 6,000 patients, its size and range of facilities put it in the class of a small general hospital.

Ofosu-Amaah is to run the center with staff provided by the health ministry. His basic approach is to create a high quality service which will attract and hold patients. He has tried this approach before at another

health center and was successful. At Mamprobi, he first had groups of medical students gather some baseline demographic and health data on the community. The data are not very good, but Ofosu-Amaah feels they are adequate to assess the community's current health status and future gains. He and the dean would like to see the center's research and evaluation activities strengthened if the necessary resources were made available.

The center will serve as an urban teaching facility for the medical school and a demonstration center for the health ministry. Center staff would include two or three consultant physicians who would attend to patients screened by nurses and help train medical and nursing students in community and environmental health. Ofosu-Amaah will train his own health superintendents to oversee routine clinic operations. Staff nurses and midwives will be assigned responsibility for serving particular sections of the community to maximize areas served by the center. A highly trained hospital administrator would also be a key member of the center's staff.

A separate family planning clinic, offering a full range of services, would be set up at the center. Patients would be referred to the clinic by various center staff.

Under Ofosu-Amaah's direction, the center could develop into an excellent urban training facility for medical and nursing students and special categories of health personnel. Ofosu-Amaah is looking for support for the training of health superintendents, laboratory equipment, family planning clinic supplies, and salaries for extra staff nurses.

Other department members with strong public health and family planning interests are Drs. Fred Wurapa and G.A. Ashitey. Wurapa is one of the co-directors of the Danfa Project, the joint rural health and family planning project of the University of Ghana and UCLA. The five full-time American

staff are to be phased out by 1976 and Wurapa will retain major program responsibility for it until 1978, the project termination date.

The Danfa Project, which has been the medical school's major research activity for the past five years, has been described elsewhere. Apart from its significant contribution to the development of family planning research in Ghana, a few instructive criticisms have been made of its work. The dean and senior lecturers of the community health department felt that Danfa was not being used adequately as a rural teaching facility because of restraints imposed by researchers. A researcher at ISSER felt that Danfa had not provided sufficient guidelines for the development of rural family planning projects. The head of the GNFPP felt that Danfa had shifted its research priorities and was not producing very much program-related research.

Dr. G.A. Ashitey, an epidemiologist, is an outspoken proponent of family planning. Though saddled with heavy teaching responsibilities, he could become a fine prospect for future support as his research and training interests develop.

Demography and Related Social Sciences

1. The University of Ghana is one of the two original universities in anglophone West Africa (the other is the University of Ibadan). It is now a quarter of a century old and enjoys unrivalled prestige in the country. Its present vice-chancellor, Professor Alex Kwapong, has strongly supported DARSS in the university even in the days when it did not have its present wide acceptance. Over a period of thirteen years, from 1960 to 1973, the Population Council provided over $250,000 in support of demographic training and research to the university. The program expanded from one of limited teaching within the Department of Sociology under expatriate faculty to an independent Demographic Unit fully staffed by Ghanaian nationals.

Early in 1960 a proposal was developed in negotiations between university staff and the Population Council to support demographic training within the Department of Sociology. The goal was to provide such training to second and third year B.Sc. and B.S. (Honors) sociology students. Funds were provided for short term consultations involving an English and an American demographer. The first year's teaching program utilized an Israeli demographer hired on local terms (for expatriates) through funds made available by the Population Council. At that time a study of vital rates was instituted by the demographer, part of which was later incorporated into an M.Sc. thesis by one of the Ghanaian staff.

Subsequently, the Israeli demographer was replaced by an Australian, followed by a New Zealand demographer, each for two year periods. These individuals provided continuous teaching and research supervision for several major studies including urbanization, knowledge, attitudes and practice of family planning, mortality and migration studies. In 1966, Professor K.E. de Graft-Johnson, a Ghanaian sociologist interested in the development of population studies, was appointed acting head of the Department of Sociology, and with funds provided for local staff through the Council, two additional staff members -- one at the Ph.D. level and one at the M.Sc. level -- were added.

By August of 1966, about 100 students in the B.Sc and B.A. (Honors) program had received training in demography as part of their sociology program. From this group, individuals were selected to work in the Demographic Unit as research assistants. The unit, established in 1966, consisted of two full-time faculty members, one part-time, and two research assistants. The faculty members and the research assistants were supported during the period of 1966 through 1968 under a Council grant. The university

built a separate building for the unit, and provided utilities, supplies, a secretary, and a clerk. With Council support additional fertility studies, mortality studies, and migration studies were undertaken. These studies were supervised by nationals, although short term consultant visits were made by staff from the London School of Economics.

Thus, by the beginning of the 1966-67 academic year, the Demographic Unit was operating as an integral part of the teaching program at the university and carrying out a wide range of research projects which were published and widely distributed locally. At the same time, the staff members served as consultants to the Census Bureau.

The year 1968 marks a significant turning point in the operation of the unit. The university agreed to assume full responsibility for the recurring expenditures of the unit in terms of housing, equipment, and salaries. The Population Council grant for the period 1968-73 provided research funds only.

The Demographic Unit has proved to be remarkably successful, providing a base for research and publication, organizing conferences, seminars, housing a demographic library, and attracting other university faculty to use its accommodation and regard it as their intellectual home. It proved the value of having a separate institution in a separate building, and provided the model for requests for similar institutions elsewhere in West Africa. When the Council announced that its grant for the period 1968-73 was intended for demographic research rather than core support for the unit, the vice-chancellor began to explore the possibilities of other support. He soon discovered that the Economic Commission for Africa was looking for a base for a demographic training and research institute (later RIPS), and that the University of North Carolina had ideas for generally diffusing population training and courses through selected universities (later the

Population Dynamics Program or PDP). Accordingly the vice-chancellor decided to phase out the Demographic Unit (at present physically phased out because RIPS is occupying the building), but the decision was reversed in 1971.

Since 1971-72, the University of North Carolina and the University of Ghana have cooperated in establishing a Population Dynamics Program, with all funding from UNC. The University of Ghana project director is Dr. Nelson Addo and the UNC advisor is Abe David. This program has funding for numerous activities and the potential for both a great deal of development and possible trouble. The possible trouble would loom if the university should develop an angry student or faculty movement or indeed if the national government shows such tendencies. The program is known to believe that it should encourage population interest and involvement in as much of the university as possible and that staff should be "retrained" for this purpose (these statements appear in easily available written form). The money is available and, apart from the easily justified appointment of a local director, has been used to pay half the salary of the deans of the faculties, who are influential people in matters such as the desired remolding of curricula (much harder in the British university system than the American one). The program's main components are the change of curricula, retraining of staff and loan of replacements, the provision of short-term consultants, and the support of multidisciplinary research. Good research projects have not always received support either because they were insufficiently multidisciplinary or artificial means were adopted to meet this criterion. Projects are currently underway in the Faculties of Theology (religious views in Ghana on antinatal practice) and Economics and in the Institute of African Studies (traditional communication with reference to antinatal practice). Such grants are almost entirely in the hands of a Ghanaian committee and there

has been some infighting to protect departmental and personal interests. Requests for loan staff have been lodged by the Geography Department for a lecturer on urban geography and by the Medical School for a biosocial statistician. Advanced training overseas for faculty is said to be available anywhere, but the faculty claims that there is pressure to go to North Carolina. Highly expert, short-term consultants, willing to help design research projects or to give specific advice on matters like sampling, do not seem to have been as easy to get as some of the faculty had hoped.

The decision to retain (indeed, to resuscitate) the Demographic Unit was made when the vice-chancellor and others found, much to their surprise, that the existence of the two major population efforts, PDP and RIPS, provided no way for the university, either of its own initiative or at the behest of the government, to initiate population research projects. It was further felt that the university would only retain enough leverage with RIPS if it had its own home for demographers (including counterpart demographers working part-time with RIPS). This matter, as well as relations with PDP and RIPS, is under consideration by the University Population Committee (under the chairmanship of Professor K.E. de Graft-Johnson of the Sociology Department), but the Committee has rarely met and gives the impression that it is waiting to be guided by events.

The central core of demographic interests in the university (at present a triangle between the Sociology Department, PDP, and RIPS) consists of four demographers. Dr. S.K. Gaisie is full-time with RIPS; Dr. N. Addo is full-time director of PDP (an administrative post); Mr. F. Aryee (lectures very competently in demography and did the Princeton course in 1961-62) is working for his Ph.D. at Toronto; and Mr. T. Kumekpor is in the Sociology Department, limited in obtaining counterpart positions by his failure to

get a Ph.D. at Princeton. The Sociology Department still offers two population courses, one substantive and the other on techniques, but its teaching strength is at present stretched thinly. In addition, the Economics Faculty now offers a part course in demography as does the Statistic Department (partly taught by Dr. K.T. de Graft-Johnson of ISSER).

The university also has two research institutes with interests in population: the Institute of African Studies and the Institute of Social, Statistical and Economic Research (ISSER). The Institute of African Studies first appointed a demographer in 1965 (Nelson Addo, who moved to the new Demographic Unit within a few months, and had no successor). The institute had no great interest in population studies until its sociologists and anthropologists began to move that way as PDP money became available and other research funds began to dry up with increasing financial stringency in Ghana. At present several researchers are working on the fringes of demography. Dr. Christine Oppong (who worked with Professor Jack Goody of Cambridge) is probably the most competent and imaginative researcher.

ISSER, since its evolution from a United Nations-supported institute, has had a somewhat checkered history largely because of its inability to recruit the kind of staff it wanted. It has had as demographers: Nelson Addo, acting director for a period; Dr. G. Kpedekpo (now with the United Nations' Statistical Institute at Makerere University, Uganda), who did some interesting work on vital rates; Mrs. Maxine Kumekpor, who is working in collaboration with the family planning program on evaluation; and the relatively new deputy director, Dr. K.T. de Graft-Johnson, a capable demographer and statistician, who was previously head of the Demographic and Social Statistics Unit of the Central Bureau of Statistics.

ISSER is organized into six units, of which the Factors of Agricultural Growth Unit is the most active, currently undertaking several major

research projects. The other units are the Cocoa Economics Research Unit, Population Unit, Statistics Unit, Economics Unit, and the Data Processing Unit. Since 1971, the Population Unit has been conducting a continuous registration project in three areas of Ghana with UNICEF funding. Of particular concern to the project are levels and patterns of morbidity and mortality, especially among infants and children. An attempt is also being made to analyze weaknesses and improve the vital registration system in these areas. ISSER is also responsible for the evaluation of data collected through the National Family Planning Program. Several new forms have been devised for the collection of data, and several sample surveys have been conducted. Under a grant from the International Labour Organization, ISSER is also participating in a study of the influence of demographic, social, economic, and cultural factors on labor force participation rates in Ghana.

Because the Medical School is eight miles away, collaboration with ISSER in population studies has been impeded. Interest, however, has been shown: a collaborative plan with the Sociology Department for work on Togo did not proceed; Professor F. Sai was interested in joint work on family planning, before joining the IPPF in London; and there is at present some interest in the Department of Obstetrics and Gynecology in the measurement of the incidence of abortion.

2. The United Nations Regional Institute for Population Studies (RIPS). RIPS is the English-language demographic training and research center for all of Africa; it is the counterpart of the UN centers in Yaounde, Cameroun (IFORD, French-language) and Cairo (English and Arabic). It has now been in existence for three years. The students must be graduates deemed

suited to graduate studies. It offers a Certificate after one year, a Masters Degree for selected students after a further year, and, it is envisaged, will offer a Ph.D. -- all these qualifications being those of the University of Ghana, not of RIPS as such. This is an interesting and worthwhile experiment, but has resulted in considerable strain between the university, RIPS and the Economic Commission for Africa (ECA). The students come from nearly all the twenty-two independent countries (or British island colonies) of Africa where English is the official language or one of the offical languages, and their educational backgrounds necessarily differ and are difficult to assess from Ghana. Some of them quite obviously would not have been allowed to go on to graduate work if they had not previously been at the University of Ghana; the difficulty is compounded because ECA resists initial examination and the dropping of students in mid-course because of the political affront to their countries. Hence it is difficult to show that the standards of the Certificate course are above those of the University of Ghana Honours Bachelor Degree. The institution has gained variety but has probably lost educational cohesion by the variety of its staff, a Swedish director and colleagues from Poland and India. The absence until about a year ago of an African full-time staff member (until S.K. Gaisie became a Ghanaian counterpart) was serious and meant that no faculty had background experience of a British-type African university. RIPS was not really successfully communicating with either the University of Ghana or ECA and it had an insufficiently African image. These defects should be corrected with the arrival of the director-elect, Professor Chukuka Okonjo in July 1974. RIPS has so far failed to develop a research program, a cause of some friction with ECA. It takes in about twenty students a year (rarely more than two from any one country) and about half

will go on to M.A.'s. They seem to be taught too much and to do too little of the normal postgraduate work: field research, individual reading in libraries, essay writing, and so on.

RIPS is at present in temporary quarters, but there is some hope that a permanent building and staff housing will be erected (the present government does not feel committed by the promises of its predecessor).

3. University of Cape Coast. With funds provided by USAID, the Population Council is currently supporting a population project at the University of Cape Coast in southern Ghana. The grant includes funds for an expatriate demographer to teach courses in technical and substantive demography, two research projects, and related equipment and support personnel.

The University of Cape Coast was formally established in October 1971. It evolved out of Osagyefo Teacher Training College and the University College of Cape Coast (1962-1971). Present student enrollment is approximately 1,100, most of whom are enrolled in teacher training courses. The distribution of students in the 1973-74 academic year was as follows:

Faculty	Total Students	Education Majors
Arts	632	494
Science	346	144
Education	131	131
TOTALS	1,109	769 (69%)

Although plans exist on paper for postgraduate training at the Masters and Ph.D. level, these programs will not be implemented in the foreseeable future. The two other Ghanaian universities (Legon, 3,000 students; Kumasi, 2,000 students) are older, larger, and more prestigious. The present military government in Ghana has not accorded much priority to higher education, and

plans to expand UCC have been temporarily shelved.

Other than Peter Morton-Williams, chairman of the Sociology Department, and S.K. Jain, the demographer supported by the Council grant, only one other faculty member has any demonstrated interest in population. Professor E.V. Engmann (Ph.D. Edinburgh), chairman of the Geography Department, has written several articles on population-relevance (two of which appeared in Ominde and Ejiogu, Population Growth and Economic Development in Africa) and is currently working on a book on the population of Ghana. Professor Engmann is Ghanaian.

Dr. S.K. Jain, a Ph.D. demographer from Australian National University, teaches courses in technical and substantive demography to third year sociology and geography students. Enrollment in 1973-74 consisted of four sociology majors and eight geography students. In light of the very weak mathematical background of the students, Jain has proposed that each course be expanded to a full year so that he can devote more time to basic mathematical/statistical skills. (Jain's wife is a M.Sc. statistician from Banares Hindu University and will teach statistics in the Geography Department beginning in September 1974.

Two research projects were envisaged under the grant. The first was a societal-anthropological-demographic study of the town of Cape Coast, about four miles east of the campus. The demographic component of the study would be an attempt to establish levels of fertility and mortality, and to analyze the factors leading to presumed changes in traditional methods of fertility limitation. The project has not been started owing to Morton-Williams' inability to find a Ghanaian research assistant to direct the field work. Two candidates were offered the position; both used the offer to improve their salaries in their present jobs.

cannot be found by July, the project will be dropped.

The second project is a longitudinal study of eight villages in the wet forest area of the western region of southern Ghana. The research design includes an original baseline census of the population (approximately 23,000) and continuous registration of births and deaths over a period of hopefully three years. The data collected will be used to estimate age-specific mortality rates and to analyze causes of mortality.

The baseline census has already been completed, and the analysis will probably be completed in September. The framework for the continuous observation consists of three distinct clusters of villages, each cluster having a full-time registrar assigned to it. Two of the clusters will have assistant registrars. Each village has at least one full-time informant who keeps a daily record of births, deaths, and other important (sociological) events. The registrars are responsible for collecting this information and supervising the informants. All the informants were enumerators in the 1970 Ghana census and are also school teachers able to keep records in English. The registrars are either headmasters or former community development officers. Dr. Jain makes a complete round of all the villages once every two weeks, taking three days to complete the circuit

Data collection should continue for a total of at least three years, and hopefully five or more years, in order to be reasonably certain about the reliability of the data and to be able to perceive approximate levels and likely trends. The generation of age-specific mortality rates and the analysis of casual factors are among the most needed types of research in tropical Africa. The results of the study will be of direct policy relevance and hopefully will provide data upon which the government of Ghana will feel it could act with some confidence and conviction.

4. The University of Science and Technology at Kumasi. This university is the preeminent technological institution in the country. It does not have social sciences as such but does have a Department of Town Planning with a strong social science bias under Professor Austin Tetteh (a contributor to The Study of Contemporary Ghana and a graduate of Pennsylvania's Population Center). Tetteh and Gaisie (an Ashanti interested in Kumasi, the cultural capital of the Ashanti) have discussed the possibility of a demographic component in Tetteh's program, but no formal courses are currently being considered.

IV. LESSONS FROM THE COUNCIL'S EXPERIENCE IN GHANA IN DARSS

Several lessons have emerged from the Council's experience in Ghana that are relevant for institutional development efforts elsewhere in tropical Africa.

Probably the most important lesson has been that of the low profile in policy and administrative matters. The administrative head has always been a Ghanaian (K.E. de Graft-Johnson). He reported to the vice-chancellor for both the original program and the Demographic Unit and, ultimately, took financial and other responsibility. He and other Ghanaians presented the program's findings in debates likely to affect national decisions. Without question, a university administration, attempting to explain to a suspicious government that it was not being subjected to undue American influence, welcomed the range of nationalities of the advisers: an American who made it quite clear that he had a good deal of sympathy for social experiment by new African nations, an Israeli, an Australian, and a New Zealander. The Council also found its policy of disregarding the political color of the country (which does not mean lacking sympathy for some of the national goals) was the correct one -- not only because it provides the

soundest moral basis for foreign programs, but also because it takes into account the fluid political situation in much of Africa and the sensitivity of Africans to outside judgment. Of the major American funding bodies, only the Council remained in Ghana during 1964 and 1965 -- a decision that was approved at the time by all Ghanaians concerned, no matter how strongly they were opposed to the regime, and has, without exception, been described to Council representatives as the only proper policy by spokesmen for the three very different regimes that have followed.

Two points about appointments were also learned. The first is that an adviser is in a far more impregnable position if he has a standard post in a national institution (preferably an institution with a good deal of local prestige); this means a teaching and/or research post in a university rather than an adviser to a foreign assistance program to that university. He should take his place on local committees on the basis of this post (while letting his other affiliation also be known) and on this basis secure visas, access to government officials and so on. The second point is that such university postings should go through the normal appointments procedure of the university. This does not mean that a selection committee should be able to appoint anyone other than the suggested appointee, but very considerable danger exists if pressure is applied for a higher status appointment because outside funding is involved. The selection committee must go through its normal procedures without anticipating resistance from the funding body if they suggest an appointment to a lower status post than was at first suggested, or, if they reject the appointee as not meeting the usual minimum qualifications for the post

More perhaps than any other lesson, the program in Ghana taught the importance of an integrated teaching/research/staff training program.

In order to gain the confidence of the other members of the university staff, the donor agency representative should show that he can teach a fairly full program in his subject and at any level. More importantly, he should give adequate training to one or more groups of students, and will inevitably learn a great deal from them about the society. For most researchers, this is the main early contact with the society. But, in developing countries, where quantitative concepts are not easily grafted onto the culture, lecture courses in demography or economics can have surprisingly little value and can influence students very little in their later careers as public servants, unless the lectures and a serious field research program have gone ahead hand in hand. Much of the research should be planned in class; much of it should use students in all phases from pilot testing to final reports. Also, no program is safe from suspicion, or, in fact, is secure in the long term, unless, from the beginning, university staff members (often the youngest -- such as junior research fellows) and then graduating students are given further training with the obvious intention that they should inherit the program. A foreign expert, when asked by politicians, administrators, or his own vice-chancellor, who will be available to take over his post and how soon that might be, has to be able to quote names and dates. In terms of the level of training needed, and the determination of the new African universities that they should have staff of wide experience, this has meant (at least until now) scholarships for graduate work in overseas universities.

We gained some experience in the very difficult matter of where to place a demography program in a university and how to graft it on. In Ghana, the best base seemed to be the Sociology Department for a number of reasons, which have quite wide applicability in anglophone Africa. Sociology students are often keen to acquire a new skill that offers employment pros-

pects; economics and medical students nearly all plan to become economists or doctors, while geography students are usually allowed by their department to undertake demography only as a more specialized distributional study. In addition, population research in Africa frequently involves social surveying, and non-governmental research is most often concerned with social interrelations of demographic phenomena. From 1966, some of the demographers moved into the Demographic Unit, but all retained joint appointments with the Sociology Department. Admittedly, these measures, while maximizing the output of persons interested in being demographers, were probably the major reason for the slow penetration of economics and statistics courses in the early years.

Mistakes were also made. Not until 1968 was a relatively small amount of money found to allow the head of the Sociology Department (whose assistance had been vital) and a colleague, neither of whom wished to do pure demographic research, to undertake research on urban sociology with some population content. The delay was dangerous, not because departmental support has to be bought, but because we had undermined the structure of the department by making it easy for those faculty members interested in doing demographic research to get funds, technical advice, and outlets for publication. The best students had been sent overseas for graduate work so that the most highly qualified applicants for faculty positions, as the department expanded, were our students returning from overseas.

The importance of authoritative publications emerging from the program (in impressive covers and with good layouts) was not realized early enough. The delay arose partly from the commitment to the Ghana Academy of Science to report the 1962-64 research program in The Study of Contemporary Ghana. This volume itself should have been published simultaneously in Ghana

and overseas, with a wide distribution in Ghana, but against advice from the Council program, no local edition was arranged. The Demographic Unit monograph series did not get underway until 1968.

Cooperation in research projects and publication did not start soon enough; in the early years there was no parallel to the pattern that developed from the outset in Nigeria, for instance. The reason was that population was an unknown field of study in tropical Africa fifteen years ago, and Ghanaian academics were not going to risk their futures by being lured into it. It was also not certain that it was politically wise. Council advisors proposed such cooperative research again and again, but no Ghanaian faculty member was willing to venture into the field until the first of the program's returning graduate students came back in 1965. If the Ghana program had enjoyed in the early 1960's the kind of research money that became widely available in the late 1960's, there is little doubt that we could have attracted some senior Ghanaians into research with considerable benefit to the program.

But our greatest lesson, and one still not properly appreciated among those supporting programs in tropical Africa, was that of student numbers. By 1965, over one hundred graduates of the University of Ghana had taken demography courses as a major component of their degrees; by now, the number has probably passed 150. This would be the equivalent of Nigeria training a thousand or Zaire three hundred. Yet Ghana has never experienced a surplus of demographers and at present could absorb more both at the level of the Central Bureau of Statistics and at that of university teaching where both RIPS and ISSER are critically short of Ghanaian demographers. The students who took demography courses for their degrees were absorbed by the Central Bureau of Statistics and in the statistical sections of other government

departments. It was discovered that, in a society where the public service had always had difficulty in securing sufficient people who could handle numbers easily, the demographers were at home with the social statistics and other quantitative records in education, health, social welfare, labor, and a range of other fields. They secured, on the whole, unusually rapid promotion. After the first coup, a Manpower Office was established, which attracted some of the better demography graduates -- a fortunate occurrence as it was this office which was subsequently given the task of preparing a population policy.

V. GENERAL CONCLUSIONS AND RECOMMENDATIONS

Family Planning and Public Health

In some areas the GNFPP is receiving as much support as it can effectively absorb. It still suffers from basic organizational and staffing problems which inhibit its ability to assume responsibility for promising new program possibilities. USAID, the major donor, realizes this inadequacy and has as its highest priority the strengthening of the program's planning and management capacity. Short-term consultant and advisory services have been provided and support given for training program staff.

USAID intends to help bolster the program's research and evaluation capability by providing funds to permit the hiring of a special assistant to the executive director for evaluation. Consulting services might also be provided to assist in the preparation and coordination of family planning proposals from various research institutions.

At the medical school, USAID's primary interest continues to be the Danfa Project. Their main objective is to ensure that the findings of operation research can be used to promote the more efficient use of available program resources. Through the University of North Carolina, USAID is also supporting nursing education in family planning and social science

family planning research at the University of Ghana and Ghana Medical School. Through its resident advisory staff and numerous subcontractors, USAID is in a pivotal position to influence the flow of assistance to the GNFPP and medical school.

The Ford Foundation is to provide the GNFPP with the residential advisory services of Dr. Abraham David, the former representative of the University of North Carolina group at the University of Ghana. Dr. David is likely to strengthen considerably the program's capacity to plan and contract needed research and work effectively with various research institutions allied to the program.

The Department of Community Health at the medical school should be strengthened by provision of public health physicians with expertise in epidemiology, maternal and child health, family planning, and population dynamics. MPH fellowships should be provided as part of staff development.

With the planned rapid expansion of medical education in Africa, staff development in public health is a high priority. Medical schools require staff primarily for teaching, but arrangements could be made whereby staff were provided as part of a research, training, and service program.

The rural and urban teaching facilities of the medical school should be improved by selective support for the reorganization of MCH services including family planning and for research and evaluation.

The Ghanaian Medical School is planning to establish rural and urban teaching facilities. At most of these facilities, family planning would be included as part of MCH services and research would be undertaken to assess the impact of health service programs. The reorganization of MCH services often requires funds for remodelling the physical facilities, hiring and training of additional staff, and equipping clinics. While

most medical schools recognize the need for adding research and evaluation to their teaching and service facilities, few have the necessary resources to build a high quality component.

Demographic and social science research units in Ghana should be encouraged to forge closer links with medical school departments wishing to measure the impact of health programs.

Medical school departments, for the most part, lack the expertise to evaluate satisfactorily the impact of their service programs. The demographic and social science research units would seem to be a valuable source of such expertise. Through a suitable contractual arrangement, some of these units could begin providing this useful service to the medical school. Excellent opportunities would seem to exist at Accra.

Although postpartum family planning programs are being phased out in Ghana, high quality family planning clinics at the medical school should receive increasing support.

It is crucial that the medical school based family planning clinic at Accra is re-evaluated in terms of the critical role it plays in setting the standard for government and private clinics, the excellent base it provides for training programs in family planning methods, and for its vital function in contraceptive research programs.

Support for contraceptive research should be broadly conceived and should be made available both for purposes of institutional growth and professional growth of deserving individuals.

While there is significant interest in contraceptive research, there is equal interest in research on infertility, menstrual regulation, pregnancy, venereal disease, and uterine cancer. Support for broad areas of obstetrics and gynecological research would have far greater appeal to re-

searchers and would enjoy far better prospects of acceptance by medical faculties than a narrowly conceived contraceptive research program. Only medical schools with large, well-managed family planning clinics, such as the one at Accra, would seem to be eligible for institution building grants. Since presumably all could not qualify, there would also be the need to support the family planning studies of other physicians. Medical schools do not reward doctors for high quality service, but for high quality research. Therefore, efforts should be made to ensure that the family planning research interests of medical school physicians become vehicles for their professional development and advancement.

Funds should be provided to medical and nursing schools and to their professional associations to study the current status of medical and nursing education in family planning and to determine appropriate ways in which family planning could be integrated into teaching programs at various levels.

Some family planning and population dynamics is taught at most medical and nursing schools, but it is done on an unsystematic basis with departments, and often individual professors, deciding on specific course content. Most medical schools have curriculum or education planning committees. Though often not very strong, these committees are often charged with major curriculum reform. Committee members could be supported to attend courses on medical or nursing education in family planning or to visit schools where family planning has been introduced into undergraduate or postgraduate levels. Private and government medical and nursing associations could be given small grants to study the current status of family planning research and training in schools and be encouraged to make recommendations to their governing bodies and to circulate their findings to leading members of their

professions.

Demography and Related Social Sciences

In terms of population interests, Ghana's real importance may be as a base for pan-African work (that, for instance, is why RIPS is there). It has a good educational and research record; it no longer suffers from controversies about population policies and has an established, if somewhat desultory, national family planning program; it is large enough to be important but not so large as to be conspicuous; its three changes of government have shown that politics are unlikely to make fundamental differences to educational institutions and have left it not strongly representing any particular political ideology amongst African nations; in contract, it has a stable and gentle society; it has a considerable pool of educated and sophisticated persons; it still retains some of the prestige for being the first country in tropical Africa to gain its independence after World War II.

Ghana is in a position to train as many students to the first degree level with a major DARSS component in their degrees as is desired. The only bottleneck might come from Ghanaian lecturers limiting the number of students at the University of Ghana, a problem which may well occur in other parts of the region as well. Local staff feel worried about competition from younger demographers coming on in a way that foreign staff obviously do not. Furthermore, plaudits both at home and abroad are much greater for their research and writing than for their teaching. The mechanism is simple and justification to oneself and others is easy. standards will be higher if the courses are restricted to students with certain statistical or mathematical prerequisites. The number of students graduating with a demography component dropped from over thirty in 1964 to three in 1969, although it has since risen slowly partly because of pressure from the external examiner. Further expansion of undergraduate training could be encouraged.

RIPS is capable of producing as many master's level graduate students as will be needed, as it has a special relationship with Ghana and particularly the University of Ghana. However, there will remain a case for some persons, destined for university faculty or high positions in government, undertaking graduate work overseas or post-doctoral work after their RIPS training or while in employment. I believe that this need could be met during the next decade by providing on average one new fellowship and one post-doctoral fellowship per year.

Most foreign technical assistance will be provided by PDP, but special projects may require an expert for short periods of two or three months.

In the past, foreign personnel have been critically needed. In the normal teaching and research programs this is no longer the case. The exceptions are specialized personnel for a specific project (e.g. Jain at Cape Coast) or shorter-term advisors. The longer-term personnel should be employees of local institutions with full salaries or topping-up salaries paid from abroad if necessary. Expatriate advisors must plan projects or teaching programs with local staff. Expertise that comes from a distance as the revealed word, with no chance of discussion to put local views or explain real cultural differences, is bitterly resented (not only by the local nationals but even by the expatriate advisors). Literature and library resources are needed, usually desperately -- not only the Council library but multiple copies of standard texts in countries where foreign exchange for books is hard to get and where students are poor. Similarly, teaching programs need desk calculators, and research programs need vehicles and maintenance. Programs for computers can sometimes be useless unless competent computer operators are sent at least for some periods. There are real prob-

lems in keeping computer centers working in tropical Africa (important NISER projects have taken two years for punching and the production of marginals and simple cross-tabulations at the prestigious Rockefeller Foundation data processing center at the University of Ibadan).

General budgetary support can be dangerous, although external agencies can supply nearly all the financial support in a bundle of separate items. Such budgets should be worked out in closer collaboration with local people than is often the case. But the items should be specific and there should be local counterpart funds or provision of amenities. There should also be a clear understanding about future development. Formerly, we have probably underestimated the importance of providing some money for the local publication of presentable monographs and research reports for presentation to government. We may do well to give more support also to seminars on specific themes which produce published reports for circulation within the country. Sometimes a visit from a publishing expert could be of value.

African countries are so small (with the possible exceptions of Nigeria and Egypt) that international demographic organizations must be developed and they must have journals or publishing programs. There is every reason for giving strong support to the Population Association of Africa, but it remains a moot point whether it will be able to stick together as a single organization or whether it will split into two with the Sahara forming the line of cleavage. It is to be hoped that developed countries will sponsor participation in the meetings. In addition, Ghana should occasionally be the site for fairly high-level demographic or population planning seminars with mixed foreign and Ghanaian representation. Ghanaians should be drawn from both university and government. It is possible that the best route to increasing local knowledge would be to get government sponsorship

for a new version of The Study of Contemporary Ghana to be undertaken in a revived demographic unit.

In summary, demography and related social sciences are largely institutionalized in Ghana, and Ghanaians remain ready to discuss projects accompanied by funding, planning, and some help in putting things into action. For any further developments in these population-related areas, the universities and the government remain very approachable, and a reasonably firm base for future activities exists in the University of Ghana, probably the most advanced example of established teaching research in DARSS in Africa.

SOURCES OF DATA

Site visits: J.C. Caldwell, 1972-74; Rocco A. De Pietro, Jr., March and April 1974.

June 1974

CONTENTS

IVORY COAST

IVORY COAST

Robert G. Castadot, M.D.
and Helen Ware

I. COUNTRY SETTING

In 1973, the Ivory Coast had an estimated population of 4.5 to 5 million in 322,000 square kilometers. The crude birth rate is estimated to be 46 with a crude death rate around 23 per thousand. The rate of natural increase is estimated to be around 2.4 percent with a very strong addition due to in-migration. In Abidjan (500,000) it is estimated that half of the African population is of non-Ivorian origin (from Mali, Upper Volta, and so on). Forty-five percent of the country population is estimated to be less than 15 years old and life expectancy ranges between 40 and 45 years. Infant mortality is reported to be between 130-159 per thousand. The urban population represents 10 percent of the total. Eighty-five percent of the active population is employed in agriculture.

The gross national product (GNP) has increased by 6-7 percent per year for nearly twenty years. With a GNP of US$310 per capita, the Ivory Coast is considered a model of success among the Francophonic countries of West Africa. It has indeed the highest GNP in West Africa. The Ivory Coast is the one example, at present, of sustained economic growth in West Africa which has not been the result of fortuitous mineral discoveries. Nevertheless, one should be careful about such a judgment, as wealth seems to be concentrated mostly in the city of Abidjan. The Ivory Coast has a prosperous, growing, urban middle class and, one would assume, a potential demand for family planning. The percentage of children in primary school is nearing 60 percent. Western firms compete in rural production with 30 government

corporations and state cooperatives. Exports are dominated by forest products (mostly wood), coffee, and cocoa. State investment, rather surprisingly, tends to be capital intensive. University students per million population now exceed Ghana, although Ghana's lead in local graduates has yet to be overtaken. Twenty-two percent of the state's budget goes for education versus 10-12 percent for health.

II. HEALTH POLICY AND PROGRAMS

Dr. Blaise N'Dia Koffi, former Minister of Health, has described the priorities of public health in the Ivory Coast as social medicine including sanitation, mass campaigns against communicable disease, maternal and child health, mental health, and health education. He also stated that the hospital system would not be neglected, as witnessed by the building of the luxury university hospital of Cocody, and the modernization of the second university hospital of Treichville and Bouafle. Nevertheless, it should be remembered that the hospital system delivers health services to only 5 percent of the population. The main bottleneck in establishing a national health delivery system is the lack of personnel. The two university hospitals are expected to provide medical training, and the Institute of Public Health to provide public health training. For most of the population, and particularly in rural areas, the major health problem remains the association of infectious and nutritional diseases.

III. POPULATION POLICY AND PROGRAMS

Based on the steady increase of the GNP and the consequent need to employ foreign workers, the government has tended to favor demographic growth. Even the idea of family planning for maternal and child health reasons has not been endorsed.

Nevertheless, in the past two years a number of physicians have become concerned with the increasing number of illegal abortions among young women, particularly students. Dr. Malik Sangaret, Chief of Obstetrics and Gynecology at the Hospital of Treichville (Abidjan), has reached large audiences with his conferences and newspaper articles in which he strongly endorses family planning and raises the question of the need to legalize abortion. Although there are neither governmental nor private family planning programs in Ivory Coast, physicians and some hospitals provide family planning services on request.

The government of the Ivory Coast has become interested in some aspects of population, particularly the relationship of population change to economic development. The Ministries of Planning and Finance have participated in planning for the forthcoming census. Dr. Barbara Lewis of Rutgers University has been conducting a study of the relationships among fertility, employment, and the status of women in Abidjan with Population Council funding but also with the support and cooperation of the Office of Development Studies within the Ministry of Planning. The data will be analyzed at Rutgers, and the ministry has asked to receive a full report by January 1975 for use in urban planning. The University of Abidjan has shown an interest in studying the impact of rapid population growth on social and economic development.

IV. UNIVERSITY AND INSTITUTIONAL DATA

Two institutions were surveyed: the University of Abidjan and the "Office de la Recherche Scientifique et Technique Outre-Mer" (ORSTOM).

University of Abidjan

The University of Abidjan is one of the key institutions in

francophone West Africa. Established in 1964, the university's degrees are recognized in France as equivalent to French degrees, and the university's stature is recognized as well throughout West Africa.

Demography teaching at the university is located primarily within the Faculty of Economics. All students take a compulsory semester course in demography during their first year and may take an optional course in their fourth. The chief government statistician used to teach the basic course; but, in 1973, it was taught by a French economist (M.A.) who was understandably unable to handle the load of 90 students. He has since left Abidjan and has not been replaced. A unit on population geography is included in the basic geography course, taken by approximately 120 students in 1973, but the demographic content is not very extensive. There is no postgraduate training in demography at the university.

The rector of the university, Professor V.Ch. Diarrassouba, has expressed an interest in expanding demographic teaching at the university. In 1973, in his then capacity of Dean of the Faculty of Economics, he requested the Population Council to provide a senior demographer for three years who would expand demographic teaching in the faculty, especially on the interrelationships between population change and economic development, and who would also act as an advisor to the Ministry of Planning. The individual would have to be fluent in French, but the rector wishes to broaden his faculty to include persons trained outside the French tradition. The Council was unable to respond favorably to the request owing in part to discussions then underway between the University of Abidjan and the University of North Carolina for possible establishment of a Population Dynamics Program at Abidjan, and because of heavy Council commitments elsewhere. The expressed interest, however, of the university, its prestige

in francophone Africa, and the rapid economic change taking place in Ivory Coast, continue to make the University of Abidjan a prime candidate for institutional development. Previous demographic teaching at the university has had little impact because it has been intermittent, because the teaching has been done by junior academics from other disciplines (usually economics or geography), and because there has been no research program to complement the teaching and to actively engage the students. A senior demographer of full professorial status and international repute would be necessary to launch an effective teaching and research program.

Attached to the university are several research institutes, of which CIRES and the Institute of Ethno-Sociology are most significant. No population research is currently underway in either institute. Dr. Diarrassouba was formerly head of CIRES* and maintains an interest in it. His replacement has not yet been chosen, but the institute's interests in the social sciences suggest it as the likely focus of future DARSS research.

Faculty of Medicine of Abidjan

The School of Medicine was opened in Abidjan in 1962, with technical assistance from the Faculty of Medicine of Rennes, France. In 1966 a temporary medical school was created at the Hospital of Treichville with a capacity of 200 students. In 1968 the School of Medicine became the Faculty of Medicine of the University of Abidjan. The second university hospital at Cocody and the new Faculty of Medicine were inaugurated in 1969. The University Hospital Center of Cocody is a very modern thirteen-floor structure closely associated with the new Faculty of Medicine.

For the academic year 1969-70 there were a total of 417 students in the Faculty of Medicine of the University of Abidjan. The distribution of students by country of origin revealed that 171 were Ivorian, 88 French

* Ivorian Center for Economic and Social Research

140 other Africans, and 19 other nationalities. Among the French students more than one third were female while among Ivorian students about 5 percent were female. In 1973 there were 170 medical students in the first year and 33 in the sixth year.

The curriculum follows the French norms and includes seven years. The first two years are devoted to basic sciences. The third, fourth, and fifth years are devoted to pathology, therapeutics, and related sciences. At the end of the fifth year the students are divided into two groups: those who have passed the exam to become interns and those who have failed. The few who are accepted for internship will spend four years in clinical work which will orient them toward hospital medicine and the specialities. For those who are not accepted for internship, the sixth year will include public health and rural medicine. They will be back at the university hospital for the seventh year which is devoted to clinical activities and writing a thesis. One should note that the university hospital has health responsibility in the rural village of Attiekoi, twenty-five kilometers from Abidjan, and also uses the rural demonstration area of the Institute of Public Health at Bouafle and Adzope.

The French influence is still predominant through the provision of most of the faculty including the president and deans of the university, most senior staff, and through the training in France of Ivorian candidates.

In the university hospital of Treichville are two schools for paramedical personnel: the National School of Nursing and the National School of Midwifery. The National School of Nursing was opened in 1961 and offers a three-year curriculum. In 1964 it graduated ten nurses and in 1969 it graduated seventy-seven, of whom sixty-six were Ivorian. The

National School of Midwifery was also opened in 1961 and graduated thirteen students in 1964 and twenty-four in 1969.

There seems to have been little interest in population or family planning activities in the School of Medicine with the exception of Professor Malik Sangaret at the university hospital of Treichville. Dr. Sangaret is undertaking a campaign of legitimation of family planning by giving conferences on sex education, family planning, and abortion. A lecture that he gave during my stay in Abidjan (May 18-20, 1973) was printed entirely in the local newspaper. He advocates sex education in the school curriculum, availability of family planning services, and liberalization of abortion laws. The conference I attended generated interest beyond the capacity of the large auditorium of the medical school and produced no negative reaction among the audience. Dr. Sangaret and his staff are also interested in carrying a medico-social study of the Ivorian child and the risks associated with pregnancy in Ivory Coast. He provides some family planning services on demand in his department.

The National Institute of Public Health (Institut National de la Sante Publique)

The creation of the National Institute of Public Health of Abidjan is the result of efforts undertaken as early as 1956 by Dr. Pierre Delormas and others to integrate family and public health concepts into the training of medical and paramedical students in Abidjan. The creation of such an institute was among the priorities of the 1960-70 plan of the government of Ivory Coast. The first funds for a feasibility study were provided by French technical assistance in 1961. Later, funds were made available by the European community in Brussels for the building of

facilities and purchasing of equipment. The institute was completed in 1970 at the total cost of 525 million CFA francs (350 million for building and 175 million for equipment). The modern buildings, implanted in a large park, include 12,500 square meters of usable surface.

The National Institute of Public Health has a dual administrative status. It is an autonomous department of the Ministry of Public Health and Population on one side; on the other side it represents a department of public health in the medical faculty.

The institute is divided along vertical lines into three major technical sections -- MCH, sanitation, and communicable disease -- and the minor sections of venereal disease, tuberculosis, mental hygiene, nutrition, and social medicine. To assure the integration of training and research the institute is then divided horizontally into services which include sociology, health education, epidemiology and statistics, documentation and a library. Most of the operative budget comes from the Ministry of Health with some funding for teaching from the university. The institute can receive outside grants and is apparently negotiating via intermediaries with USAID for a study of the Ivorian child.

Surrounded by a beautiful campus of fifteen hectares, with access to several demonstration areas, the institute is located in Adjame, an Abidjan suburb of 8,500 people. The institute has responsibility for delivering curative and preventive health services in this part of the city. In rural areas, the institute has set up a demonstration area at Bouafle which includes 60,000 people. The priorities in this demonstration area are MCH, nutrition, sanitation, prevention of communicable disease, and epidemiological studies. In another area (Adzope), the institute has a training zone to familiarize medical and paramedical students with

the problems and activity of the "Service des Grandes Endemies" which used to be the responsibility of the French Military Physicians and is charged with the control of communicable diseases.

The main emphasis of the curriculum is to integrate public health concepts in different health training programs. It is oriented towards the medical school, towards the school of paramedical training and various other administrative or teaching schools, as well as towards volunteer students.

In the Faculty of Medicine the institute provides half a day of teaching per week, all year long, to the first year medical student. During the first quarter the training is theoretical and includes introduction to demography, ethno-sociology, medical psycho-sociology. During the second and third quarters students rotate through various sections of the institute (MCH, communicable disease, VD, mental hygiene, nutrition, laboratory, sociology, and surveys).

In the fifth year of medical school, the institute has a responsibility for teaching hygiene, public health, legal aspects of medicine, social medicine, and occupational medicine. One hundred hours of theoretical teaching cover epidemiology, health statistics, health economics, public health administration, applied biology, nutrition, sanitation, health education, and communicable disease. Every three weeks the student presents a seminar on a medico-social question such as family planning, relationship of MCH and hospitals, tuberculosis, nutrition and so on. The students also attend practical training in the MCH center staffed by the institute in the urban area and spend four weeks in the rural area of Bouafle where they participate in community activities, conduct surveys, and provide health education training to the teachers of the

area. The students spend two weeks at Adzope to learn the application of tropical epidemiology.

In the Institute of Sociology a two-year program of four certificates (general sociology, social and economic planification, psychosociology of development, public health and social development) leads to a master's degree in medical sociology (assistante sociale). In the future the institute wants to create a two-year program for physicians which would give a master in public health with three possible options: epidemiology, public health, and sanitation.

The institute also provides public health training (twenty-four hours for students in the University Institute of Psychology), and twenty to forty hours of social medicine to various professional schools in Abidjan. This includes the National School of Administration, the Institute of Social Training, the Women's Technical High School, the School of Public Works, the School of Agronomy, and the School of Police.

In the National School of Midwifery the institute provides thirty hours of teaching of hygiene and public health in the first year and fourteen hours of social medicine in the third year as well as clinical field work at the MCH center in the institute and in Bouafle.

In the National School of Nursing it provides forty-eight hours of hygiene and public health in the first year and fifty-two hours of social medicine in the third year as well as field work in the urban MCH center and two weeks of field work at Bouafle and Adzope.

The institute is responsible for the training of sanitation agents. It organizes occasional retraining activities for various professionals and offers two-week courses to Peace Corps members from France, Germany, the United States, and Holland, as well as to other voluntary health workers coming to the Ivory Coast from abroad.

While the institute is part of the Ministry of Health, it has direct training responsibility at the Faculty of Medicine of the University of Abidjan, at the Faculty of Arts and Law, and at the Faculty of Economics, as well as with the Ministry of National Education and the Ministry of Planning.

In the first year of the School of Medicine in 1973 there were 170 students and in the sixth year 36 students. In the School of Nursing there were 250 students in the School of Midwifery about 150 students.

The director of the institute is an Ivorian, Dr. Kona N'da, assisted by Dr. Hellies. Dr. Pierre Delormas is the "Director of Studies" and he has two assistants: an assistant director who is Ivorian and who has university affiliation, and another non-university-affiliated assistant. Each of the major sections has a full-time medical staff while the minor sections have part-time staffs from the university.

The institute includes an auditorium for 300 people, an audio-visual teaching room seating 60, four classrooms for 25 students, and one classroom for 60 students, a large meeting room, a library, and a department of documentation. A dormitory can presently house 64 students as well as a restaurant and a bar.

There is also a nutrition laboratory and a water laboratory which are apparently well-equipped and a large MCH center which provides services to the population of the neighborhood. The MCH center offers three services: prenatal consultation, infant consultation, and day hospitalization. The center, which is staffed by several physicians, midwives, and nurses, provides health services, immunization, and health education in a small open-air auditorium. Special consultations are also available in

ophthamology, ENT, skin diseases, dentistry, psychiatry, laboratories and radiology, and a referral service to the hospital in Abidjan.

The Institute of Public Health has a modern infra-structure, staff, and the potential for impact in the future. At present there seems to be no interest in the population field and the relevance of the health services delivered by the institute has been questioned by professionals both in the Ivorian Ministry of Health and by foreign visitors.

V. CONCLUSION

The government of Ivory Coast has so far pursued a pronatalist policy with no interest in population programs or family planning activities. The university, following very faithfully the French model, might be somehow out of context in Ivory Coast. The National Institute of Public Health, which is a link between the Ministry of Health and the university, has great potential for training physicians in public health and for tailoring the training of paramedicals to the real needs of the country. But so far its staff has demonstrated little interest in population or family planning activities.

Nevertheless there is a group of young Ivorians, in the Faculty of Medicine, Department of Gynecology, who are interested in family planning services as they relate to maternal and child health. They have undertaken a policy of sensitization of the government and university and deserve support. The evolution of the training and research programs at the Institute of Public Health should be followed.

The University of Abidjan is potentially a prime candidate for institutional development in demography and related social sciences. It is one of the most prestigeous institutions of higher education in francophone west Africa. At least some university officials, including the

rector, have expressed interest in increasing population-related teaching and research within the university. Any effort to expand DARSS at the university would have to begin cautiously, however, with modest objectives and initially with expatriate staff of international reputation.

SOURCES OF DATA

Site visit to Abidjan May 18-21, 1973: Professor Pierre Delormas, director of the "Institut National de Sante Publique," Professor Malik Sangaret, chief of Ob-Gyn at the university hospital of Treichville, Dr. Rene Libotte, chief of the Department of Health Programming in the Ministry of Health and Population, Mr. Luddo Welffens, a Belgian economist with a degree in sociology from the University of Chicago who is presently employed in the Ministry of Health and Population, Department of Programming, and Dr. Christianne Welffens, the first woman doctor from the Ivory Coast, who is an assistant in gynecology at the hospital at Treichville.

Secondary sources: A series of papers on the University of Abidjan, the Institute of Public Health, the Ivorian Health Priorities, and the University facilities, published in Medecine d'Afrique Noire: "Les Deuxiemes Journees Medicales d'Abidjan," Volume 17, Number 2, February 1970, a mimeographed paper by Professor Delormas, "Institut National de Sante Publique," J.C. Caldwell Trip Report, February 1973.

John C. Caldwell, Helen Ware, site visits, 1973.

June 1973

CONTENTS

KENYA

KENYA

Roushdi Henin and Marjorie Nicol

I. COUNTRY SETTING

The estimated mid-1973 population of Kenya was 12 million, of whom 47 percent were below the age of fifteen and above the age of sixty-four (less than 3 percent in the latter category). The crude birth rate is estimated at 48, and the crude death rate at 18, indicating a 3 percent rate of natural increase. The high growth rate and dependency ratio pose problems in health, education, labor, and agricultural production, of which the government is aware.

II. HEALTH POLICY AND PROGRAMS

The Ministry of Health is responsible for the government health services, which include hospitals, rural health centers, and dispensaries scattered over the country.

The rural health centers were formerly the responsibility of the local county councils, but they were taken over by the Ministry of Health in 1970. The number of rural health service points is around 600, of which 185 are health centers or subcenters and 414 are dispensaries or small service facilities, with or without a trained person in charge. The ratio of the health centers to rural population is about one to 58,000.

There are about 1,100 registered doctors in Kenya, of whom some 750 are in private practice (1973). The remainder are employed by the Ministry of Health to man hospitals (general and special) and health facilities. There are also 770 registered nurses, 580 medical assistants, 2,660 enrolled or com-

munity nurses, and 185 health inspectors employed by the Ministry of Health. The majority of the doctors have been trained abroad, since the medical school is only seven years old, and many are expatriates. Most other personnel have been trained locally.

III. POPULATION POLICY AND PROGRAMS

A national family planning program was launched in 1967, and a five-year plan to expand family planning and maternal child health services has been formulated. Funding for the plan has been secured from the World Bank and a consortium of other donors. The plan aims at averting 150,000 births over the five-year period. Training, evaluation, and technical advisory services will be provided in part through the Population Studies and Research Center now being established at the University of Nairobi.

The voluntary Family Planning Association (FPAK), which started in 1957, was affiliated to IPPF in 1962 and is still financed by that organization. Since the government took over responsibility for the program in 1967, the FPAK has been concerned primarily with educational field work and the dissemination of information. Its staff, doing the clerical work at the clinics, works side by side with government health personnel. The field educators of the FPAK, one of the chief means of reaching the people, are trained for two weeks at the Family Welfare Center in Nairobi, which is run by IPPF. In-service training of doctors, nurses, and other workers is also held there. There seems to be good liaison and cooperation between the FPAK and government officials in charge of the national program.

The Ministry of Health is responsible for the administration of the national family planning program, which is run by ministry doctors, nurses, and health personnel in 300 health facilities throughout the country. At

present the family planning services are offered only weekly or fortnightly, but plans call for daily services at most health facilities as soon as staff is available. Most of the present staff have been through a short training course in family planning, and all new locally trained nurses, doctors, medical assistants, and community nurses are being trained in family planning. There are ten nurse-trainer supervisors who supervise the family planning clinics and train paramedical staff. Seminars have been held to train 200 more field workers as well as community development social workers, nutritionists, and so on. Students at the Karen College (home economics) and at the Egerton Agricultural College are also given training in family planning.

The major constraint to the program is the shortage of health staff. Many such staff, already overburdened by curative and other urgent demands, regard family planning as only another burden on overfull schedules.

When the program was started, the IUD was highly recommended as the most suitable method, but it has not proved popular, and oral contraceptives are now the primary method used.

There appears to be widespread acceptance of the pill on a short-term basis only, and according to the FPAK report for 1971, there is very little evidence of mistakes in the use of pills. For some reason, however, the average length of time an acceptor remains on the pill is ten months. It would be interesting to know the age groups of women on the pill. Percentage distribution of acceptors were: orals, 79 percent; IUD, 11; Condoms, 2, injectables, 6; other, 2. Evaluation so far has been minimal, but there is a very good clinic card in use, and there are plans for an adequate evaluation and research unit in the next five-year program.

Many external governments, international agencies, and foundations are

supporting family planning work in Kenya. There seems to be a great deal of activity and money in the field. The five-year population program proposed for 1975-79 involves the government of Kenya in the total sum of US$14.3 million operating costs, while $14.8 million will come from seven other sources. For example, the Swedish government through SIDA will provide $5.4 million for staff training, a new national family welfare center, and the total cost of all contraceptive supplies. The Population Council is also assisting in the establishment of a Population Studies and Research Center at the University of Nairobi.

At present there are many other external agencies and foreign workers involved in the Kenya national family planning program. In time, when more Kenyans are trained in demography, statistics, family planning, and administration, there will be less need for so many external helpers and, presumably, easier coordination of the work at the grass roots.

IV. UNIVERSITY AND INSTITUTIONAL DATA

Health and Family Planning

The University of Nairobi This university, the national university of Kenya, was formerly the University College of Nairobi and part of the University of East Africa. It became an independent university in 1970 by the University of Nairobi Act of Parliament and now gives its own degrees. The president of Kenya, Jomo Kenyatta, is chancellor of the university, and the vice chancellor or principal is a Kenyan, Dr. J. Karanja.

There are five campuses, four within the city of Nairobi, which include the Departments of Arts and Sciences, Engineering, Medicine, and Veterinary Medicine. The Preclinical and Premedical Departments are two kilometers from the main buildings, while the Clinical and Medical Departments are situated in the Kenyatta National Hospital campus, three kilometers from the main campus.

Major research institutes, also situated in the university, are the Institute of African Studies, the Institute of Adult Studies, the Institute for Development Studies, and the Population Studies and Research Center.

The Faculty of Medicine started in 1967, and the first sixteen medical graduates qualified M.B.Ch.B. (a five-year course) in 1972. A two-year diploma course in advanced nursing is also given by the Faculty of Medicine, and the first eight nurse-teachers graduated in 1970.

There are about 4,000 students in the University of Nairobi, of whom nine-tenths are men. Most of them live on campus, but shortage of accommodations has forced some to live in the town. The majority of the students are Kenyan in origin, with a small number from other African countries. The entrance requirements are similar to those of British universities.

The faculty of the university is drawn from all over the world, less than half coming from Kenya. There are seventy-nine members of the medical faculty (though several professional chairs are vacant according to the 1973-74 calendar), and five faculty members teach the advanced nursing course. Again, the majority of staff are from overseas.

The university is supported almost entirely by the Kenya government, although there are grants and endowments from foundations and governments abroad. It is the main institution of higher education in Kenya and enjoys an excellent reputation both within and outside the country. The staff level is very high.

Within the Faculty of Medicine, teaching in community medicine and family planning has high priority During the third year medical students are introduced to community health, and in the fourth year they have a twelve-week course of instruction including forty hours of lectures, integrated with the Departments of Obstetrics and Gynecology and Pediatrics and Child Health.

Family planning instruction and techniques are taught both to medical students and to the students in the advanced nursing course. The enrollment of medical students in 1972 has risen to eighty-four, and it is hoped the number will rise even higher, producing around ninety graduates by 1978. Only 5 percent of these medical undergraduates come from outside Kenya. It is further hoped that most of these medical graduates will be employed by the government.

Ministry of Health Training Institutions. In addition to the University of Nairobi there is a Medical Training Center in Nairobi under the Ministry of Health, which trains 130 medical assistants annually. One hundred of these are recruited from the ranks of enrolled nurses or community nurses, who are given one extra year of training. The other thirty are registered medical assistants who are recruited after four years of secondary schooling and have three years of training. There are plans for a second school for medical assistants at Nakuru, which is expected to open soon (July 1974) with a total student intake of 300. There is a great shortage of paramedical personnel to man the network of health centers all over the country, and training of this category of worker is considered the most urgent priority.

The present annual output from the three nurses' training schools is 170 registered nurses, and there are 300 more enrolled nurses or community nurses from nine other training schools run by the Ministry of Health. The curriculum of all these schools is being revised by the Nursing Council of Kenya and, in future, family planning will be included. Eighteen mission hospitals also train enrolled nurses, with an annual output of 150, of whom half usually go to government posts. The total number of hospitals in the country, government and mission, is 200. A team of Dutch nurses (part of the Netherlands government assistance) teach family planning to all nursing schools and nursing staff already in the field, but this assistance is being withdrawn.

Demography and Related Social Sciences

University-Related DARSS

University of Nairobi interests in population date back at least to 1962 when, following the census taken that year, a series of 1:1 million population maps were prepared by Professors W.T. Morgan and S. Ominde. A monograph incorporating the data contained in these maps was published in 1966. In the same year, Professor D.M. Etherington of the Economics Department did a population projection analysis of the urban and rural population of Kenya and examined the implications for development policy.

In preparation for the 1969 census, the Geography Department, at the request of the Ministry of Economic Planning and Development, assisted in preparing large-scale maps of the entire country. The efficiency of census operations was significantly strengthened, because it was possible to have detailed records of boundaries of enumeration districts down to the sublocation level. Another major contribution was a seminar on population growth and economic development in Africa held at the university in 1969, from which emerged a volume of the same title in 1972, edited by S. Ominde and C. Ejiogu. The first detailed work on population movements in Kenya was published by Professor Ominde in 1969.

In the Faculty of Medicine, Professor F. Schofield has done work on the health aspects of various types of contraceptives. The Faculty of Agriculture has shown interest in conducting research relating to population growth rates, the availability of arable land, and food production. Similarly, the Faculty of Veterinary Medicine has indicated an interest in the relationship of population growth rates and the availability of protein sources necessary to sustain such rates of growth.

Population Council involvement with the University of Nairobi dates

back to 1965, when Dr. Donald F. Heisel was sent by the Council to work in the Department of Sociology. He was replaced by James Cramer (1969-71), who in turn was replaced by Mr. E. James Fordyce (1971-73). As the Council's Regional Representative for Africa, Dr. John Caldwell lectured in demography at the university from September 1969 to January 1970. Heisel conducted a KAP survey among both men and women in addition to his teaching responsibilities. Cramer worked on a vital registration system, Fordyce on a study of family planning clinic distribution and utilization.

In 1971 the Council made a grant to support the establishment of a masters degree program in demography and population studies in the Departments of Sociology, Geography, and Economics. Three local fellowships were provided under the grant, and student interest was sufficiently great to prompt the university to add four additional fellowships to the program. The seven students are currently being supervised on an occasional basis by Professor Roushdi Henin of the University of Dar es Salaam. The University of Nairobi has appointed an expatriate sociologist-demographer for the 1974-75 academic year, among whose responsibilities will be supervision of the masters degree students.

The Population Council in June 1974 made a small grant to support the establishment of a multidisciplinary Population Studies and Research Center within the university. The center will involve cooperation among several departments, initially Sociology, Geography, Economics, and the Institute of Development Studies. Faculty in several other departments, including Medicine and the Institute for African Studies, have expressed interest in participating. The center has five basic aims: (1) to support postgraduate training in population, (2) to create new information and knowledge about population processes, their determinants and effects in Kenya, by research, (3) to foster the exchange

of ideas and information among university teachers and research and government personnel, (4) to provide a basis for exchange of demographic information with other institutions of higher education in East Africa and with the United Nations regional demographic centers in North and West Africa, and (5) to provide for a population documentation reference library and data processing and computational facilities.

Under the center, postgraduate population programs will be instituted or expanded within the departments of Sociology, Economics, and Geography, and degrees will be awarded by these departments rather than by the center itself. It is anticipated that twenty-four to thirty two students will have completed M.A. or Ph.D. degrees by the end of the first five years of the center's operation. Of the graduates, possibly four or five would be retained by the university, partly to replace expatriate staff and partly to meet the anticipated increase in demand for these skills in other parts of the university. Other graduates are expected to be employed by such government agencies as the Central Statistical Office, Ministry of Finance and Planning, Ministry of Education, Ministry of Health, and Ministry of Agriculture, and by the private sector.

These ministries are currently understaffed in terms of demographic expertise. Discussions between representatives of the ministries and the director-designate of the center have led to an understanding that the center will provide seminars and masters degree training to selected ministry staff to improve their ability to use demographic data for planning and evaluation.

Research proposals are expected to be developed by faculty in the departments of Geography, Sociology, and Economics, the Institute of African Studies, and by interested faculty in other departments. Much of this research will be directly relevant to the work of the ministries named in the preceding

paragraph. Dur. [illegible] heir postgraduate training, students who plan to enter government will [illegible] icipate in research and learn how to use research tools for social and economic development.

Anticipated research includes work on interrelationships between demographic trends and socio-economic factors; determinants of fertility; demographic aspects of urbanization and migration, mortality, health, and nutrition; basic data collection and analysis; evaluation of national family planning program projects; contraceptive use and continuation rates; and employment patterns.

To ensure mutuality of interest between participating university departments and government ministries the center will have a governing board and a research coordinating board, whose membership will include representatives of the university and the Kenyan government.

The primary concerns of the Population Studies and Research Center will relate to Kenya and particularly to the role of population in national development. At the same time, the center is expected to become an important institution in the field of population in East Africa. As such, its development will have a regional impact, particularly as a resource base for demographic information, knowledge of population procedures, and personnel trained for public service.

The Department of Geography consists of ten staff members, of whom two are involved full time in DARSS and a third, an agriculturalist-demographer, is involved part time.

Professor Simeon H. Ominde, M.A. (Aberdeen), Dip.Ed. (Edinburgh), Ph.D. (London), is presently head of the department. He was first appointed in 1955 as assistant lecturer in geography at Makerere University College.

He was promoted to lecturer in 1958 and to senior lecturer in 1963, when he was also chairman of the Kenya Education Commission. In 1964 he was appointed professor of geography and head of the Geography Department at the University of Nairobi. In 1965-67 he was dean of the Faculty of Arts, a post he held again from 1969 to 1971. In 1970-71 he was a member of the Kenyan Public Service Commission of Enquiry on Education, a member of the ILO-UNDP Employment Mission to Kenya, and a member of the Kenya National Committee on Human Environment. He has written and edited a number of books and contributed numerous articles to scholarly journals.

Mr. Jimmy Ndaka Muinde holds the B.Sc. (University of Ljubljana, 1964), M.Sc. in Statistics and Demography (University of Ljubljana, 1968), an the Diploma in Statistics and Demography (Cairo Demographic Center, 1971). He was a tutorial fellow, Department of Sociology, University of Nairobi in 1971, and lecturer in population studies, Department of Geography, 1972. He has no publications.

Dr. R. Odingo, B.A. (London), Ph.D. (Liverpool), is an agriculturalist-geographer. He has been taking some interest in initiating the Population Studies and Research Center since 1971.

The undergraduate training program in geography is a three-year course. Students take three courses during the first year, one of which is on world environment and another on the East African environment. During the second year, students take four courses, one of which is population geography. The course contains significant components of both substantive and technical demography. In the third year, students take four courses. Demography is an optional course that may be taken as one of the four (in past years most students have taken it).

There is a masters degree program in geography, consisting of course

work and a thesis of not more than 50,000 words. The three-hour written examination at the conclusion of the course work may include a section on population geography.

Two research projects are currently underway. "Fertility and Employment: A Study of the Interaction of Socio-Economic and Demographic Influences in Kenya" is an ILO-funded project ($30,000) under the ILO World Employment Program, which aims to provide data input for the ILO economic-demographic model studies. The Kenya survey will cover some 8,000 randomly selected households. It is under the supervision of Professor Ominde. Field work and data processing are directed by Mr. Muinde with the assistance and advice of Dr. K.N. Rao and Dr. J. Knowles, ILO experts seconded to the Population Studies and Research Center.

The second project is a multipurpose migration study of the town of Kisumu. The objectives are to gather data on the population characteristics of the town, to measure the contribution of migration to its growth, to estimate future demands for government services over the remainder of the century, and to study the relationship of migration to fertility behavior. The basic data for the survey will be collected in two sets of interviews one calendar year apart in order to arrive at an estimate of trends. The project is funded through a Ford-Rockefeller Population Policy Award ($29,000). Professor Ominde is the project supervisor, and Mr. Muinde and Mr. Ali Memon, a tutorial fellow in the Geography Department, are also participating. In addition, the Geography Department team is assisted by several persons from other departments: Dr. Da Costa (Agriculture), Dr. Abilla (Sociology), Dr. Muga (Sociology), and Dr. Mutto (Mathematics).

The Department of Sociology has twelve established positions, of which only ten are filled at the present time. Eight of the present staff members

are at least partly engaged in DARSS research. A sociologist-demographer from Denmark has been hired to begin in July 1974, increasing the number of faculty engaged in DARSS to nine.

The chairman of the department is Dr. Philip Mbithi (Ph.D. Cornell), who moved over from the Institute of Development Studies in 1973. Dr. Mbithi is a dynamic individual, keenly interested in building up both teaching and research aspects of DARSS. The other Sociology Department faculty now engaged in DARSS research are the following:

	Research Project	Funding Source
Mr. Kabwegyere	Small Centers Development Patterns	ILO
Mr. Kabwegyere Ms. Walji	Changing African Family	Population Council
Mr. Ndeti	Sociology of Fertility	Univ. of Nairobi
Ms. Potash	Female Rural Migrants and Unemployment	Univ. of Nairobi
Mr. Dutto	Urban growth	Univ. of Nairobi
Mr. van Doone	Rural-Urban Migration	ILO
Mr. Abila Mr. Muga	Kisumu Migration Survey (with Geography Department)	Ford-Rockefeller

Undergraduate students take two required courses during the first year: introduction to sociology and anthropology, and rural sociology. Of the forty lectures in the latter course, fourteen are devoted to population-related topics (such as land carrying-capacity, rural-rural migration). In the second year, students take four courses, of which demography is one.

A masters degree is offered in the department after one year of course work (seven courses) and a dissertation written during the second year. In 1973-74 seven students were enrolled in the program, two in demography and five in general sociology. Three of the five general sociology majors are writing

theses on population-related topics, such as the effects of migration on social structure. All seven masters degree students receive local fellowships.

Four candidates were registered for the Ph.D. in medical sociology in 1973-74. A former Population Council Fellow (Ms. Walji) is enrolled for a Ph.D. in demography under Professor Henin's supervision. She is presently an assistant lecturer in the Department of Sociology and teaches the demography course.

The Institute for Development Studies, a multidisciplinary organization, was created primarily to conduct research on social and economic problems of development. It is governed by a board of eighteen members: the vice-chancellor, the director of the institute, six members of the institute staff, the heads of the Departments of Economics, Agricultural Economics, Geography, Government, Sociology, the director of the Institute of African Studies, the dean of the Faculty of Education, the permanent secretary of the Ministry of Finance and Planning, the permanent secretary of the Ministry of Agriculture, and the general secretary of the National Christian Council of Kenya.

Dharam Ghai, M.A.B. (Oxon), Ph.D. (Yale), an economist, is director of the institute and has research interests in DARSS. J. Gachuhi, M.A., Ph.D. (SUNY Buffalo), is a sociologist and deputy director of the institute. He seems to have developed in recent years an interest in family planning research.

The institute is funded mainly by the Rockefeller Foundation, although Rockefeller support is gradually changing from institutional core support to support of specific research projects. There is apparently some interest on the part of other donor agencies in providing support of the same nature.

The staff is primarily expatriate: of the twenty-two members, only

six are Kenyans. One of the main problems is the high turnover. The vice-chancellor insists on short-term (two-year) contracts for research staff joining the center. This applies also to Kenyans, because he feels that if Kenyan research fellows are given tenure in the institute, it will be difficult for any department to keep its own teaching staff. He has recently promised to reconsider the situation, and a more satisfactory formula may be reached by which teaching staff members would have the opportunity to work in IDS for a period of two years, after which they would return to their own departments.

A number of Ph.D. theses were completed at the Center almost solely by expatriate research fellows. Of the forty-six current research projects that deal mainly with economic problems, ten are related to population. Of these ten, three are on family planning, two are on migration, and the rest deal with labor force, employment, social impact of population growth, marriage and prostitution, and nutrition.

Research carried out in the institute is published in the form of discussion papers, occasional papers, and monographs. Of the 187 discussion papers produced during the period 1965-74, only fourteen were on population. Of these, four dealt with migration and the rest with labor force, unemployment, population data, and fertility. Four were contributed by Dr. Heisel and one by Dr. Cramer. None of the occasional papers or monographs dealt with population issues. The institute was a cosponsor, however, of a seminar on "Population Policy and African Development" in 1968.

The Department of Economics curriculum for the first and second years does not include anything on population (except for a brief reference to "poverty, unemployment, limited resources, rapid population growth," in describing macro-economic problems of East Africa, in one of the first-year courses).

Students in the third year take economic development as a compulsory

course, and a demography course is optional. Students also take courses in mathematics in the first year and in economic statistics and mathematics for economists in the second year. These three courses, together with economic development in the third year (all are compulsory), would indeed be useful in producing good economic demographers if "economic demography" were made available as an option in the third year.

There is no department of statistics in the university. However, some statistics is taught in the Department of Geography in the form of "quantitative methods." There is a course in statistics in the Department of Sociology and a course in economic statistics in the Department of Economics.

Education is divided between the Faculty of Education in the main campus, where education as a discipline is taught, and Kenyatta University College (at what used to be called Kahawa Barracks), which is a teachers' training college. There is also an Educational Research Bureau on the main campus, which is involved not in training but in research. Finally, there is an Institute of Adult Studies, offering a Diploma in Adult Education.

At the present time there exist no population activities of any kind in any of these institutions.

Dr. Kimani, head of geography in Kenyatta University College, stated that the University College will eventually be converted into a separate university, not only for teachers training, its present function, but for other national needs. It would thus supplement the University of Nairobi.

The computer in the university is part of the Computer Center Department in the Faculty of Engineering. There is a head of department and four lecturers, two of whom deal with systems analysis. There is also a manager for the computer center with two assistants; one looks after handling the data (including supervision of the machine room), and the other looks after the

computer room. There is a systems programmer, but no data programmers for the time being. Users must do their own programming and otherwise prepare data for the center staff to run. Some statistical packages are available, but no population-related packages.

The center's equipment consists of an ICL 1902 16k computer (expected to rise to 32k by mid-1974), a card reader, four magnetic tape decks, a line printer, paper tape reader, paper tape punch, and graph plotter. There is a punch room with three portable punches, five hand punches, six electric punches, and five electric verifiers. The punch room is manned by eight operators and one supervisor. Plans call for converting the center into an independent Institute of Computer Science, with an increased staff.

DARSS Activities Outside the University

The demographic statistics unit in the Central Statistical Office (CSO) is headed by the government demographer. He is the only person with population training within the unit (M.Sc. in demography, L.S.E.) and devotes the major portion of his time to the Poplab within the Ministry of Finance. A Kenyan national currently studying for an M.Sc. in demography at the London School of Economics is expected to return to the CSO upon completion of his studies next year, and a second may be sent to study at the University of North Carolina. The unit is understaffed in terms of the mounting list of requests for a variety of demographic data and studies from various Kenyan ministries. The final report on the 1969 national census has not yet been completed. In addition, there is a need for personnel to carry out an intercensal demographic survey, as well as personnel trained to conduct the population census planned for 1979. Contact has been established between the CSO and the director-designate of the Population Studies and Research Center, and the CSO has agreed to

nominate candidates from among its staff for masters degree training with support from the center.

The Ministry of Education has a demographic unit. Its head studied demography at the London School of Economics but did not complete the course successfully. Additional population-trained personnel are needed to relate projected population growth and distribution in Kenya to the needs of educational planning.

The family planning evaluation unit within the Ministry of Health is charged with the responsibility of evaluating progress in the Kenyan national family planning program. The unit has available some data processing machines but has had to rely on short-term expatriate personnel. There is need for additional personnel to collect and analyze baseline demographic data, including studies on contraceptive usage. The need for trained evaluation personnel has been emphasized by the World Bank loan in support of the national family planning program. The Ministry of Health has been among the most active supporters of the Population Studies and Research Center and expects to be able to draw upon its faculty for assistance.

The Ministry of Finance and Economic Planning has been a firm supporter of the establishment of the Population Studies and Research Center. Although the senior economist in the ministry is keenly interested in population, the ministry does not have an economic demographer who could help integrate population data into Kenya's economic plans.

Part of the World Bank's loan to Kenya in support of the national family planning program includes funds for the establishment of a National Family Welfare Center, including a research and evaluation division. The substantive work of this division goes beyond purely demographic concerns into the broader

areas of population dynamics, family planning management, individual motivation, and program evaluation. The job descriptions of the five senior staff members are shown below as an indication of the broad range of skills needed.

	Qualifications
Division Chief	M.A. or Ph.D. in one of the related disciplines (sociology, demography, economics, statistics, health science) and graduate training in population dynamics and family planning, demography, or statistics
Senior Research Associates (2)	B.A. or M.A. similar to those of division head
Research Associates (2)	College graduates who have had education and training in one of the related disciplines.

Some of the senior staff may initially have to be expatriates, in view of the absence of these skills in Kenya at the present time.

V. CONCLUSIONS

Health and Family Planning

A great many outside agencies and governments are helping the government in its population program and stated aim of reducing its high rate of natural increase (3.3 percent). The World Bank has signed an agreement with the government of Kenya for partial support of a new five-year program scheduled to start in 1975.

Evaluation of the present program so far has not been satisfactory, as the program is quite recent and there is considerable shortage of trained personnel. For reducing the total fertility rate, which is 7+ (one of the highest in Africa), a more selective approach would appear to be necessary. For instance, very little of the program seems geared to preventing first pregnancies in the teen-age or adolescent group, and health education of young

people does not appear to be a major priority. One major constraint is the shortage of paramedical staff, but perhaps an equally important constraint is the high level of illiteracy in the country, considered to be perhaps as high as 85 percent (UNESCO standard). In view of the large sums of money involved, it might be important to ascertain more clearly what effect the present program is having on fertility rates, so that money can be put into areas of the program that will yield results. The evaluation and research unit of the proposed five-year program will be important and should be well monitored, with the Kenya government represented as well as international specialists.

Priorities would appear to be training of paramedical and health personnel in general, and not only for family planning. Existing health staff should be not only trained in family planning techniques, but should also be shown the rationale for family planning as a necessary family health component. The encouragement of women's education should be given high priority, as well as health education in all schools, colleges, and institutions training adolescents. This is a long term measure, which will yield good results eventually and should therefore be started as soon as possible.

The World Bank has drawn up a detailed plan for a population program for Kenya for the next five years (1975-79). Obviously a great deal of thought, expertise, and calculation have gone into this plan. Several governments are involved apart from the government of Kenya, which is putting up about $14.3 million for operating costs, while seven outside agencies are putting up $14.8 million in capital costs. This program is going to attract many people, both local and foreign, with foreigners predominating intitally because of the shortage of locally trained health teachers and workers. The Ministry of Health will not have the personnel or the expertise to run the program. In view of the multiplicity of external donors, the government of Kenya will

probably set up a coordinating board or ministry on which all the donors are represented. It is important that this coordination be done at the local level also, as the enterprise includes the construction of eight community nurse training schools, a national family welfare center, a health education unit, thirty rural health centers, and a ten-year rural health master plan which will include training of nursing teachers (WHO).

Much of this involves training and teaching, and it might be organized with help from the University of Nairobi. The Departments of Community Medicine, Advanced Nursing, and Sociology and the Child Development Research Unit should contain people able and willing to advise. It will need very careful and efficient administrative organization, and perhaps this is where the Council will be able to help. Evaluation of the program must be built in, with sufficient flexibility to change any part of the program (should it need alteration) at any stage. The objective of better family health might be a more popular objective than that of reducing the population growth rate.

Future Needs in DARSS

The situation with respect to demography and related social sciences can be summarized in a paradox: much is going on, but little is actually happening. The explanation lies in (1) the multiplicity of and competition among donor agencies and (2) a lack of skills, both local and expatriate, to make judicious use of funds provided by donor agencies. A probably incomplete list of donor agencies currently supporting projects in Kenya includes: SIDA, NORAD, USAID, UNFPA, IBRD, IPPF, Dutch Technical Assistance, PROFAMILIA (West Germany), Ford Foundation, Population Council, and the University of North Carolina.

The lack of needed skills is evident in the Ministry of Health and

the Central Statistical Office, but other examples could be cited as well. There is an evaluation unit within the Ministry of Health charged with responsibility for evaluation studies under the national family planning program. The unit has been provided with machines and expatriate staff, who have since departed. At present there are some forms, some cards, and a key-punch operator, but no evaluation. The World Bank loan, supplemented by other donor agencies, provides for a research and evaluation unit within the national family welfare center, but skilled Kenyan personnel are desperately needed to conduct management, fertility, and evaluation studies. In the Central Statistical Office, there is one Kenyan demographer who is expected to complete the final report on the 1969 population census, answer requests from several ministries to supply data not readily available, carry out studies needed for social and economic planning, and cooperate with the University of North Carolina Poplab experiment.

Coordination of efforts among the donor agencies is beyond the scope of this report. What follows are some thoughts on a five-year training program to meet the shortage in skills. Before making specific recommendations, two general issues should be addressed.

1. Should DARSS graduate training take place at home or abroad? This is a real issue, which must be considered very carefully. The time is now ripe for graduate training to be undertaken at the home university rather than abroad for the following reasons:

- As mentioned elsewhere in this survey, research and graduate training are inseparable. The one should be used to feed the other.

- It is important that Kenyans should work for their dissertations with Kenyan data.

- Local graduate training can be useful in cutting down the effect of the brain drain. It is more likely that a Kenyan with a Ph.D. from Nairobi will start and continue his career in Nairobi than will a graduate from Michigan, Princeton, or London.

- It is important to take into consideration the problem posed by the brain drain, for it is difficult to plan DARSS staff development effectively if graduates disappear to the UN, other agencies, or other countries.

Needless to repeat, in the present situation local staff development must be preceded by the phased use of expatriate staff.

2. It is important that graduate training should be a joint responsibility of a center for population research and the appropriate disciplinary department. A graduate student should be jointly supervised by a staff member, say from sociology or economics, and a research staff member from the center. And it is in the center in particular that graduate training and the center's research program should be married. Such a marriage is a basic prerequisite for the healthy development of DARSS. The center should draw a master research plan. Graduate students should then be used to cover certain parts of this master plan for their M.A. or Ph.D. dissertations. The students should take part in designing the particular survey, the schedule, the tabulation program, and so on. In this way they would go through all the problems that face a researcher in the field, in data processing, and in data analysis. When they received their M.A. or Ph.D. they would be ready to be effective demographers in posts either in or outside the university.

Because of the absence, at the present time, of qualified Kenyan demographers to run such graduate training, the following paragraphs will look into the types of skills required and try to arrive at a feasible

recruitment plan.

Department of Sociology. One sociologist-demographer, whose duties would be:

(a) to supervise three to four Ph.D. and M.A. candidates,

(b) to introduce two more courses so that there would be three courses available for sociologists at the undergraduate level: an introductory course in demography in the second year, a course in technical demography, and another in social demography in the third year, and

(c) to conduct research as part of a master research plan in the Population Studies and Research Center.

Department of Economics. One economic-demographer, whose duties would be:

(a) to introduce an undergraduate course in economic demography in the third year, for economists,

(b) to introduce an M.A. economics program with specialization in economic demography,

(c) to supervise three to four Ph.D. and M.A. candidates,

(d) to assist the Ministry of Finance and Planning to incorporate a population component into economic planning (this should be his main research activity), and

(e) to generally create the necessary awareness for this type of skill, both in the university and in government ministries other than the planning ministry.

Population Studies and Research Center. One senior formal demographer, whose duties would be:

(a) to act as advisor to the director of the center,

(b) to draw, in connection with the director, a master research plan for the center, in accordance with national needs,

(c) to draw a five-year master plan for graduate training (M.A. and Ph.D.) to meet the university and the government sectors, and

(d) to supervise three to four graduate students.

One statistician-demographer, whose duties would be:

(a) to set up the organization and procedures for the evaluation unit of the family planning program in the Ministry of Health,

(b) to initiate the evaluation program, and

(c) to supervise three to four Ph.D. and M.A. candidates, particularly in technical demography and evaluation programs.

The advantages of this plan are: it will not entail extra costs to the departments during the anticipated period of external funding; it will create an important skill presently lacking in the Department of Economics; it will ensure continuity of demography teaching in the Departments of Sociology and Economics; and it will strengthen the ties between the departments and the center. As noted earlier, twenty-four to thirty-two students will have completed M.A. or Ph.D. degrees by the end of the first five years of the center's operation. Of the graduates, possibly four or five would be retained by the university, partly to replace expatriate staff and partly to meet the anticipated increase in demands for their skills in other parts of the university. Other graduates are expected to be employed by such government agencies as the Central Statistical Office, Ministry of Finance and Planning, Ministry of Health, Ministry of Education, Ministry of Agriculture, and by the private sector.

The role of the Population Studies and Research Center. The following is a summary of the role that the Population Studies and Research Center should play in developing DARSS.

1. The center should be used as a vehicle to establish DARSS training in the departments of the university both at the undergraduate and postgraduate levels, rather than as an end in itself.

2. The center should prepare a master research plan to serve a dual purpose: (1) to fill in gaps in demographic knowledge about East Africa in general and Kenya in particular, and (2) to be a training field for the graduate program.

3. The center should act as a leader and advisor for all interested institutions in the country.

4. It should aim to coordinate activities of relevant institutions.

5. It should not attempt to monopolize research but should encourage and give expert advice to researchers in other departments.

6. The center should give advice to the relevant ministries on population issues, until these ministries have their own population specialists.

7. It should aim not only to satisfy existing demands in the government ministries for DARSS specialists but also to create such a demand where necessary.

SOURCES OF INFORMATION

Site visits: L. Bean, Spring 1973; R. Henin, Spring 1974.
Population Council, Kenya, Country Profiles. May 1971
University of Nairobi, Calendar 1973-74.
Family Planning Association of Kenya, Annual Report. 1971

August 1974

CONTENTS

LIBERIA

LIBERIA

Marjorie Nicol, M.D.

1. COUNTRY SETTING

The Republic of Liberia lies on the west coast of tropical Africa in what was formerly known as Upper Guinea. The 350-mile coastline is bounded on the northwest by the republic of Sierra Leone, on the north by Guinea, and on the east by Ivory Coast. Most of its 43,000 square miles are in the dense rain forest belt which gives way in the northwest to a plateau region of grassland and open park-like country. There are a few mountains in the eastern and western parts, the highest peak being just over 6,000 feet. Considerable iron ore deposits and a few other minerals are found. Rubber, coffee, and piassava (hemp) are the chief agricultural products.

The population of Liberia was estimated at 1.67 million in 1973, but a new census is now being taken. Some recent figures for 1973 estimated the crude birth rate at 50 and the crude death rate at 23 per thousand. The population growth rate was estimated at 2.7 percent. The infant mortality rate is very high, estimated at about 188 per thousand live births for the whole country. Accurate figures are difficult to obtain, because many births and deaths go unrecorded. Life expectancy is estimated at around 50. The percentage of people living in the towns is around 29.5 percent, many of whom live in the capital --Monrovia -- and one or two smaller towns. The majority live in villages or in farming areas near the towns.

The history of Liberia is interesting because, unlike most African countries, it was not colonized by a European power. It came into being as an

independent state following the founding of the American Colonization Society in 1816 for the resettlement of freed blacks from the United States. After several skirmishes, more with the British than the French, its present boundaries were fixed. It is ruled mainly by the descendants of these early settlers, formerly called Americo-Liberians. The majority of the inhabitants, however, belong to several tribal groups, such as the Kru, Mudingo, Vai, Bassa, and Kpelle. The Vai is one of the rare African tribes that still uses an original script.

More than half the people profess some form of Christianity. There are also some Muslims and a few pagan tribes in the interior. Although no figures are available, illiteracy is considered to be very high, especially in the rural areas. Schools are being built in remote areas, as the new government feels this is the key to national development.

The economy, which was growing fairly rapidly about ten years ago, now has a very slow growth rate of 1 percent or less. The per capita income in 1972 was thought to be U.S.$250. The country as a whole, apart from Monrovia (population 100,000), remains untouched by development. There are few roads and no other towns of any size. The new government of President Tolbert is doing its best against great odds to find outside assistance to diversify the country's economic base. (Previously Liberia's economy was closely tied to the operations of the Firestone Rubber Company of the United States, one of the main companies in the country.)

II. HEALTH POLICY AND PROGRAMS

The Ministry of Health, only recently founded, does not have any stated policy on population, although the new minister, Mr. Bright, an articulate lawyer, is aware of the new figures, including the high infant

mortality rate. He sees the provision and improvement of health care -- especially in the long-neglected rural areas -- as one of the urgent priorities of the government. Recruiting suitable health care trainees who will remain in the rural areas is another of his priorities, although the country-wide shortage of health personnel and the higher salaries offered in urban and mining areas will make such recruitment difficult. A Five-Year Development Program is being drawn up in which Minister Bright may try to include a favorable statement on family planning.

USAID started a health training program in Liberia in which a number of midwives and maternal and child health workers were trained every year, with family planning part of this training. Unfortunately, this project was discontinued last year. According to the USAID representative in Monrovia, USAID is now concentrating its attention on the economy of the country -- agricultural innovation, public administration, and transportation. It is unfortunate that USAID policy in regard to health changed before local health resources had been developed. There are shortages of drugs and of trained manpower to staff even rudimentary health services for the rural areas.

Outside of Monrovia, with the exception of one or two outstanding mission hospitals, health care services are very rudimentary indeed, and in most cases nonexistent. The elaborate schemes for training personnel for health care services in rural areas have not met with success, possibly because they have been fashioned on models in more developed countries, or have been planned by well-meaning people who have little understanding of the situation. A major constraint is the paucity of educational facilities outside the capital, a situation that is hopefully being corrected under President Tolbert. Both child and adult education are priorities. By using an adequate

number of semiliterate adults with a short training in hygiene and nutrition, as well as indigenous midwives and trainee midwives also instructed in hygiene and simple home nursing, a good deal of basic health care could be provided in the remote parts of the country. This appears to be one of the most important health priorities of the country.

III. POPULATION POLICY AND PROGRAMS

There is no stated population policy of the Liberian government in terms of the need to increase or decrease the population. On the whole there is a general feeling among most members of the cabinet that the country needs more people, and it is very unlikely that family planning for demographic purposes would be acceptable. At the moment it is regarded only as a health measure, to counter the high infant and maternal mortality, and to improve the health of the children.

However, the president stated in May 1973 in the course of a public address that: "It would be self-defeating to advocate the raising of living standards whilst at the same time denying the need for qualitative growth. Responsible parenthood is just as important as responsible fiscal policy." This has been interpreted as a favorable response to the efforts of the local Family Planning Association, a voluntary Association funded by IPPF.

Population concern started among a small group of people in 1956 following a visit from a representative from the Pathfinder Fund. Meetings were held, a Family Planning Association was formed, and a small clinic was opened with help from Pathfinder. The clinic was run by a small local committee for ten years. In 1966 the IPPF started to support the association, and the work greatly expanded.

The FPA is active, operating eleven clinics -- three in Monrovia and eight in the rural areas (two of which are in mining areas). Last year

Mr. Foday Massaquoi, a faithful volunteer, was appointed executive secretary. The IPPF supports the association with $63,000 per year, $10,000 being raised locally.

The Broad Street Clinic, the main one in Monrovia, is open daily, with a Saturday clinic for men. It is a multipurpose clinic, offering all types of contraception, nutrition, antenatal services, and infertility investigations, plus doing a considerable amount of teaching and public education. The FPA realized from the beginning that because health care is not well developed in Liberia, family planning cannot be offered as a separate service but must be part of a wider system of health care. Therefore, in order to offer family planning, the wider services must also be offered. This has caused some trouble with IPPF, which objects to using its resources on nutrition and other services indirectly related to family planning.

It seems clear that the time has come for government to take over the family planning services as part of a larger comprehensive system of health care. There is a fully trained full-time Health Educator paid by the FPA who will probably be used by the government to educate paramedical personnel, teachers, and welfare workers about family planning, among other things. A laboratory has recently been started at the main clinic to do pap smears.

In 1971, the latest year for which figures are available, the total number of new clients was 8,739. Of these, 1,725 were acceptors of contraceptives, while 4,398 came for basic nutrition advice and assistance. Of these, at least 654 were prospective contraceptive clients. It seems necessary to continue with the nutrition work of the clinics to draw would-be acceptors for contraceptive services. An additional 888 clients sought infertility counseling, and 680 came for antenatal advice.

In clinics of the Liberian FPA, the pill was by far the most popular contraceptive method (79 percent of all acceptors), with the IUD second (20 per cent). Condoms are distributed free. There is a shortage of all contraceptives, but the commercial field is opening up. The public demand for these services appears to be growing. It is, however, much lower in rural areas, as might be expected. The FPA of Liberia is the only body offering contraceptive services to the public. (They also run the MCH family planning clinic at the JFK hospital complex.) It is hoped that the government will increase its support of, and eventually take over, responsibility for family planning services. Supplies of most contraceptives are easily bought commercially over the counter, but they are much more expensive than those sold by the FPA. Contraceptive services could be extended much further if cheaper supplies were available.

For seven years the association has had the same president, Mrs. Mae Kellar, a vital, intelligent social worker, who is in charge of the social services at the maternity section of the JFK complex. All the nurses have been to the United States for short courses in family planning. More nurses could be used, and the training of field workers is just beginning. The health educators are very well trained in the United States and seem to be making an impact in Monrovia. The future of the association will depend on government support and the organization of a health care system to cover the remote areas of the country.

At the moment the family planning problem is mainly an urban one, and services could usefully be extended within Monrovia and its environs. Public education also needs to be extended, along with a health education program in all teaching institutions. Most of the civil and political leaders

are generally aware of the problem, but there are other more urgent priorities in the health field, and health itself lags behind several other priorities in the minds of government leaders. Research and evaluation need to be done.

There are a few private doctors in Monrovia who offer family planning services to the middle class.

IV. UNIVERSITY DATA

The main institutions of higher learning are the University of Liberia, established in 1951 in Monrovia, and Cuttington College, a liberal arts church-owned college about 140 miles from Monrovia at Cape Palmas. The University of Liberia is the former Liberia College which was founded in 1862 by President Roberts. At first it was supported by Trustees of Donations of Boston, Massachusetts, and the Board of New York Colonization Society. The government of Liberia assumed full support of the college in 1900. In spite of many handicaps it continued to operate until by an Act of Parliament, in 1951, it became the University of Liberia, with Dr. J. Max Bond as its first president. It is arranged on the American collegiate system, and the College of Liberal and Fine Arts (a four-year degree course) has a Department of Anthropology and Sociology among several other departments. There is also a College of Agriculture and a College of Law, a Teacher-Training College, an Institute of African Studies, and an Extramural Division. At present the university has 1,400 students of whom 314 are women. The majority of the students live off campus, as dormitory facilities are only provided for a small number. The government supports the university, but three United Nations agencies also help as well as USAID. There are also two other teacher training institutions and one technical training institute.

A Demographic Unit headed by a UNFPA-funded demographer, Dr. Srivastava, was established within the Department of Sociology and Anthropology in November 1973. A course in population studies was offered in 1973, with five students attending. Two courses are being offered in 1974 by Dr. Srivastava -- an introduction to population studies and an introduction to population analysis. In addition, two Liberian members of the department, Dr. H. Jefferson Taplah and Thomas Ken, are working in the area of family sociology and both have an interest in related demographic topics. Dr. Ken is studying marriage patterns and child rearing in urban and rural Liberia.

A good deal of demographic data is available from the five-year Population Growth Survey carried out between 1969 and 1972 with USAID support. The survey, conducted under the auspices of the Department of Planning and Economic Affairs of the Government of Liberia collected data on infant mortality rates, fertility rates, migration, household composition, and general population trends. It employed a dual record system based on resident registrars and six-monthly surveys. A good deal of the data has been analyzed and published by the department, but more could be done at the university. In addition, the 1974 census will provide even more data.

The School of Medicine

The new School of Medicine, part of the University of Liberia, produced its first graduates, four M.D.'s, in December 1973. It started in 1968 as a cooperative project between the Liberian and Italian governments. In 1970 it merged with the University of Liberia and was renamed the Achille Dogliotti College of Medicine, after an Italian philanthropist. Although the School of Medicine is run by an advisory board (of which the dean is secretary), the ultimate governing body is the board of trustees of the University of

Liberia. The first head of the School of Medicine was Dr. Luigi Losano, professor of physiology of the University of Turin, who returned for five months in 1973. The A. Dogliotti Foundation is supporting one full-time professor, and WHO has also promised to support one. Preclinical teaching appears to be somewhat inadequate due to lack of staff.

The John F. Kennedy Hospital, less than two miles from the medical school, serves as the teaching hospital for the college, and the chief medical officer of the hospital is associate dean of the college. The JFK complex is a well-equipped, fairly new, American hospital with 421 beds and ample clinical material for teaching medical students. The teaching staff consists of a mixture of Liberians (trained mostly in European medical schools) and Americans. Some of the staff are well qualified, others are newly qualified and acting as part-time instructors. The shortage of teaching staff is critical. For instance, there is only one pathologist for the whole country.

The School of Medicine consists of a two story building containing the four preclinical departments with classroom facilities, a laboratory, and a library. There is a dormitory for thirty seven students with dining room, lounge and study; a four room bungalow that houses the administrative offices of the college, a warehouse, an animal house, and a laundry.

St. Joseph's Hospital, a new 100 bed hospital is also situated on the site. It is run by a group of doctors and nuns who have no teaching responsibility, as all clinical teaching is at present done at the JFK Hospital.

The new dean of the School of Medicine is Dr. T. Daramola, a Nigerian, who until last year was assistant professor of community medicine at the University of Lagos. He and his Liberian wife have Canadian medical degrees and excellent postgraduate degrees - he in community health and she in physiology. He is trying very hard to recruit staff, especially preclinical staff,

but as there is a world wide shortage, he has not been very successful. He has recruited a highly qualified and experienced obstetrician and gynecologist, formerly on the staff of Ibadan. Daramola contributed an article to Caldwell's Population of Tropical Africa on "Family Planning Attitudes in Lagos." He has also participated in a WHO statistics study and written a paper on "Data Processing as a Part of the Curriculum in the Field of Health."

WHO has asked Professor Ade Grillo, dean of the School of Medicine at Ife and a well-known Nigerian anatomist, to submit a report on the Liberian School of Medicine and the JFK Hospital.

The educational system in general needs strengthening, and the School of Medicine is in a rather precarious state. The next few years will be critical for its survival. There seems to be promising ground for experimentation with the teaching of medicine in the tropics, concentrating on medical assistants rather than doctors, and for developing new approaches to community health.

The Tubman National Institute

The Tubman National Institute of Medical Arts, established by a United States public health service team some twenty-five years ago, is an important-sounding name for what is in fact a training school for nurses, sanitarians, and medical assistants. Health education, started in 1956, has since lapsed, and family planning as such is not taught. The superintendent, Mrs. Yaidoo, has said that there are plans for including family planning in the curriculum of the School of Nursing. The standards do not seem high, or even adequate, to provide nursing and paramedical staff for a teaching or other reasonably good hospital.

The Liberian government has decided to join the institute with the School of Medicine. Although linking the two would seem logical in order to raise the standards at TNIMA, there is reluctance to do so, since the five-year old medical school has not yet justified its existence.

Cuttington College

Cuttington College, founded in 1889, was named after an American president of the Episcopal Church, a missionary who worked in Liberia. It is a small, well-established college about 140 miles from Monrovia and is owned by the A.M.E. Episcopal Church. Its total student body is 313 and it is staffed mainly by expatriates. (It was closed from 1929 to 1950.) Originally founded as a theological college, it now offers liberal arts and science courses and includes a School of Business and a School of Nursing.

The School of Nursing at Cuttington (started in 1966) is associated with the Phebe Mission Hospital nearby and is of a relatively high standard. Nursing courses are offered for degree, R.N., midwife, and practical nurse. There is also training for laboratory technicians.

The future of Cuttington College is somewhat precarious since it is entirely dependent on private donations and church sources. An appeal for funds has recently been launched in the United States as well as in Liberia. Many successful Liberians are Cuttington alumni.

In the School of Nursing curriculum, health education is very important, and family planning is taught to all grades of nurses. Mothers are admitted routinely with sick children and are taught how to feed and care for their children. Recently, an outreach program has been started in which nurses and laboratory technicians travel to surrounding villages to provide health care. This program is funded by the Liberian government. A good program of rural health care could be based here, provided sufficient resourses could be found.

V. CONCLUSION

The University of Liberia and its small School of Medicine may be regarded as a negative institution within the framework of population teaching/research, but with some possibility of developing in this field. Much will depend on the quality of the available staff and students, both in the demographic and medical family planning field. Very little teaching is being done at present. The only viable programs in family planning are offered privately either by the Family Planning Association (IPPF) or in the health education family planning program at the Nurses Training School attached to Cuttington College.

At present some evaluation of the work of the local Family Planning Association seems necessary. Personnel training at all levels is much needed. A start could be made by recruiting training from among the Liberian students studying abroad, especially in the United States, who would like to return home if there were suitable jobs available.

SOURCES OF DATA

Site visit to Liberia: February 1974.
Situation Report, IPPF, October 1971.
J.C. Caldwell Trip Report (Confidential), February 1973.
University of Liberia Catalogue, 1972-74.
Annual Report of the Dean, College of Medicine, November 1973.
TNIMA Catalogue, Silver Jubilee Issue, 1973.
Report of Family Planning Association of Liberia, 1971.

February 1974

CONTENTS

NIGERIA

NIGERIA

Rocco A. de Pietro, Jr. and Thomas K. Burch

I. COUNTRY SETTING

With over 60 million people, Nigeria is perhaps the seventh largest nation in the world in terms of population, and by far the largest nation in Africa. It is roughly twice as large as Egypt, which has approximately 37 million people. It also has relative economic strength among developing nations, and the potential, including resources such as oil, for substantial further economic development. Its size and economic strength will no doubt make it one of the most important nations of Africa in the decades ahead.

Population looms large in any assessment of Nigeria's current situation and its future prospects. The southern, coastal regions of the country are densely settled, and crowding is manifest both in rural areas and cities. The cities themselves are growing rapidly, and in some cases have become quite large without adequate housing, transportation, or other necessities of orderly urban development. The crude birth rate of Nigeria is high, at least 50 per thousand, and has shown no signs of decline. Data on mortality are scarce, since Nigeria does not have an adequate vital registration system, but estimates of life expectancy at birth would place it at approximately forty years. The crude death rate is approximately 20 to 25, suggesting an annual rate of increase of 2.5 to 3.0 percent. In short, the population of Nigeria is growing rapidly, with no signs of imminent slowing of that growth. For at least two decades Nigeria will experience all of the social and economic problems asso-

ciated with rapid population increase. Special problems arise in connection with the long-standing drought conditions of the southern Saharan region (the Sahel), which has had some effect in the northern parts of the country.

Considerable interest attaches to population, as witnessed by the all-out national effort in connection with the 1973 Nigerian census, taken in the fall of that year. A massive effort was made to conduct an accurate census, an effort involving considerable public education and information. With the release of provisional figures in May 1974, public attention has remained at a high level. Indeed the accuracy of the provisional results has become a focus of political controversy. The early results of the census gave a total population for Nigeria of 79.76 million. This figure was larger than expected and implied such things as a lower figure for per capita income than had been current. The more serious problems, however, relate to internal distribution. Provisional figures show extremely rapid growth for the six northern states (especially the three in which Hausa predominate) -- approximately 51 million in 1973 compared to approximately 30 million in 1963, for an average annual growth rate of about 5.5 percent. By contrast, the six southern states, where Yoruba and Ibo predominate, are reported as having grown from approximately 26 million to only 28 million in 1973, for an annual rate of only 1 percent. At least two populous southern states, namely, Mid-Western and South-Eastern, were reported as having slight declines.

It is widely believed that the figures for the northern states have been grossly exaggerated for political and economic reasons. General Gowon's announcement that Nigeria would not return to civilian rule in 1976 was one major consequence of the controversy surrounding the census.

The government to date has not focussed on population growth as a major

problem. In the second national development plan for 1970-74, the following policy stance is put forward: "given the promising resource base of the economy ... what seems appropriate ... is for the government to encourage the citizens to develop a balanced view of the opportunities for individual family planning on a voluntary basis ..." There is, in fact, considerable family planning activity but no full-scale governmental program.

II. HEALTH POLICY AND PROGRAMS

The leading causes of mortality and morbidity in Nigeria are infectious diseases, communicable diseases and illnesses associated with malnutrition. According to officials of the Lagos City Council Health Department, the leading causes of death among children are pneumonia, gastro-enteritis, and malaria. Morbidity among women is associated with the biological function of childbearing: anemia, postpartum hemorrhage, obstructed labor, and infection.

Other major health problems include hypertension, measles, cerebral-vascular accident, hepatic failure, tetanus, convulsion, infective hepatitis, cancer, and menigitis.

The chief medical advisor to the federal government noted the four highest health priorities: (1) training of health manpower, especially more doctors; (2) controlling communicable diseases; (3) developing environmental health programs; and (4) expanding basic health services.

State health ministries spend most of their budgets for the recurrent expenditures of government health facilities. Although policies emphasize the need to develop preventive services, funds are spent mainly on curative services. Government programs include expansion of the medical schools, development of teaching hospitals in all the states, and construction of institutes of child health in all states. Through the Institute of Child Health in Lagos, the

Federal Health Ministry is also supporting the development of MCH and family planning programs.

Doctors are highly concentrated in urban areas, especially at the university teaching hospitals. There are about 3,000 medical practitioners and about 15,000 registered nurses in Nigeria. The population per doctor is about 1 per 27,000. In rural areas it is much worse. Even in urban areas the majority of doctors are inaccessible to the poor. Retired midwives, herbalists, and local chemists become the poor people's doctors. In most major cities and large towns there are state or general hospitals staffed by doctors, nurses, and technicians. Of course, outside of the capital city of any state, the staff becomes slimmer with some having only a single doctor, several nurses, and no laboratory assistants.

In rural areas, there are health centers run by nursing sisters with community nurses and midwives attached. Nigeria no longer trains Grade II midwives, many of whom now run private maternity homes. Dispensaries are also found in rural areas. Their quality varies greatly from state to state. Surprisingly, some of the better ones are found in the north. In the south some have been observed to be without drugs for months. Medical health officers make weekly visits to health centers and periodically check on the dispensaries.

Although each of the six medical schools is currently turning out fewer than 200 doctors per year, the goal is for each to turn out 200 by 1980. With the rate of medical school expansion, the goal seems within reach at least by 1985. After completing the bachelor and master of surgery degrees at Nigerian medical schools, the pattern is for doctors to go for advanced degrees in England and Scotland. Nigerian medical schools are beginning to grant advanced medical degrees, but are much less preferred than foreign schools.

Most stage governments and universities have schools of basic nursing.

Ife and Ibadan also have university degree courses for nurses. Nigeria trains its own tutors and nurse administrators. However, Nigeria still does not offer a course equivalent to the British state certified midwife (S.C.M). The government has plans to build a School of Nursing which would include family planning as a post-basic course.

III. POPULATION POLICY AND PROGRAMS

Prospects for family planning in Nigeria have been both helped and hindered by the census results. In a prepared speech read by the Western State Military Governor, the Nigerian head of state, General Yakubu Gowon, made his first formal statement in support of population control. The Daily Sketch, the Western State government newspaper, sought in an editorial an explanation for the population decrease in the west: "The experts should concentrate on the Western State where there has been a big drop in population to establish whether it was because its 1963 figure was bloated or whether the people of the state have been too ardent in embracing the idea of family planning."

The new and serious political problems precipitated by the census result come at a time when Nigeria's economic prospects have never been brighter. An official of the Ministry of Mines and Power estimated revenue from oil exports at about 18 million dollars per day. Nigeria's major economic problems in the next five years will not result from capital deficiencies, but from a lack of skilled manpower to plan and manage development projects, particularly in the states.

The next five years should see significant growth of public health and family planning research, training, and service activities at the six Nigerian medical schools. Within the past two years, medical schools at Benin and Ife have been launched. Both are committed to revamping health care in their state, including the provision of family planning as part of maternal and child health

services. The Lagos Medical Faculty has already begun extending MCH services, including family planning, to Lagos and North-Western states and has plans to organize similar services in the South-Eastern and North-Central states. The Ibadan Medical Faculty has extended comprehensive health services to parts of the Western state and has plans to develop joint MCH projects with Kwara and Benue-Plateau states. To help implement these programs, various categories of medical and paramedical personnel will have to be trained to provide a full range of health services including family planning.

Nigeria's moderate national population policy of providing family planning as a voluntary social welfare service for mothers is not likely to be modified considerably in the next four-year-plan (1975-78). Nigeria does intend, however, to set up the National Population Council called for in the present plan, which would have as a major objective the coordination of external aid for population and family planning.

Family Planning Council of Nigeria

With about seventy clinics in eleven states, the FPCN is the largest provider of family planning services in Nigeria. It serves about 12,000 new patients annually, mostly with the pill. Although most of its clinics and patients are in the six southern states, it has made several inroads in the north -- particularly in Benue-Plateau, Kwara, and North-Eastern states.

The Council employs over 120 full-time fieldworkers, most of whom are based at Lagos, Ibadan, and Benin. In addition, it also employs five full-time information officers and an evaluation officer. The Council has had national awareness campaigns (using mass media and fieldworkers) and has received funds for another campaign directed at men. They have been successful in attracting leadership and public attention to family planning issues through their information activities.

The Council receives over 90 percent of its resources from IPPF and other foreign agencies.

IV. UNIVERSITY DATA

Nigeria currently has five major universities: Ahmadu Bello University, University of Ibadan, University of Ife, University of Lagos, and the University of Nigeria. The University of Benin has recently been established and there are pressures from other states for additional universities. Enrollments range between 2,000 and 3,000 students; all are expected to increase over the next five years. There is tremendous public pressure for higher education and abundant government funds for major capital expenditures.

A. Medical Schools

All the medical schools teach some family planning and population dynamics, but course content is decided upon by individual departments and thus varies greatly in quality and intensity. Lagos, Ife, and Enugu medical schools have begun on a small scale to integrate family planning and population dynamics into their basic curricula.

The Nigerian head of state has publicly called for the medical schools to each produce 1,000 new doctors by 1980. As the six medical schools combined are presently turning out only 400 new doctors a year, most deans feel this goal is unrealistic. The training of more doctors, however, remains a major medical school objective which is fully in harmony with Health Ministry goals.

Since medical school research priorities are largely left to individuals, prospects for family planning research rest as much with individuals as with their institutions. Although some deans would like to see this trend reversed, few are powerful enough to do much about it. Both as a research topic and health service, family planning has been very much legitimized by its favor-

able association with dynamic leaders of the Nigerian medical profession.

University of Ibadan

Faculty of Medicine

In the past five years, there has been substantial growth of public health and family planning research and training. A few exceptionally strong department heads have piloted these developments. They are: Professor O.A. Ojo, head of the department of obstetrics and gynecology; Professor B.K. Adadevoh, former head of the department of chemical pathology; Professor T.O. Ogunlesi, former head of the department of medicine and head of the Ibarapa Project; and Prof. A.O. Lucas, former head of the department of preventive and social medicine.

Prof. Adadevoh's field of speciality is reproductive biology and thus his major activities will not be described in this report. He is cited principally for his contribution to interdisciplinary research and training.

Department of Obstetrics and Gynecology

Prof. Ojo is an energetic and hard working physician who demands from his staff the same high standard of performance he sets for himself. His well-administered program is an object lesson in the paramount importance of strong top level leadership in the successful execution of development projects in Nigeria. Within his department, Prof. Ojo has developed a national training program for medical and paramedical personnel in family planning methods and has initiated a small but expanding contraceptive research program.

The Ford Foundation-funded training program, which was initially designed to train the 600 staff nurses of the Western state government, almost immediately attracted the attention of other states. All but three of the twelve have sent trainees to Ibadan, with Benue-Plateau and North-Eastern exhibit-

ing the most enthusiasm.

Persistent problems for Ojo are inadequate provision for assisting trainees once they have returned to their posts, and the lack of built-in guarantees that state governments will institutionalize the newly acquired skills of trainees. Ojo insists that their skills will eventually be used, even though there might be a considerable time lag.

Training program needs over the next few years will include: assistance for former trainees to set up family planning clinics under Ministry of Health supervision; training and travel fellowships for program staff; and program funding when Ford support ceases.

At the moment, Prof. Ojo's clinical research program is only a grouping of loosely related studies reflecting as much the interests of donor agencies as his own. As co-director of the WHO Regional Clinical Research Center (no separate facility) at the University College Hospital, Prof. Ojo has commenced clinical trials of progesterone and chloroquine medicated IUD's. Outpatient culdoscopic tubal ligation was also started in April 1973 with Pathfinder Fund assistance. Pathfinder is also funding a comparative study of the effects of fertility control drugs on menstrual regulation. The North Carolina group is also discussing with Ojo the possibility of developing a West Africa regional clinical research center at Ibadan.

Prof. Ojo is grooming Dr. O.A. Ladipo as his eventual succesor. Dr. A. Onifade, who has assisted Ojo in some of his programs is not considered an appropriate successor because of his age. Ojo prefers that donor agencies deal directly with him rather than with other department members and opposes donor agency programs which provide gynecologists to departments other than his own.

Department of Medicine

Prof. T.O. Ogunlesi directs the Ibarapa Project, the rural teaching and service facility jointly operated by the medical faculty and the Western state government. At Igbo-Ora, one of the eight areas in the Ibarapa division, third-year medical students spend two months in training under the supervision of resident and visiting medical staff. From the beginning, baseline demographic data have been collected at Igbo-Ora to measure the impact of comprehensive community care. Since 1971 Prof. Ogunlesi has been interested in adding family planning research, training, and service to the project, but not until recently has he been able to win the necessary faculty support to do so.

Largely through Ogunlesi's efforts, the medical faculty included in its four-year development plan (1975-78) a proposal for the establishment of a MCH/FP program at Igbo-Ora. The proposal represents the faculty's first group submission. Project objectives are: (1) to train medical and nursing students, postgraduate physicians and nurses, and various categories of paramedical personnel in MCH/FP; (2) to study the most effective and efficient means of introducing MCH/FP in a rural setting; and (3) to provide women with antenatal and postnatal care, including family and infertility services, and children with comprehensive health care.

Prof. Ogunlesi said that the faculty would seek donor agency support for family planning research and training components. The government is likely to fund nurses' salaries and drugs. The final proposal is to be ready in July.

The former dean of the medical school, Dr. O.O. Akinkugbe (recently succeeded by Prof. B.O. Osuntoken, head of medicine) indicated that he was trying to reverse the past tendancy of projects being funded without considera-

tion for "faculty philosophy." The new faculty approach is to discourage "empire builders," e.g., powerful department heads, and avoid situations whereby the university is asked to take over funding for projects it has only nominally approved. The draft proposal for the faculty's MCH/FP program stipulates: "A concerted interdepartmental approach is necessary for balanced development, avoidance of overlap, and for a proper assessment of its implications when Ibadan is eventually asked to take them over completely." It notes, however, that the faculty approach "will not prejudice department priorities or ongoing efforts by individual departments at negotiating assistance for specific projects within the general ambit of the MCH program."

Department of Preventive and Social Medicine

Although no longer chairman, Prof. A.O. Lucas remains the department's stalwart. Prof. Lucas has never had a great professional interest in public health and family planning research. His own research, as well as his department's, has focussed heavily on the incidence and implications of communicable diseases rather than on their control within various communities. Two notable exceptions are Drs. Oduntan and Ademuwagon, both of whom have well defined public health interests.

Dr. S. Olu Oduntan, who holds an M.P.H. from Berkeley, has emerged as the department's leader in MCH. With Prof. Lucas's full support, she has developed a rural MCH research and training project which is currently underway at Igbo-Ora. The project includes a family planning component which, according to Lucas, has not been implemented due to financial restraints. In principle and scope, the project clearly overlaps with the proposed faculty MCH program and will surely be absorbed by it should it develop.

The department is seeking major WHO support to create an institute of health with possibly Lucas as its head. The proposed institute would

have seven units, including statistics, epidemiology, maternal and child health, and health education. Already the department has the necessary staff to launch the institute. Epidemiology would be by far the strongest. Dr. Oduntan will undoubtedly head the MCH unit. Lucas urgently wants to develop the MCH unit which he considers "a high risk area for patients" and statistics "the backbone of many things we do."

University of Ife

Faculty of Health Sciences

Just one-year-old, the University of Ife's Faculty of Health Sciences is organized differently from any of the other medical schools. In place of the traditional departments, such as obstetrics and pediatrics, there are seven divisions of community, hospital, and nursing care, which together encompass most activities related to public health and family planning research and training.

The faculty's educational aim is to train a health team of graduate medical and paramedical personnel to work both in rural and urban areas. Team members would be trained together at small and medium sized government hospitals and health centers which would serve as teaching hospitals.

The prime mover for this innovative approach to medical training is Prof. T.A.I. Grillo, the new faculty dean. Grillo's background as a professor of anatomy at Ibadan would seem to make him an unlikely figure to pioneer in this approach. But he claims that after much study and thought he has become convinced that his model is best for Nigeria.

Grillo's ultimate objective is to decentralize basic health care by converting health centers into primary care units and hospitals into secondary, or specialist, institutions. In the decentralization process, he sees the faculty working with the Western state government to remodel health

and medical services. Unlike the University of Ibadan, Ife is largely a state supported university with about 70 percent of its revenue coming from the Western state government. Faculty members, state government health officials, and community members have formed a management board responsible for the supervision and control of the state's health facilities. As the more powerful board member, the state government is pressing the medical school to become more involved in community service. Although primarily interested in training and research, the medical school is also committed to community service. But rather than simply serving in government health programs, it is seeking the power to reorganize them.

The Division of Community Care intends to provide family planning as part of postnatal services for mothers at each health center including those at the university, Ikire, Ede, Imesi-Ile, and Ile-Ife. The Division of Hospital care will provide family planning as part of maternal and child health at each hospital including those at Ondo, Ilesha, Ede, and Ile-Ife. For example, every hospital obstetrics service will dispense contraceptives.

Of the five proposed primary care institutions, only the University of Ife Health Center has thus far been reorganized by the medical faculty. Of the four secondary care units, only Ondo General Hospital has been approached. At Ondo, a study of existing services was made and MCH services including family planning were provided. However, a senior gynecologist at the hospital was unwilling to cooperate fully with the young medical school physician so that a complete reorganization of obstetric services did not occur. The conflict is indicative of the types of issues that still need to be resolved between the state government and medical school.

The Division of Community and Nursing Care is headed by Prof. Ade Ade Adeniyi-Jones, former acting head of the Department of Community Health

at Lagos. Adeniyi-Jones is very much committed to family planning within the MCH context. Outside of that context, he feels family planning is "disasterous" for Nigeria. He firmly believes in using paramedicals to provide basic health services. He claims that he proved it worked in Lagos. At Ife, however, he is having difficulty convincing his dean and others that this is the best approach. Although not an active researcher, Adeniyi-Jones is a supportive department head and will encourage the research interests of his staff.

Presently, the Division of Community and Nursing Care has only token staff. Besides Adeniyi-Jones, there are two junior lecturers, a visiting Japanese professor, who speaks very little English, and two nurse tutors. During the 1974-75 period, both Adeniyi-Jones and his dean have as a priority objective expansion of the division. Immediate needs are for community oriented physicians and graduate nurse tutors.

The dean considers research development a long range need. He favors external support for research only for situations in which the medical school lacks the necessary facilities. Research priorities are set by individual divisions with little or no guidance from the faculty.

The major public health and family planning research activity is a joint project between the faculties of health sciences and agriculture. The Isoya Rural Development Project aims to determine the health needs of Isoya, a group of nine villages totalling about 4,000 in population. At the initial project phase, basic demographic data would be gathered and comprehensive health care would be provided to mothers and pre-school children. Family planning would be one of the MCH services. Later, health care would be extended to school children and adults. Efforts would be made to involve the community in its own health care. The project would be evaluated in terms of

its impact on children's growth patterns, demographic change, and reduction of blood parasites. The project's research component could be considerably strengthened if links were established with the Institute of Population and Manpower Studies for the gathering and processing of demographic and basic health data.

The physician who seems most enthusiastic about family planning is Dr. M.O. Sogbanmu, a Scottish-trained gynecologist who introduced family planning services at the Ondo General Hospital. He would seem like a good candidate for advanced training in family planning methods and family planning research. The importance of supporting family planning research interests of doctors such as Sogbanmu cannot be over emphasized.

The faculty is to grant a university degree to clinically trained nurses. After some job experience, the nurses would be capable of operating a rural health center, the primary care unit in the Ife scheme. Whether the attainment of a university degree will affect a nurse's willingness to serve in rural areas is an open question. On the completion of her Bachelor in Nursing Science (B.N.Sc.), a nurse would be qualified to dispense contraceptives including IUD's.

University of Lagos

College of Medicine

As with other Nigerian medical schools, the big thrust at Lagos is to train more doctors and to extend medical and health services to the community. Lagos, which had trained only 245 doctors by the end of 1973, will admit 150 new students next year and expects to increase the number to 200 by 1980.

Prof. Felix Dosekun, dean of the College of Medicine, emphasized

two priority areas of need. First, collaborative research with foreign universities through a staff exchange program and support for general public health research, training and service programs. Second, with the planned expansion of student enrollments, staff development is a very high priority. Although Nigerianization of teaching staff continues and is virtually complete, highly experienced foreign specialists will be required in increasing numbers to bolster teaching and research programs.

The three departments directly involved in public health and family planning research and training are: community health, pediatrics, and obstetrics and gynecology.

Department of Community Health

Historically, public health and family planning research and training activities in Nigeria had their beginnings at the Department of Community Health, which was organized under Prof. Robert Wright of the Johns Hopkins University Medical School. In 1965 the department received a large Ford Foundation grant for demographic and family health surveys in the Lagos metropolitan area. Many expected the department to evolve into a demographic and family planning research center capable of meeting the needs of a national family planning program. Ten years later, however, high level staff desertions have all but decimated the department. Dr. S.O. Daniel, the acting head since 1973, is only of lecturer grade. (Since writing the draft report, Prof. O. Ransome-Kuti, head of pediatrics, was appointed acting department head.)

Dr. Daniel is actively seeking funds for the Badagary Project, which he described as "a community-based family planning program." On paper, the project looks more like a lot of capital construction for research facilities and residence halls than a well-conceived project with clearly defined goals.

Daniel seems committed to providing family planning as part of comprehensive health care, but his plan of implementation has yet to be worked out in any great detail.

Within the next five years the medical school plans to establish a rural teaching and service facility similar to the Ibarapa Project at Ibadan, and Daniel would like Badagary to be the site of it.

Dr. Muriel Oyediran, the department's mainstay, is one of Nigeria's most experienced family planning clinic doctors. In 1967 she helped to organize the department's family health clinic, now run completely by nurses. She is an experienced family planning trainer having organized sessions for West African nurses supported by WHO and trainees of the Institute of Child Health, Lagos. She also has strong clinical research interests. Currently, she is studying the effects of an injectable contraceptive on 100 patients.

The department's family health clinic is first rate and could be expanded into a major training center for the needs of Nigerian and smaller anglophone West African family planning programs. In addition, it could be developed into a teaching facility for medical and nursing students at undergraduate and graduate levels. The clinic could also serve as the base of a small contraceptive research program with Dr. Oyediran taking a leadership role.

Department of Pediatrics

Headed by Prof. Olikoye Ransome-Kuti, the department has been the faculty's major contributor to research, training, and service in public health and family planning. Among medical school professors, Ransome-Kuti seems to be unique in his ability to work well with both medical school and government bureaucracy to win approval for his programs. His power seems to

lie in his personal reputation and family connections. He is one of the few ranking Nigerian physicians who does not do private practice, a fact that compels persons in authority to support his programs. His father was a prominent church leader and his mother one of the earliest crusaders for teachers' rights.

Ransome-Kuti also heads the Institute of Child Health Two top physicians on his staff are Drs. Doherty and Kolawole who have helped to manage MCH projects at Lagos (Gbaja) and Sokoto. Ransome-Kuti has received a large USAID grant to assist each of Nigeria's twelve states to reorganize its MCH services. Funds are available for remodelling physical facilities so that all MCH services are housed under one roof, for training nurses as primary providers of health care, and supervising newly established MCH clinics.

Research and evaluation is a key project element. Baseline demographic and health surveys are being made to assess the impact of health programs and to study the incidence and pattern of diseases A complete enumeration of the clinic population is also being made to assess their health progress and to trace defaulters.

For the next three years, Ransome-Kuti has sufficient funds to expand his program to other states, but will require support for the adequate supervision of newly established government MCH clinics. The period of supervision will probably take longer than the three-months originally envisaged, particularly in states which have severe shortages of doctors and nurses.

Department of Obstetrics and Gynecology

In the areas of family planning research and training, this department has been largely ancillary to departments of community health and pediat-

rics. Prof. J. B. Akingba, the acting head, is a leading advocate of legalized abortion. Prof. Dele Akinla, a senior lecturer, has published a few abortion studies and has undertaken a few contraceptive research studies. A top clinician, he often attends to difficult family planning cases referred from various Lagos clinics. He has also assisted other departments in training doctors and nurses in family planning methods. He is interested in studying the effects of the Copper-T on contraceptive patients and could team up with Dr. Oyediran of the community health department to form the nucleus of a small contraceptive research program. Dr. Stephen Kuku, also a lecturer, runs a weekly infertility clinic, and is primarily interested in infertility research.

University of Benin

Faculty of Medicine

Dr. T. Bello-Osagie resigned as chief gynecologist of the Lagos Island Maternity Hospital to return to his home state as dean of the new medical school. As the senior gynecologist for the wife of Nigeria's head of state, he has always been close to the corridors of power in Lagos. Bello-Osagie says that he sees in the development of the medical school a personal challenge -- its destiny and place in history very closely tied to his own.

Benin now has Nigeria's sixth and newest teaching hospital. To the astonishment of many, the Mid-Western state military governor established it, thus breaking the relatively frozen pattern of medical school growth and setting off requests for teaching hospitals in every state -- a political demand conceded by the federal government. Largely financed by the Mid-Western state, the medical school has already forged close ties with the state health ministry. Dr. J.C. Ebie, the commissioner of health, is an active part-time lecturer in the community health department.

At the moment Bello-Osagie is concentrating his efforts on getting his hospital clinics strengthened for teaching and service. He considers research development a longer range need, although he is encouraging projects put forward by staff members. In the Benin health scheme, doctors are to be trained as leaders of health teams consisting of health workers, nurses, and other paramedicals skilled in environmental sanitation, nutrition, health education, and biostatistics. Bello-Osagie is also talking about training a new breed of rural health worker that would have some of the diagnostic and treatment skills of doctors.

The departments most likely to become involved in public health and family planning research and training are: community health, obstetrics and gynecology, and pediatrics.

Department of Community Health

The small department is headed by Prof. B.E.C. Lambert, a Swedish physician who is expected to hold the position for the next four years. Staff recruitment is an immediate department objective. WHO is to provide a health statistician, and other community-oriented physicians are also being sought.

Dr. K.C. Okoye, the ranking Nigerian staff member, has loosely connected population and family planning interests. At the London School of Hygiene and Tropical Health he studied under Rex Fendall and wrote a thesis on nutrition in African populations. He has drafted the department's syllabus that includes sections on population dynamics and family planning. Okoye favors establishing family planning clinics throughout Benin City as part of his department's health extension programs.

The department's two major research, training, and service projects include family planning as a preventive health service for mothers. At Oyen,

a village of 3,500 people about fifteen miles from Benin, the department (in collaboration with the Department of Pediatrics) is gathering base line data on the psychological, social, and physical pattern of diseases, and providing curative and preventive services including family planning. The project is to unfold in several phases over five years. Later phases would include research on the organization and administration of health services and an evaluation of the cost-benefit of health as a social service. Both departments are eagerly seeking funds for the project's research and service components.

The second study focuses on the malnutrition problem in the isolated community surrounding the Nigerian Institute for Oil Palm Research (NIFOR) about fifteen miles from Benin off the Lagos road. Department researchers are investigating the causes, cure, and prevention of malnutrition in rural populations. Since 1973, NIFOR has served as a rural teaching facility for the medical school.

Department of Obstetrics and Gynecology

Prof. Bello-Osagie heads this relatively strong department. A very bright spot in the department is Dr. Michael Asuen, a United States trained gynecologist, who spent his residency at Bellevue Hospital in New York City where for three years he helped to run a large family planning clinic and undertook contraceptive research. His research included studies of IUD expulsion rates in women of differing parity and absorbtion of copper by women on the T.

At the University of Benin Teaching Hospital there are only about 100 deliveries a month. Dr. Asuen maintains that two-thirds of the women attending the hospital's antenatal clinics are referred to other centers in Benin for delivery, the hospital admitting only difficult cases.

He noted that over 200 are seen daily at the antenatal and postnatal clinics.

Asuen would like to see the medical school help reorganize the state's obstetric and gynecological services. He frequently sees women with uterine cancer that could have been prevented by early detection and treatment. He claims that services provided by the local Family Planning Council of Nigeria are poor. He would like to get a family planning clinic started at the university hospital and later develop a small contraceptive research program

Also in the department is Dr. L.N. Ajabor, a former Rockefeller fellow at San Diego, with strong research interests in reproductive physiology, including the detection and cure of infertility, uterine cancer, and venereal disease. He personally desires training in advanced contraceptive methods.

Department of Child Health

Prof. M.I. Ogbeide heads this three-man department. One of the earliest solicitors of funds for the medical school, Ogbeide is determined to see his department's teaching and research programs grow. His department's major research activity is the joint MCH/FP project with the community health department. As with most other medical school departments at Benin, the immediate objective is staff recruitment.

University of Nigeria

Faculty of Medicine

Four and one-half years after the Nigerian civil war, the East-Central state is rapidly getting back on its feet, although many observers agree that the major gains thus far have been at the people's and not the government's initiative. Government funds simply have not matched rehabilitation needs. The teaching hospital at Enugu, which was literally stripped of everything movable during the war, has been rebuilt slowly with none of

the costly modern architecture which typifies new edifices at Lagos and Ife. Medical school dean, Prof. C. Nwokolo, reflects the pragmatic approach evident at Enugu. He feels that family planning is not sensitive in the predominately Catholic East-Central state. Instead, he feels "it is sought after." He also feels that it has a definite place in training and research in the medical school. Since the war, there has been little research of any kind. All efforts have been directed toward getting teaching and service programs restarted. It was no small accomplishment that the medical school, with an almost exclusively Ibo staff, was able to organize a complete medical faculty with several senior department heads.

Department of Obstetrics and Gynecology

One such department head is Prof. Ogan, who would like to introduce family planning as part of postnatal services at the teaching hospital and at hospitals outside Enugu where his consultant physicians visit regularly.

Another department gynecologist, Dr. W.O. Chukudebelu, already runs a weekly family planning clinic at the teaching hospital to which resident consultants refer patients. Chukudebelo would like to organize a postpartum type clinic at the hospital which eventually could serve as a training base for doctors and nurses. He is seeking assistance to help train a part-time doctor and full-time nurse to operate it.

Department of Pediatrics

Another very promising individual is Dr. Winefred Kaine, head of pediatrics. Dr. Kaine was Ransome-Kuti's registrar at Lagos and has kept up professional contact with him. She is quite conversant with the Gbaja project and would like to set up something similar at Enugu. She was

critical of Pathfinder Fund supported physician, Dr. O.L. Ekpechi, a professor of internal medicine, for starting a family planning clinic in the town. She feels strongly that medical school obstetricians and pediatricians should be the ones initiating family planning services within the medical school and not in the town. Her idea is to have a full-time well baby clinic run by nurses under the supervision of doctors with family planning as a service for mothers who bring their children to the clinics. Because of constraints on hospital space, the well baby clinic is run only once a week on Saturdays. She needs support to operate the clinic on a more permanent basis. Although there was much discussion of interdepartmental cooperation, there was little evidence of joint planning thus far. However, persons at Enugu seems to believe in the principle of working together and thus it is conceivable that physicians of such high calibre as Drs. Kaine and Chukudebelu could develop in the future a high quality MCH service.

Department of Preventive and Community Medicine

Prof. Nwokolo also looks to the new department of preventive and community medicine to play a leading role in the development of public health and family planning research and training programs. A Canadian professor is to join the department as acting head. He will have on his staff another expatriate professor and some relatively junior Nigerian physicians. The strengthening of the research, training, and service capabilities of this department is considered a high priority need.

As a first step, Prof Nwokolo would like to establish a rural research and training facility at the Affa Health Center about twenty-four miles from Enugu on the Nsukka road. He requires funds for a full-time health educator, a highly trained nurse and health visitor, lab

technologist, and demographer/health statistician. Research would include a complete household enumeration in the areas served by the clinic and a survey of the community's health status. After clinical services are established, he would introduce health education, immunization, and other health measures. Family planning would be added as one of the preventive health measures. Although community medicine would initiate the project, other departments such as pediatrics and obstetrics would eventually be brought in.

B. University Data: Demography and Related Social Sciences

Nigerians tend to place a high value on education and literacy and work to improve these at all levels. A manifestation of this is seen in the continuing tradition of educational assistance within families, whereby a young adult will be expected to, and will, provide substantial financial contributions toward the education of his younger brothers and sisters. Newspaper circulation is high, involving national papers that are distributed throughout the country as well as local and regional papers. The university system itself is modeled along British lines and some individual institutions are now large, well-equipped, and relatively mature. The University of Ibadan, for example, recently celebrated its 25th anniversary. Of the five major universities, Ibadan and Lagos are supported by federal funds; Ahmadu Bello and Ife are supported primarily by state funds; and the University of Nigeria at Nsakka is supported by a combination of state and federal funding. Generally speaking, governmental support for these institutions is adequate to generous. The University of Ibadan holds a dominant position in terms of prestige and intellectual and academic influence, but it is far from holding a monopoly in these matters.

There are those who believe that Ibadan is currently losing ground to Ife as the premier higher educational institution of the country. In any case, the clear governmental policy of federalism with respect to many domestic matters, as well as the size and ethnic diversity of the nation, will almost certainly combine to continue to promote the development of several major institutions of higher learning within the country. Indeed, the problem of over expansion might arise, as already many smaller colleges are bidding to become full-fledged universities. Ahmadu Bello University holds a unique position in sub-Saharan Africa as the only developed university in the savannah region.

In terms of demography and related social science (DARSS), four of the five major universities manifest commitment and involvement. The exception is Ahmadu Bello University. There has been some population-related activity there, including family planning clinics, demography teaching in the medical school, and some population courses in the Department of Sociology, but this has been largely initiated, financed, and staffed by non-Nigerians. There is no Nigerian faculty person with a primary commitment to DARSS, nor has the university administration made this a priority area for development.

The University of Ife

The most visible and substantial commitment to population studies is at the University of Ife. Activity is focussed around the Institute for Population and Manpower Studies, under the directorship of Adenola A. Igun, who is also Dean of Social Science. As presently constituted, the institute is a demographic and survey research facility, which also provides undergraduate instruction in population within the Departments of Economics and Sociology. Ife has the largest number of faculty and research staff

with a prime commitment to population of any of the Nigerian universities. It has come close to assembling a sufficiently large and trained staff to allow for sustained major research and training activity into the future. Possible or expected staff additions in the next year or two would enable it to reach this goal. The current staff, in addition to Dean Igun, includes: I.I. Ekanem, Ph.D. in sociology from Brown University; L.A. Adeokun, Ph.D, in population geography; J.A. Ebigbola, M.A. in demography; and F. Durojaiye, M.A. in demography; G. Farooq (the Population Council advisor), Ph.D. in economics from the University of Pennsylvania. They devote virtually full-time to DARSS. In addition, one Ph.D. level faculty person in each of the Departments of Sociology, Economics, and Geography devotes approximately half-time to DARSS. Dr. Uche, Ph.D. in sociology from Chicago, has agreed to join the institute in the fall of 1974.

The IPMS has successfully undertaken major survey research relating to population, notably the national Nigerian KAP survey. Analysis of these data continues, and has led to the improvement of the overall capabilities and staffing of the Institute with respect to survey research analysis. At the moment, the institute is probably the best academic survey research organization in the country, with trained support staff and good computer facilities and software.

Plans are currently underway for the establishment of a graduate training program in demography. As currently conceived, the program would be run by the institute, but would be interdisciplinary and would involve active cooperation of faculty and other social science units. The senior faculty members in the Department of Sociology, Economics, and Geography have expressed their support for such a degree program and their willingness to assist in teaching the necessary courses. Earlier friction and

competition between the institute and the regular social science departments seems for the moment to have subsided, and the prospects for meaningful cooperation are quite real.

It is also quite possible that the IPMS could become a major research facility servicing the research needs of other social science faculty. This role would be enhanced by an improvement in the physical quarters for the IPMS, an improvement that is already in the works.

The institute currently receives approximately half of its support from the university, and this fraction is increasing. With the expected increase in Nigerian staff and local financial support, the main institutional development needs of Ife will be supplementary. Expatriate staff would be needed primarily for advanced or highly specialized courses and to play a diplomatic function with respect to interdepartmental cooperation. They could also play a useful role with respect to the analysis of existing data. Outside financial support should increasingly be focussed on specific research projects and on the development of library, data bank, and computer resources.

University of Ibadan

DARSS at the University of Ibadan is centered in the Department or Sociology, under the chairmanship of Francis Okediji. In some respects the DARSS activity at Ibadan has been the most advanced of any of the Nigerian universities, but it has been heavily dependent on expatriate staff. Ibadan is the only Nigerian university that has offered advanced degrees with specialization in demography. Six students are currently enrolled in this graduate program. One is expected to finish his doctoral thesis in the spring of 1975. Another is currently completing his master's thesis. The remaining four will take their first year post-

graduate exam in June 1974, on the basis of which it will be decided which of them will pursue either an M.Sc. or Ph.D. degree. The bulk of the course work for this program, however, has been provided by Professor John Caldwell, during periods of residence at Ibadan. Professor Okediji has his advanced training in general sociology rather than demography, and pursues substantive interests in a variety of fields. His interest in and ability for providing advanced course work in demography, particularly in its more technical aspects, are limited. A recent addition to the department, Dr. Arowolo, with a Ph.D. from the University of Pennsylvania, represents more substantial training and interest in DARSS, but his role in the immediate future will be limited by his relatively junior status. The continuation of effective graduate training in demography at Ibadan will necessitate either further expatriate participation, or the addition of a more senior faculty person with primary training in and commitment to DARSS.

The same general situation applies to research in DARSS at Ibadan. Ibadan has been the headquarters for a major program of collaborative research on the Changing African Family, but the initiative for this program, and much of its planning and execution, has been dependent on Professor Caldwell and Dr. Helen Ware, both of Australian National University. Both have currently returned to their home university, although there are plans for them to return to Ibadan to cooperate in the data analysis stage, particularly with Dr. Arowolo. With the departure of Caldwell and Ware, no permanent research facility has remained. Similarly, although Ibadan has an adequate computer facility, the necessary software and other arrangements for the effective analysis of survey data have not been created.

The major need at Ibadan for the immediate future would seem to be the stable addition of a senior person with research and training interests in DARSS, whether that person be an expatriate or a Nigerian. Since the graduate training referred to above is given in the context of a degree program in sociology, rather than in demography, it can be meaningfully done with relatively small staff resources in DARSS. When viewing the overall development scene in Nigeria, it would seem advantageous that the graduate training program at Ibadan retain this close affiliation with a degree program in sociology. Major institutional development needs at Ibadan, therefore, for the next years, would be for crucial if limited staff additions, and ad hoc support for specific research projects. It would also be useful to assist technically and financially with the development of data storage and processing facilities with particular reference to the Nigerian data from the Changing African Family Project.

Also located at the Ibadan campus is the Nigerian Institute of Social and Economic Research (NISER). NISER does research for the government on a contract basis as well as pursuing an independent program of research. Its library includes an extensive collection of Nigerian government documents and is also a United Nations depository. NISER's commitment to DARSS has varied over the years, often depending on the interests of visiting expatriate staff. At the current time, there are two demographers working at NISER: E. Vielrose (Ph.D., Warsaw), a visiting economist/demographer, and O. Orubuloye, who completed a master's degree in sociology with a specialization in demography at Ibadan in 1974. NISER also maintains a permanent team of interviewers.

Although NISER's access to the Nigerian government is apparently

good, its potential as a major DARSS institution is uncertain, owing largely to frequent changes in its staff. On the other hand, it has demonstrated a lasting interest and commitment to research in the areas of economic planning and development. The possibility of incorporating demographic factors into ongoing and proposed research in these areas needs to be further explored.

University of Lagos

DARSS at the University of Lagos is centered in the Human Resources Research Unit of the School of Social Studies under the acting directorship of Professor Victor Diejomoah. As is implied by its name, the Human Resources Research Unit has a prime interest in manpower and related questions; its concern with DARSS in the strict sense is somewhat secondary at the moment. But the unit does have a relatively large and well-trained staff of social scientists, many of whom have strong interest in population. These include, in addition to Professor Diejomoah: Dr. Iro, Ph.D. in sociology from Cornell; Dr. V. Pethe, a visiting United Nations advisor, Ph.D. in economics; Dr. N. Fapohunda, Ph.D. in economics; Mr. F. Ojo, M.A. in economics; Mr. G. Udofia, M.A. in statistics; Dr. F. Mott, the Population Council Advisor with a Ph.D. in sociology. There are, in addition, associates of the unit, with smaller time commitments, in the Departments of Sociology, Psychology, and Geography.

Demographic teaching is for the moment confined to individual courses available to undergraduate students of social science, and to graduate students in actuarial sciences. Plans are currently under discussion for two new training programs. The first would be a diploma program, providing approximately one year of demographic research primarily for government employees. The second programmatic development would create demographic specializations in the masters' programs of the department of economics (already in existence) and of the Department of Sociology (to be established). These masters' programs would involve a substantial increase in the number of specialized population courses at the graduate level and would both enable and encourage students in economics and sociology to write theses in the area of DARSS.

The Human Resources Research Unit is a well-established research shop, with much of its work relating to matters other than DARSS in the strict sense. Survey research in demography has been done in the past and continues, but much of this has been at the initiative of expatriate advisors. On the research side, a key question regarding the future of DARSS research within the Unit has to do with the extent of interest in and commitment to demography and closely related subjects on the part of the Unit's acting director. In the near future the main institutional development effort of outside agencies probably should be focussed on the development of graduate training along the lines discussed above, and on the support of strictly DARSS research projects by interested staff and associates of the Human Resources Research Unit. The diploma program mentioned above also would merit support, particularly

in view of its potential for increasing population consciousness among middle-level government employees.

University of Nigeria

DARSS at Nsukka is at the moment relatively slight. Only two persons figure in any major way: Professor Chukuka Okonjo and Dr. Apiah Okorafor. Two undergraduate courses in population are offered in the Department of Economics, one in Geography, and one in Sociology. In the past, on the other hand, courses in population were limited to the short-term courses in demography offered by Professor Caldwell.

The current research program is quite significant, particularly as Professor Okonjo is one of sub-Saharan Africa's leading demographers. Moreover, both culturally and geographically, Nsukka is a long way from the other Nigerian universities. Its research program focusses on the East Central State, where population densities match those found in Rwanda and Burundi. Three major research projects are currently underway: an ILO-funded manpower study; a study of the potential for developing small-scale industry in rural areas; and a longitudinal KAP/fertility study organized by Professors Caldwell and Okonjo, and supervised in the field by Dr. Okorafor.

The prospects for an early increase in DARSS activities, however, seem uncertain. In addition to the small central staff, there is relatively little active cooperation with staff of other departments. Also, Professor Okonjo has accepted the position of director of the United Nations Regional Institute for Population Studies in Accra. He plans to maintain close links with his home university, but, in fact, the DARSS staff at Nsukka is reduced to one well-trained and highly motivated, but junior and relatively inexperienced, faculty person. Other problems relate to the need to rebuild the

university subsequent to the war. For example, the Nsukka campus is only now getting a computer, and it may be as much as two years before the computation facility is operational as far as demographic and survey research are concerned. The encouragement of DARSS in this major university of the country's eastern region is important, but for the moment, it probably can consist only in smaller grants to encourage the few people actively working there now. The base for larger inputs, whether of encouragement or money, simply does not seem to exist. Were they able to attract two or three more well-trained faculty colleagues, the situation could change fairly rapidly. A favorable sign is the university's provision of a new, air-conditioned building for the population program, containing some 5,500 square feet of offices, library and research space, including offices for visiting researchers.

The major potential strength of the program at Nsukka is the staff development plan initiated by professor Okonjo. Five Nsukka graduates are currently pursuing higher degrees in demography or related social sciences (with population specializations) abroad, and all are expected to return to the university faculty upon completion of their studies.

V GENERAL COMMENTS AND RECOMMENDATIONS

Family Planning and Public Health

In recent years, there has been a marked change in donor agency thinking concerning criteria for support of family planning. From support

for strictly family planning components of health activities, there has been a shift to support for MCH with family planning included, and most recently, a trend towards supporting multi-purpose health care programs for entire communities with family planning only one of the many services provided. USAID, WHO/UNFPA, and the Ford Foundation are the major donors.

USAID's primary interests are in multi-purpose rural family health service systems, including health education, nutrition, environmental sanitation, immunization, and family planning; training for various categories of medical and paramedical personnel in family planning through short-term local and overseas programs; nursing and medical education in family planning; research on nutrition and market research on the feasibility of commercially distributing contraceptives in Nigeria. Mr. Thomas Lyons is the USAID population advisor in Lagos.

The Ford Foundation is committed to support maternal and child health as part of rural and urban development. High on the Foundation's list of areas for possible support is social science and medical research. Support for the Medical Research Council of Nigeria and for a small study of private maternity homes in Western Nigeria are two activities under

consideration. Ford is also likely to have a country emphasis with Nigeria, Ghana, Niger, and Cameroon receiving about 80 percent of their funds for population. Dr. Cecile DeSweemer is the Foundation's advisor in public health and family planning.

WHO is interested in supporting broad based community health programs including family planning. It considers the MCH approach deficient and prefers one which includes environmental sanitation, nutrition, and health education. WHO is likely to join hands with UNFPA in support for such comprehensive health programs including family planning. One such project, planned for the North-Western state, would train government medical auxiliaries in MCH, including child spacing, and strengthen the state government's health management capacity. WHO is also considering support for a regional center for health educators to be based at Ibadan's department of preventive and social medicine and an institute of health for the same department. Dr. Ernest Bidwell, the acting WHO representative, was a colleague of Prof. Lucas at Ibadan. Mr. Vernon Perles is the UNFPA population officer.

Recommendations

Community health departments at a few medical schools should be strengthened by provision of public health physicians with expertise in epidemiology, maternal and child health, family planning, and population dynamics. MPH fellowships should be provided as part of staff development.

With the planned rapid expansion of medical education in Nigeria, staff development in public health is a high priority. Opportunities exist at Lagos, Enugu, and Benin medical schools. All three would welcome

the provision of public health physicians. Lagos would also like to establish a staff exchange program with a United States school of public health. Medical schools require staff primarily for teaching, but arrangements could be made whereby staff were provided as part of a research, training, and service program.

The rural and urban teaching facilities of a few medical schools should be improved by selective support for the reorganization of MCH services including family planning and for research and evaluation.

Nigerian medical schools are planning to establish rural and urban teaching facilities. At most of these facilities, family planning would be included as part of MCH services, and research would be undertaken to assess the impact of health service programs. The reorganization of MCH services often requires funds for remodelling the physical facilities, hiring and training of additional staff, and equipping clinics. While most medical schools recognize the need for adding research and evaluation to their teaching and service facilities, few have the necessary resources to build a high quality component.

Demographic and social science research units in Nigeria should be encouraged to forge closer links with medical school departments wishing to measure the impact of health programs. Medical school departments, for the most part, lack the expertise to evaluate satisfactorily the impact of their service programs. The demographic and social science research units would seem to be a valuable source of such expertise. Through a suitable contractual arrangement, some of these units could begin providing this useful service to the medical schools.

Although postpartum family planning programs are being phased out in Nigeria, high quality family planning clinics at the medical schools

should receive increasing support. It is crucial that the medical school based family planning clinics at Lagos are re-evaluated in terms of the critical role they play in setting the standard for government and private clinics, the excellent base they provide for training programs in family planning methods, and for their vital function in contraceptive research programs. Excellent opportunities exist at Benin and Enugu for the establishment of hospital-based family planning clinics. Benin in particular is the top prospect. The physician there is already well-trained and experienced, and the state government is committed to family planning within the context of health. The Mid-Western state military govenor is on record favoring population control and legalized abortion.

Family planning training programs in Nigeria should receive support to assist former trainees to set up family planning clinics and to aid governments to reorganize MCH FP services. Training programs at Ibadan and Lagos have inadequate provision for follow-up of graduates. Former trainees of the Ibadan program for nurses have made numerous requests to the director for support in setting up clinics. In some cases government bureaucracy stands in their way, but in others the lack of contraceptive supplies is the main obstacle. At the Institute of Child Health's program in Lagos, follow-up provisions have been found to be inadequate. Periods longer than three months are often needed before state government nurses and doctors can begin to provide a high quality MCH/FP service without supervision.

Support for contraceptive research should be broadly conceived and should be made available for purposes of both institutional growth and professional growth of deserving individuals.

While there is significant interest in contraceptive research,

there is equal interest in research on infertility, menstrual regulation, pregnancy, venereal disease, and uterine cancer. Support for broad areas of obstetrics and gynecological research would have far greater appeal to researchers and would enjoy far better prospects of acceptance by medical faculties than a narrowly conceived contraceptive research program. Only medical schools with large, well-managed family planning clinics, such as those at Lagos and Ibadan, would seem to be eligible for institution building grants. Since presumably all could not qualify, there would also be the need to support the family planning studies of other physicians. Medical schools do not reward doctors for high quality service, but for high quality research. Therefore, efforts should be made to ensure that the family planning research interests of medical school physicians become vehicles for their professional development and advancement.

Funds should be provided to medical and nursing schools and to their professional associations to study the current status of medical and nursing education in family planning and to determine appropriate ways in which family planning could be integrated into teaching programs at various levels.

Some family planning and population dynamics is taught at most medical and nursing schools, but it is done on an unsystematic basis with departments, and often individual professors, deciding on specific course content. Most medical schools have curriculum or education planning committees. Though often not very strong, these committees are sometimes charged with major curriculum reform. Committee members could be supported to attend courses on medical or nursing education in family planning or to visit schools where family planning has been introduced into undergraduate or postgraduate levels. Private and government medical and nursing associations could be given small grants to study the current status of family

planning research and training in schools and be encouraged to make recommendations to their governing bodies and to circulate their findings to leading members of their professions.

Demography and Related Social Sciences

As has been suggested above at several points, a major potential problem with respect to DARSS institutional development in Nigeria is that of competition/cooperation among the four universities already involved in a meaningful way. Nigeria is a nation of considerable regional diversity and identity, and has chosen a path of political federalism, so that a far-flung university system seems assured. There is no reason, in principle, why several of Nigeria's universities should not have major activity in regard to DARSS. The main problems with this would arise with respect to: (a) needless duplication through the creation of identical or highly similar programs at different universities, or failure to establish an appropriate division of academic labor; (b) excessive competition for trained Nigerian professionals, resulting in inter-institutional conflict and in excessive staff mobility.

With regard to the former, the four universities discussed in the DARSS section of this report each could develop distinctive and therefore complementary programs of research and graduate training. Ife manifests the strongest commitment to demography and population studies as such and is institutionalizing along that line. Although plans are not yet complete, it is possible that the graduate degrees to be awarded by the IPMS will be in demography rather than in economics or sociology (this does not rule out the possibility of persons taking sociology or economic degrees having heavy concentrations of population courses). At Ibadan, the current graduate

work is firmly rooted in sociology, and it would be feasible to develop a program there that does demographic specialization with heavy emphasis on sociology, social psychology, and anthropology. At Lagos, a program of graduate research and training could quite properly be focussed on economic demography and manpower demography, with less emphasis on the demographic training of sociology degree students. The prospects at Nsukka are less clear, although the geographical remoteness of this university from Lagos, Ibadan and Ife (all located in the southwest, relatively near Lagos) would make the prospects of some duplication seem more acceptable.

Competition for the currently inadequate number of Nigerian professionals in DARSS is first and foremost a matter for the institutions and individuals involved to settle among themselves, and one in which outside influence could be potentially damaging. A major institutional development necessity is for further graduate training of Nigerians in DARSS. Outside agencies presumably should try to avoid funding patterns which would create even more opportunities for direct competition among universities for the same personnel.

Some competition among the leading DARSS institutions, however, could be healthy. At the same time, opportunity should be sought to promote inter-university contact and cooperation. Such cooperation has existed in the past in research, as in the case of Ife's working through Ahmadu Bello University on the northern portions of the KAP survey, and in the case of Lagos working with Nsukka and Ahmadu Bello University in some of its major field surveys. Opportunities for further research cooperation should be sought and exploited by the funding agencies. In addition, DARSS organizations should be encouraged to undertake normal academic interchange, as through lecture or seminar series involving visitation of

key staff from one campus to another. Some kind of formal association of Nigerian DARSS personnel would be desirable, but this may be achieved through the newly instituted African Population Association, in which several Nigerians play a key role. In any case, the starting of a National Association might well wait until the parent body is better established.

Since Nigerian professionals are in relatively short supply, there will be a continuing need for expatriate staff in DARSS. At Lagos and Ife, such staff should increasingly be able to play a supplementary and catalyzing role. At Ibadan and Nsukka, it would appear that their role would have to be more active and central for the immediate future.

Most demographic research to-date has involved sample survey research. This is partly due to the paucity of good census and vital registration materials in Nigeria, partly due to the inadequacy of DARSS library resources, and partly because survey research remains the easiest and most fundable style of research. A common developmental need at Nigerian institutions is that of supplementing the well established tradition of survey research with a tradition of data analysis. At the moment, DARSS research in Nigeria means doing a new survey, and this imbalance should be rectified. Most of the research facilities discussed above have on hand large bodies of survey data, much of it only partially analyzed. Similarly, the 1973 Nigerian Census may provide major opportunities for demographic, social, economic analysis. Encouragement should be given to the exploitation of these data sets. Leadership in this regard should be a major function of expatriate staff or advisors. Associated with this is the need to assist the DARSS institutions in an adequate organization of their libraries and data banks. This involves the adequate and orderly

storage of existing data and allied materials (original questionnaires, code guides, interviewers manuals, and so forth). It also involves assistance in the development of adequate organizational arrangements for the utilization of university computers and the development of software geared to social science and demographic analysis.

At the moment, it appears that university social scientists typically play a small role with regard to policy analysis or the injection of demographic considerations into social and economic planning. Participation of DARSS university experts in Nigeria in governmental activities is with some exceptions (notably Okediji) limited to advice regarding the collection of census and other demographic data. This is partly related to the current political situation in which the government tends to view universities with some suspicion. It is not likely that this situation will change quickly, so that for the moment institutional development efforts must stress the universities and their role as research and training organizations.

SOURCES OF INFORMATION

R. de Pietro: Site visits April-May 1974; T. Burch October-December 1973 and May 1974.

June 1974

CONTENTS

SENEGAL

SENEGAL

R.G. Castadot, Helen Ware

I. COUNTRY SETTING

Senegal covers 76,000 square miles and is located on the bulge of West Africa. It is bordered by the Atlantic Ocean on the west, by Mauritania on the north, by Mali on the east, and by Guinea and Portuguese Guinea on the south. The state of Gambia, which extends from the Atlantic Coast to more than 200 miles inland, is surrounded by Senegal. The mid-1973 population estimate is 4.2 million with an estimated crude birth rate of 46 and death rate of 22, giving an annual rate of population growth of 2.4 percent. At this rate, it is estimated that the population will double in 29 years. Forty-two percent of the population is under the age of 15. The infant mortality is rather high, and life expectancy at birth is 41 years. Seventy percent of the population of Senegal lives in rural areas. The ethnic composition of the population is 36 percent Wolof; other major tribal groups are the Peulh (Fulani), the Ferere and the Toucouleur. French is the official language, but the majority of the population uses several tribal languages. Literacy is estimated at around 10 percent. Moslems represent about 80 percent of the total population, and the remainder are animists with a small Christian minority.

The per capita gross national product is $230. Senegal suffers from the fact that it has a one-crop economy based on peanuts, which are grown on almost half of the agricultural land and represent 70 percent of the agricultural income and 80 percent of the export cash. The northern and eastern parts of Senegal have been stricken by the drought that has plagued

The Sahel area for the past several years. The principal trading partners of Senegal are the West European countries, mainly France and West Germany; and the larger share of technical assistance also comes from West European countries, mainly France, West Germany and, to a small extent, Belgium.

The five-year plan goal of providing primary education to at least 40 percent of the children of school age has been practically achieved.

II. HEALTH SITUATION

Communicable disease remains the leading cause of mortality in Senegal: 471,048 cases of malaria, 31,185 cases of measles, and 26,319 cases of whooping-cough were reported in 1972. Other major health problems are influenza, bilharziasis, trachoma, tuberculosis, amoebiasis, leprosy, and meningoccal infection. The Ministry of Public Health and Social Affairs has responsibility for all public health and health delivery services. At the local level, public health services are organized along the lines of the administrative division of the country into seven regions which themselves are divided into 27 departments. Each region is under the direction of the regional chief medical officer; and the district medical officers work in turn under his responsibility. The percentage allocation of resources to health in Senegal is high when compared to other developing countries. It is estimated for 1971-1972 that the national budget represented 18.7 percent of the gross national product, and that the health budget represented 9.12 percent of the national budget, or 1.7. percent of the gross national product (WHO A27/10, Part 1, page 32).

In 1971, 51 hospitals and health centers with in-patient facilities provided a total of 5,391 beds or 1.3 beds per 1000 population. Those beds are allocated as follows:

General Hospitals	2,873
Rural Hospitals	710
Medical Centers	1,808
TOTAL	5,391

Ambulatory medical care is available at a few hospital out-patient departments, at one or two health centers in each of the thirty medical districts and at many health posts. The 35 health centers are each staffed by a doctor, a midwife, nurses and auxiliary personnel. The 376 health posts are each supervised by a nurse or a health assistant. Beyond that, the Endemic Disease Control Service operates 14 mobile health services to prevent communicable disease and to find and treat infected cases.

In 1971 there were 277 doctors in Senegal, 231 of whom were in government service. The doctor/population ratio was 1 to 14,520. Other relevant health personnel includes 60 pharmacists, 275 midwives, 538 nurses, 631 nursing aids and 1,447 health assistants.

At the present time there is one school training nurses (three-year program), midwives (three-year program) and auxiliary nurses (two-year program. The requirement for admisstion to nurses and midwives training is four years of secondary education, and for auxiliary nurses, eight years of formal education.

Senegal has a very well structured system for delivering mother and child health care. In 1970, MCH care was provided at 112 centers, 49 of which had some in-patient facilities. This system is based on 16 primary centers and 60 secondary centers spread throughout the seven regions of Senegal. Tertiary centers are currently developed in cooperation with WHO. Should a political decision be made to promote family planning, the MCH network could provide an extensive channel for diffusion of family planning information and

services into the population.

III. POPULATION POLICY AND PROGRAMS

Senegal, and particularly Dakar, remains the area of West Africa most profoundly affected by French cultural influences. In terms of population policy, it is generally believed that the country is underpopulated and needs more people before industrial development can reach a take off stage. Family planning is a controversial subject, provoking debate on both religious and political grounds, but other kinds of population research are underway in the government statistical bureau.

Senegal has been experiencing the effects of the Sahelian drought, with enormous consequences for livestock, groundnut production and agricultural development in general. In this context, population questions have taken on a salience which they did not have before. Unemployment is another sphere in which the government is becoming increasingly aware that it is possible to have too many people. The number of jobs in the industrial sector has grown very slowly and a very large proportion of wage earners are still public servants (i.e. white collar workers in government employment). There are estimated to be some 47,000 unemployed in Dakar of whom some 12,000 were formerly employed in urban occupations while the remaining 35,000 are school-leavers and migrants who have never had such experience. Currently some 40 percent of Senegalese children attend primary school, but only about a quarter of this number reach secondary school. The Government now intends to place more emphasis upon improving secondary schooling rather than expanding primary schooling because it feels that those with primary schooling tend to be good for little other than swelling the ranks of the urban unemployed. At present the government is having lengthy discussions on the feasibility of

restricting family allowances for government officials to the first eight children. It is a remarkable index of the pronatalism of the country that this token measure should provoke so much discussion. The government has also learned to be extremely circumspect when dealing with matters related to the family since the tremendous rows that followed the introduction of a provision to make civil marriage a necessary adjunct to religious marriage ceremonies.

In the Ministry of Health, the attitude about family planning has ranged from (a) "We need more people to fill the large empty spaces of Senegal," to (b) "Family planning is not acceptable because of Moslem conservatism," to (c) "We have other health priorities." However, Dr. Gaye, the director of health services in the ministry, stated that the government had been preoccupied for a long time with the problem of family planning in the country. But since its independence, priority had to be given to emergencies, such as cholera outbreak, drought, and to maintaining the health infrastructure left by the French. Thus, family planning had so far remained something to be considered later on.

There is no national family planning program in Senegal and there is very little family planning activity in government facilities, where only a few physicians (such as Dr. Sassoum Leye Diop at Lubke Hospital in Diourbel) offer family planning services on request. There have been negotiations between CIDA and the director of Lubke Hospital in Diourbel to create a maternity based family planning program there, but because of personnel changes and lack of government support, this program never materialized.

Outside of government facilities, one should mention "La Croix Bleue," a clinic run by Mrs. Phebean Whest-Allegre, a Sierra Leonean midwife who started offering family planning services to her clients in 1965. By

1967 she had secured international assistance from the Pathfinder Fund; and in 1970 the Senegalese Family Planning Association was formed by Mrs. Whest-Allegre and Mrs. Nina Geye, another midwife working at the hospital Le Dantec. Mrs. Geye later was elected to the National Assembly. The Family Planning Association was dissolved in 1971 because of conflicts between these two strong-willed women, which were compounded by financial irregularities, political involvement, and the low prestige that this midwife-run outfit had in the medical community. After the Family Planning Association was dissolved, however, Mrs. Whest-Allegre was able to retain the equipment and to continue with her family planning activities, including some training seminars for paramedical personnel from other francophone countries. "La Croix Bleue" has reportedly kept its activities at a level of 150 IUD insertions per month. It is located in a middle-class suburb, and provides maternity services to wives of government officials and other middle-class women with, however, a few lower class women referred by the government child health welfare services.

The experience of the past six years shows that family planning had low priority on the agenda of the Ministry of Health. A working group composed of the Senegalese Women's Association, of the Catholic and Moslem Women's Association, and of the Soroptimists, has prepared a charter for a Senegalese Council for the Well-Being of the Family. The charter was circulated to various ministries and it was recognized by the government that the task was so broad that the program could not be the responsibility of the government alone. Consequently, it was decided to include the private sector in the council. A very influential person in the preparation of a family planning policy is Mrs. Caroline Diop, a member of the National Assembly, chairperson of the Committee on Social Welfare, and president of the Senegalese Women's Council. For several years now, the Ministry of Health has

announced that within six months a program would be available and that funding would be sought for it. So far, family planning activities seem to have been restricted to sending a few government officials, including Dr. Sassoum Diop, to family planning conferences abroad, and to drafting preliminary plans for a family planning action program in the area of the Cap Vert near Dakar. Anyway, it seems that the key policy in the Ministry of Health would be to integrate family planning into mother and child health if any program is developed.

IV. INSTITUTIONAL DATA

Senegal is the seat of several research and training organizations which should be considered along with the University of Dakar and with other governmental activities.

The University of Dakar

Founded in 1949, as a branch institute of the Universities of Paris and Bordeaux, and achieving university status in 1957, the University of Dakar has a good academic reputation in the francophone world. The university includes the Faculties of Humanities and Letters, Science, Medicine, Law, and several special institutes. Unfortunately, however, the recent history of the university has been rather turbulent and in early 1973 the army occupied the campus following violent student riots. The university is still very much on the French pattern with half of the operating costs being provided by the French, as well as half of the staff and a much higher proportion of the senior staff. Although the Senegalese academics find this situation irksome, they fear both the withdrawal of financial support and the withdrawal of the current equivalence between Dakar degrees and those awarded in France.

One major disadvantage inherent in the French system is the almost complete lack of communication among the faculties. Formerly there was a plan to teach demography to economics and sociology students together, but the plan foundered on the impossibility of providing joint lectures for students in different faculties. Demography is now taught separately in both the geography and economics departments. In the Economics Department (Faculty of Law) M. Bremaud, a Frenchman trained at Poitiers University, gives forty hours of demography lectures a year to fourth year students. The course is divided equally between techniques of analysis and a study of the relationships between population growth and economic development. In the Geography Department, Professor Diarra (a Malian and husband of Madame Diarra of IDEP) teaches general population to first year students. Fourth year students attend seminars on population problems in tropical Africa, in which, after some study of methods of analyzing population growth and structure, they examine the population component of problems in education, urbanization, migration and development. The teaching of sociology at the university has officially been suppressed because of its undesirable political connotations, but sociology is gradually creeping back in; it is now possible to do a first degree in philosophy, psychology and sociology, a masters in philosophy and sociology and a doctorate in sociology. One very good course in the sociology of the family is given to undergraduates.

There is no postgraduate training in demography at the University. Research in demography is confined to Professor Diarra's work on African urbanization and to the infant morbidity and mortality studies of Professor Dan of IPS (Institut de Pédiatrie Sociale).

Within the University of Dakar is the Institut Fondamental d'Afrique

Noire (IFAN), an independent research organization originally established as the Institut Francais d'Afrique Noire in 1939. The only staff member currently interested in population related research is the director, M. Diop, a sociologist who has organized a number of studies of various aspects of the family in different social and ethnic contexts.

The medical school of Dakar is the oldest medical school in francophone Africa and graduates 200 students a year, many of them Frenchmen. The medical faculty has been very careful about maintaining its accreditation in the French system and is still very much under the influence of the very Catholic University of Bordeaux.

Dr. Correa, professor of gynecology and obstetrics and head of maternity at the Hospital le Dantec, has shown little interest in family planning over the years and an extreme aversion to the IUD, which he rejects for religious reasons. Some of his staff question whether his opposition to the IUD is of a religious nature and state that it could be only a cover up for his ignorance in the field caused by his provincialism. Dr. Fadel Diadhiou, who is an assistant to Professor Correa, has shown interest in family planning. Because of his superior's attitude, he has been unable to insert IUDs, in spite of the fact that he has a supply of them. He usually distributes them to physicians in other departments for insertion when medically indicated.

African Institute for Economic Development and Planning (IDEP)

The director of IDEP, M. Samir Amin, an Egyptian, is one of the most vocal proponents of the theory that family planning programs constitute the latest phase of imperialistic aggression against the Third World (see his "l'Afrique sous-peuplee," Developpement et Civilisations, 1972).

The institute employs no demographers, and although Mme. Fatouma Diarra, one of the two sociologists at the institute, is the author of a recently published book on the women of Niger, her work for the institute consists largely in organizing conferences and international seminars.

A member of the institute staff is currently undertaking a study of female attitudes toward family planning, family structure, and women's roles in Senegal as part of the Population Council-sponsored Changing African Family Project. The co-principal investigators are Francine Kane, a sociologist/anthropologist trained in France (French by birth but married to a Senegalese), who is a researcher at IDEP; and Mme. Savane, a Senegalese sociologist trained at the University of Dakar. Mme. Savane has worked with the Senegalese Family Planning Association and with UNESCO's African sex education program. She is currently editing an IDRC-sponsored journal to be entitled Famille et Développement which will endeavor to integrate family planning information with other aspects of development for use by primary school teachers, midwives, and others.

Government Activities

In 1960 Senegal did not have a complete census, but a demographic inquiry based on a nation-wide sample was made. In the 1970 census round, Senegal again opted for a sample survey, this time to be carried out in three rounds. The only data relating to the Enquête Démographique Nationale 1970-71 to have been published so far are the provisional results of the first round. The results of the second and third rounds have been due to appear together "sometime in the next couple of months" for nearly a year now. The first round consisted of two questionnaires: one a traditional brief census schedule and the other a "women's questionnaire" on fertility.

The second round was largely concerned with socio-economic questions on tribe, nationality, religion, language, level of instruction and employment, as well as, of course, checking the first round data and listing the intervening vital events. The third round concentrated on migration data and housing, as well as rechecking and registration of vital events.

Despite the fact that Senegal held this survey in 1970-71, the government still hopes to participate in the 1974 Census Round, with a full national census and has asked the U.N.F.P.A. for funds for this. The statistical bureau is preparing plans for the census which is principally envisaged as a head count (with only six variables and no fertility questions) to provide a firm base for sampling for subsequent surveys. There is undoubtedly a strong feeling among the Senegalese that, despite the francophone tradition of sample censuses, modern planning and really full data (especially concerning the large towns and their surrounding bidonvilles) can only be based upon a 100 percent census.

The Demographic Division of the Statistical Bureau (part of the Ministry of Finance) is also conducting a pilot household budget survey in Dakar, funded in part by IDRC, and with technical assistance provided by two consultants from INSEE. The project is an attempt to collect and analyze micro-economic data on family production and consumption in relation to social and demographic factors. Two hundred households are included in the sample, to whom four questionnaires are being administered: on budgets, nutrition, possessions, and demographic composition and change. A national budget survey is expected to follow, probably beginning field work in late 1975.

M. Giby of the Demographic Division is engaged in a study of civil registration in Senegal. Another similar study is being carried out

within the Ministry of Interior. At present registration is almost complete in Dakar (where civil registration was first introduced in 1916) since there are so many purposes for which identity papers or registration certificates are essential. However, outside Dakar the statistics obtainable from the registration system are meaningless. Thus, both the Statistical Bureau and the Ministry of the Interior publish vital statistics supposedly based on the same raw data, one on a three monthly and the other on an annual basis. However, in 1970 the difference in the number of births registered as between the two publications was of the order of 20,000. The Bureau of Statistics is determined to make a concerted effort to improve the civil registration system outside Dakar, and would be very interested in any advice as to how this could best be achieved. The Bureau has held preliminary discussions with an AID-funded American firm, Data Use and Access Laboratories (DUALabs) on the possibility of using DUALabs' computer software systems in the analysis of data collected in the 1970-71 survey, in the proposed census and in other projects underway.

The chief of the Demographic Division of the Statistical Bureau, M. Landing Savane, is an outspoken proponent of the view that population growth is not itself a major problem in Africa, but must be viewed within a context of development goals and possibilities, improved public health, and the distribution of resources. M. Savane has been an active participant in the planning committee of the Population Association of Africa and was elected its secretary at the association's inaugural conference in May 1974.

ORSTOM (Office de la Recherche Scientifique et Technique Outre-Mer)

ORSTOM in Dakar employs two demographers and three sociologists. Works currently in progress in relation to population questions are:

1. A fertility survey in the Cap Vert/Dakar region -- B. Ferry and Christine Guitton;
2. A study of Dakar's registration statistics -- J. Verdier (currently concerned with death registrations, but will move to birth registrations shortly);
3. A multiple round survey of two small rural zones (population 5,000) which has been carried out twice a year since 1963;
4. A further study of the areas covered in (3), with a special emphasis on recent changes in infant mortality levels and the effect of measles vaccines -- J. Verdier;
5. A study of social organization in rural areas -- M. Schmidt;
6. A study of migration from overpopulated areas into new lands -- M. Trincaz.

V. CONCLUSION

At the present time the University of Dakar is not a promising candidate for institutional development in demography and related social sciences, although it is possible that support might be requested from time to time for specific research projects. Within the government, the Demographic Division of the Bureau of Statistics is a relatively active unit, engaged in several population-relevant projects for planning purposes. As the council develops its staff and technical capabilities in the area of population in development planning, it is possible that requests for assistance in utilizing population data for planning purposes might emerge

from the Bureau of Statistics. Any such requests should be treated sympathetically.

The inclusion of contraceptive technology, social medicine, and elements of demography in the medical school is a valuable goal. Better knowledge among future physicians of the relationships between fertility, mortality and health would facilitate the adoption of family planning concepts by society and by the Ministry of Health. However, under the present leadership in the Department of Obstetrics and Gynecology, little progress can be expected in the near future. In view of the lack of support for family planning activities by the Ministry of Health, assistance to schools of paramedical personnel to teach family planning techniques should have low priority.

SOURCES OF INFORMATION

Robert G. Castadot, site visit to Dakar, Senegal, May 1973.

Helen Ware, site visits, spring and fall, 1973.

Economic Commission for Africa: Summary of Economic Data, 1971.

State Department, Republic of Senegal, Background Notes

WHO Report on the World Health Situation, March 1974.

May 1974

CONTENTS

SIERRA LEONE

Marjorie Nicol, M.D.

I. [illegible]

The Republic of Sierra Leone, situated on the west coast of Africa, covers an area of 28,000 square miles.

The population of Sierra Leone was estimated in 1969 to be 2.5 million. The only complete census taken was in 1963, which gave a disappointingly low figure of 2.18 million. Another census was due in December 1974. The only large town is the capital, Freetown (estimated population between 128,000 and 200,000 and growing rapidly -- 5 to 6 percent per year), and the second largest town is Bo, about one-quarter the size of Freetown. Most of the population live in rural areas, or in small towns of 1,000-2,000 people. People from the rural areas are moving to the urban areas in search of employment, education, and so on. Unemployment of the age group 15-25 years is one of the most serious problems in the country. The population growth rate has been estimated by the Central Statistics office to be 1.7 percent, although this is now considered to be a low estimate. A recent and probably more accurate estimate of 2.4 percent has been made by the UN Demographic Unit. The average for all Africa is thought to be around 2.6 percent.

The birth rate and death rate for the country are estimates only, since many births and deaths go unrecorded, particularly in rural areas. For the western area, including Freetown, the crude birth rate for the years 1969-71 has been estimated at 38 and the crude death rate at 18 per thousand. The average national growth rate is 2.1 percent per year (WHO

statistician).

The highest rate of literacy -- about 38 to 40 percent -- is in the western area; that in the south is higher than in the east and north. This reflects the degree of missionary educational activity in the past. The government has now embarked on an even spread of school education all over the country. The present estimate of literacy for the whole country is about 10 to 15 percent. An adult literacy drive is currently under way.

Diamonds, mined in two alluvial deposits in the country, are the chief source of revenue. Movement of people in and out of the diamond areas is continuous. Minerals are well ahead of agriculture as sources of revenue; the other important sources are iron, bauxite, and rutile. The chief agricultural crops are coffee, palm kernels, cocoa, and piassava (sisal).

The two main tribes are the Temne and the Mende, but there are several other important smaller tribes like the Limba, Kono, Susu, Kurankos, and others. One third of the population of the country are thought to be Christian and nearly two-thirds Muslim.

A small but significant group are the Creoles in the western area, descendants of the liberated African settlers. Although numbering only about 20,000, they hold a high percentage of prominent positions in the civil service, the judiciary, and the professions. Their political influence has, however, steadily declined with universal suffrage, and is now minimal.

Social and economic conditions have improved in Sierra Leone since it achieved independence from Britain in 1961. Per capita income has risen from Le78 (about US$94) to Le117 (about US$140) during the past eight years. With a large population under 15 years of age (41 percent

. 1963 and a growth rate of 2.1 to 2.4 percent, it is clear that the economy needs much help to advance rapidly.

[illegible] HEALTH POLICY AND PROGRAMS

The World Statistical Office estimates the infant mortality rate for the western area at 130 per thousand live births, while the figure for Freetown alone is thought to be almost over 100 per thousand live births. The standard of health care varies widely. It is relatively high in Freetown because of a concentration of medical personnel, but owing to the continual rural influx, control of endemic diseases is difficult. Neonatal tetanus is still one of the major causes (33 percent) of perinatal deaths -- deaths under four weeks of age. (WHO statistician).

Major improvements in health care have been introduced during the past twenty-five years, for instance, yaws and smallpox have been brought under control with the help of WHO teams. Malaria, however, remains one of the chief causes of morbidity and mortality, while measles is one of the main causes of death among children of 1 to 4 years (19 percent). This gives some idea of the need for improvement in health care services.

The country is covered by a sparse network of hospitals and dispensaries or health centers, some of which are conducted by missions or mining companies, but the majority of which are government sponsored. Government policy is to supply medical care to the entire population. Most of the clinics and hospitals are free, but a sliding scale of payment has been introduced for those who can pay. It still cannot cover the increasing costs and there are acute shortages of essential drugs, hospital supplies, and equipment. There are also critical shortages of medical personnel at all levels. The Ministry of Health has suffered many changes

of staffing, including the minister, in the past few years. The percentage of the budget allocated to health is rather low, and there are grave service deficiencies, particularly in the remoter areas.

Nurses are trained locally, but doctors and lab personnel have to be trained abroad. There is an especially critical shortage of lower-level nursing staff.

Catholic Relief Services (CRS) are doing valuable supplementary work in the field of maternal and child health. The government MCH program does not cover the whole country, and CRS supplements this with an ongoing program of maternal and child health service which served 26,800 persons in 1973 (an increase of over 30 percent from 1972). These services, although somewhat rudimentary, are supported by the Ministries of Health and Social Welfare and offer immunization to infants against small poz, diphtheria, and tetanus. The health workers operate from static clinics as well as eight mobile teams, soon to be increased to twenty. Nutrition advice and help are also given, and CRS is helping to produce a cheap, high protein infant food from local products. They are also supporting training of local village maternity assistants.

The Ministry of Health is about to set up a Health Education Unit under a well-qualified Sierra Leonean, Mr. I. Lewis. There is much need for health education in schools and training colleges, and for the public in general. At present there is not much coordinated activity but the curricula of all schools is under revision and there are plans for more health education at all levels. Individual health teachers who have realized the importance of health education have started their own programs, but the pattern is sporadic. Local self-help efforts at the village and rural community level appear to be one of the ways in which a program of health

education may be operated.

There are plans for increasing the numbers of nurses in training, which unfortunately have dropped recently because of low salaries. Nearly all other professions are more lucrative. There are also plans for WHO-sponsored training of health and village maternity assistants. Despite earlier opposition, the mostly British-trained nurses now realize that some form of training is needed for the women who deliver most of the babies in the villages.

Most of the doctors in Sierra Leone were trained in the United Kingdom. There are also expatriate German-trained doctors, a few trained in the United States, and recently a number of Soviet-trained doctors have returned to Sierra Leone. All doctors are required to do one year's hospital internship before registration, but the Soviet-trained doctors are required to do a two-year internship, as their training is too specialized [illegible] the two-year internship has [illegible] started well. There are only trained clinical specialists in Freetown who are interested in teaching. There are plans, and a site, for a new teaching hospital to be built when funds become available.

The general level of health care needs great improvement, and in this the Ministry of Health is being helped by WHO, Catholic Relief Services, CARE (American Relief Everywhere), and other international bodies.

III. POPULATION POLICY AND PROGRAMS

The government of Sierra Leone has not made any official statement that could form the basis of a population policy. Two months ago the vice-president stated publicly that family planning was contrary to the African custom of large families. But the present Minister of Health, Mr. S. Forna, has openly declared the importance of family planning as a

health measure, and he is giving much encouragement to the inclusion of family planning services at maternal and child health clinics.

All the present family planning services are offered by the local Planned Parenthood Association and a few private doctors. There is considerable support for the work of the association, which is entirely funded by IPPF. There is also a certain measure of opposition to PPA, based largely on a misunderstanding that family planning will necessarily limit the size of the population. The importance of family planning as a health measure is therefore the best and most important approach at the present time. If the government could be persuaded to make this official policy, WHO and other external agencies would find it easier to give assistance.

Interest in family planning dates back some fifteen years to a small group of people who had been abroad and seen the importance of family planning in maternal and child health.

The Family Planning Association, as it was then called, started in 1959 with a small group of interested local people following a visit from a representative of the Pathfinder Fund of Boston. Most of these were midwives and doctors and other far-sighted individuals who saw the need for family planning services in Freetown. A small clinic was started first on government clinic premises, and later in a privately rented house.

The IPPF made a substantial grant to the Planned Parenthood Association of Sierra Leone in 1964, and has been the main source of its financial support since then. Free supplies of contraceptives were given by the Pathfinder Fund and other organizations abroad for several years. During the past ten years the association has grown considerably and has now spread its activities over a large area of the country. (Its head-

quarters are now at 19 Pultney Street, Freetown.) There are a staff of twenty, a daily clinic in Freetown, weekly clinics in six provincial towns, a mobile clinic that goes around the western area, and a good number of house-to-house field workers covering both Freetown and the provincial centers. The informational and educational activities are being well developed. Loudspeaker vans are used at markets, dispensaries, and other public places to discuss the rationale and need for family planning.

The number of new acceptors for 1973 was 2,182, and the number of continuing clients from previous years, over 5,000. The pill has now superseded the IUD as the most popular method (1,275 new oral acceptors and 468 new IUD's for 1972) and 193 patients were treated for infertility in 1972. Clinic clients in the provinces are also increasing. Public acceptance of family planning services, at first slow, has been growing rapidly in Freetown. Dow's figures (Dr. Thomas Dow, professor at Fourah Bay College) for Freetown show that over 65 percent of persons interviewed approved of family planning, and that over 80 percent felt that the government should help people learn about family planning.

The president of the PPA at present is Dr. Otis Pratt, Medical Officer of Fourah Bay College. One of the vice-presidents is Mr. J. Hyde of the Institute of African Studies. The activities of the association have developed considerably and are increasing. Participation in Trade Fairs and Public Exhibitions has become a regular feature, and film shows, radio broadcasts, and public lectures are held regularly. Posters are

displayed in clinics and prominent places. The president of Sierra Leone, the Hon. Dr. Siaka Stevens, visited the stand of the association at the Kenema Trade Fair in December 1972, and made an encouraging speech.

A Regional Seminar sponsored by IPPF-UNDP, held in conjunction with the Institute of African Studies at Fourah Bay College in September 1973 on "The Health of the Family Unit," stimulated much useful discussion and a number of interesting papers were read. Participants came from several African countries and government ministries sent observers.

Several members of the Planned Parenthood Association's clinical and administrative staff have received in-service training at workshops/ seminars in the United Kingdom, Washington, Chicago, Ghana, and Kenya. This is being encouraged and field workers are being trained regularly at headquarters.

The PPA intends to extend its work further during the coming year, with support from IPPF. Among its objectives are the integration of family planning programs with government-based projects in order to obtain government approval. Among the program projects for the future are the exploration of alternative sources of funding, and the attempt to raise funds locally. Local and regional liaison with other agencies is another aim.

The clinics are not free. There is a charge for first clinic attendance of Le2.00 (about US$2.25) but this is occasionally waived if patients are unable to pay. A simple means test with a sliding scale of payment may be more equitable. There are cases of hardship or cases in which people do not come to clinics because of inability to pay the fee.

An interesting aspect of the family planning clinics is the collaboration with CARE (American Relief Everywhere) by which acceptors at some

family planning clinics are each given a CARE packet which consists of powdered milk, high protein food, multivitamin pills, folic acid pills, and, on request, contraceptive pills along with the advice of a qualified nurse from the PPA. This means that the PPA is being drawn into a Ministry of Health-CARE operation for the first time. To test the effectiveness of this packet first in an urban area, CARE intends to build a new comprehensive MCH outpatient clinic somewhere in or near Freetown, similar to the present government-run one which serves the entire city and is extremely overcrowded.

If this pilot project succeeds, CARE has promised to build several other comprehensive clinics in the rest of the country on the condition that family planning services are included. It is hoped that when the comprehensive clinics are established, family planning services may be offered as part of the free antenatal advisory and child health service. CARE is also operating a wide scale nutrition program for preschool children all over the country. The children are given a package containing 5 lbs. of powdered milk, 5 lbs. of high protein corn-soya milk, and a package of vitamins.

The program of Catholic Relief Services would offer an ideal vehicle for the promotion and delivery of family planning services on a wider basis than at present offered by PPA, but, although not by any means opposed to family planning, they have to wait for a government request before they may embark upon family planning. This request has not yet been forthcoming from the Sierra Leone government. There is a small charge ($.20) per patient which helps to support the CRS program, but this is waived in indigent cases.

Some solutions and suggestions were discussed with members of the

PPA, the Health Department, and others interested in developing and expanding family planning services in the community.

Among these were:

1. Evaluation of present work being done by the PPA.
2. Research, especially sociological, to base extension of services to urban and rural areas.
3. Free contraceptive services to low income families in urban areas.
4. Promotion of interest among civil servants, white collar workers, teachers, university staff and so forth, in order to facilitate government approval and a policy statement on population.
5. Extension of publicity and information campaigns by using existing organized local groups; for example, literacy classes, social welfare groups, youth groups and so forth.

IV. UNIVERSITY AND INSTITUTIONAL DATA

The University of Sierra Leone

The University of Sierra Leone is comprised of two parts -- the old prestigious Fourah Bay College in Freetown, started in 1827 by the Church Missionary Society of Britain, and the new ten year-old Njala University College, which is mainly agricultural and situated some 150 miles inland.

Fourah Bay College is the oldest institution of higher education in Africa south of the Sahara, and in the past many students came here from all over English-speaking West Africa. It was part of Durham University, England, from 1879 to 1969, its graduates being given Durham (Dunelm) degrees. In 1964 Njala University College was established through an agreement between the Sierra Leone government on the one hand and USAID and the University of

Illinois on the other to provide an agricultural and educational institution in the provinces of Sierra Leone. Three years ago Fourah Bay College and Njala University College were united to form the University of Sierra Leone, which now awards its own degrees.

There is as yet no medical school in the University of Sierra Leone. Fourah Bay College offers degree level courses in arts, pure and applied science, geography, including demography, economics, and social science (including sociology), engineering, commerce, as well as a post-graduate diploma in education. The total student body for the session 1973-74 is 1,015 of whom 164 are women. Nearly all the students are residents in the college situated high on the hills overlooking Freetown harbor. The students come from Sierra Leone mainly, but also from all over Africa, the West Indies, India, the United States, and Britain. Most of them are on government scholarships, and the Sierra Leone government supports the college financially. The college has grown rapidly over the last fifteen years, through grants from the Sierra Leone government aided by capital building gifts from the British and United States governments, foundations, and business firms.

The Population Council has had an interest in the university since 1968 and supported, in succession, Tom Dow and Tim Devis as demographers. Although it was initially hoped that demography would be a considerable component of a new Sociology Department, the failure of this department to grow led to an increasingly strong relationship with the Geography Department. This was accentuated by the orientation towards demography originally given to the department by Dr. John L. Clarke when on loan from the University of Durham, England (he is now a professor at Durham) and was sustained

by the interest in population by the two senior Sierra Leonians on the staff, Dr. Milton Harvey (now moved permanently to Kent State) and Dr. Enid Forde. Originally the demography program was officially based on the skeletal Institute of African Studies but finally shifted to Geography. In 1971 the university reached an agreement with UNFPA for the establishment of a Demography Unit, and Mr. Ba. Singh was appointed as director. Mr. Singh has a master's degree and has previously worked in the Indian Planning Commission. Tim Devis left in 1972, thus cutting the Council's connection with the program, while a geographer from Durham, Robin Mills, a man with previous West African experience, was subsequently added.

During the year 1972-73, the unit gave the following courses in various departments of the college and in the Civil Service Training College for Government Officers.*

	SUBJECT	DEPARTMENT/NO. OF STUDENTS TAUGHT	HOURS TAKEN
A.	Demography I	Geography Honors First Year (4 students)	66
B.	Demography II	Geography Honors Final Year (3 students)	44
C.	Population Geography	Geography Qualifying Year (50 students)	22
D.	Demography & Statistics	Faculty of Economic and Social Studies (2 students)	44
E.	Introduction to Demography	Sociology (20 students)	22
F.	In-Service Training in Demography & Statistics for Government Officials	Civil Service Training College (9 students)	40

* Information provided in Birendar Singh, "Teaching, Training, and Research in Population in Sierra Leone," paper presented at the Inaugural Conference of the Population Association of Africa, Ibadan, Nigerian, May 1974.

However, the standard of demography teaching had failed so badly, according to Professor Clark, acting as an external examiner, and relations between the unit and the Geography Department had become so strained that a review mission sent out by UNDP in November 1973 recommended that the work of the unit be discontinued. Both Mills and Singh have since departed. Neither has yet been replaced.

Two Sierra Leoneans, H. Kandeh and R.S. Myers. are being trained as graduate demographers at Pennsylvania State University. They should return within two years. There are also three graduate Sierra Leone students in demography in Ghana, two at the Institute of Population Studies, Accra, and one at the University of Ghana, Legon. When these five return to Sierra Leone there should be the nucleus for a department or at least a useful research team. Perhaps the logical place for demographic studies in Sierra Leone might be the Institute of African Studies.

The Institute of African Studies

The Institute of African Studies, Fourah Bay College, is a Research Unit within Fourah Bay College started about twelve years ago to coordinate and start research in different disciplines with special relevance to Africa and Sierra Leone. Most of the demographic research so far in Sierra Leone has been centered on the institute. Both Population Council Fellows were attached to the institute while in

Sierra Leone. The institute has had no director for the past three years since its last director, Dr. Blyden, was appointed to Moscow as Sierra Leone Ambassador to the USSR. The professors of history and English literature have rotated as acting-directors of the institute, while the director's salary has been used for funding research.

The institute has been engaged on a number of interesting research projects. One of the major continuing ones is the Kono Road Project, a multidisciplinary study of 77 villages situated near a new first class road leading to the chief diamond mining area. Much data has been collected, and some papers have already been prepared on migration, fertility, family characteristics and so on in these villages. The results are being coded and analyzed.

The acting director of the institute at present is an American, Professor John Peterson, head of the history department, and the secretary of the institute is Mr. J.G.E. Hyde, a Sierra Leonean sociologist who acts as secretary to the Kono Road Project. Mr. J. Blair, a Scottish economist, has been working for the past five years on a Study of Labor Migration in the Mining Industry, and is closely connected with the Kono Road Project. The staff of the institute is woefully short, and so are funds for research. The institute publishes the Africana Research Bulletin quarterly, and one gets the feeling that much more could be done. The Population Dynamics Program of the University of Ghana (a University of North Carolina-sponsored project) is helping with funds; other sources in the United States have been approached,

including the Population Council. A statistician and a sociologist are badly needed. Research centered on the institute has generated considerable interest among the university staff and in the country in general. The results of the Kono Road Project will be applicable outside Sierra Leone, it is considered. Much more support is needed in manpower and funds.

The new Department of Sociology had a shaky start. After Professor Carter from the United Kingdom left in 1970 it was reinstituted two years ago with the appointment of a Sierra Leonean head, M.B. Dumbuya, M.A. (Toronto) and M.R. Kabba, M.A. (McMaster). Dumbuya has since returned to Toronto to complete his Ph.D. and the department is now in the hands of Kabba and Fowler, two enthusiastic young Sierra Leoneans, with very heavy teaching loads, since sociology is one of the most popular subjects. Neither of them can find time for research at present. An experienced sociologist who would also be attached to the Institute of African Studies on loan to the department for two years, would greatly help to put the department on its feet as well as initiate and organize some useful research. Clearly some long-range planning needs to be done.

Njala University College

Njala University College, now ten years old, and since 1970 a part of the University of Sierra Leone, is situated in the Eastern Province some 150 miles inland from Freetown. It was established to produce teachers with an agricultural, technical, and vocational bias. The United States government and the University of Illinois were deeply involved during its just completed first ten years. It has now started on its second decade, concentrating on agriculture, education and home economics. It is now en-

tirely dependent for funds on the Sierra Leone government, as USAID was withdrawn in 1973. Its student body is now 462, which includes 95 students from outside Sierra Leone. Physical facilities at Njala are greatly in need of expansion. More and better accommodation for students, lecture theatres, a better library, a bookshop, and other facilities are needed.

The principal, Dr. Sahr Matturi, a Sierra Leonean botanist who has been head of the college since its inception, is dedicated to his task of making the college serve the needs of rural Sierra Leone. Graduate students from the early years are just beginning to return to take staff appointments, and it is hoped that these young men and women will carry the college from strength to strength. It offers degree courses in agriculture and agricultural economics, certificate courses in agriculture and in home economics and a degree course in education (teacher training). In the field of community development, however, an experienced social worker, Mrs. Wurie, is very much interested in health education and family planning, and brings it into the courses whenever possible.

There are some important on-going research projects at Njala under the Department of Agricultural Economics. There is a large rural employment research project aimed at collecting basic input-output data in farm and nonfarm rural production and marketing, as well as data on the determinants of rural-urban migration. It is a large scheme, costing some $100,000, partly financed by USAID through Michigan State University and the Rockefeller Foundation. The staff members working on this project are well-trained and dedicated Sierra Leoneans, including scholars such as Dr. Dunstan Spencer, Mr. I. May-Parker and Dr. Rhodes. Adult literacy is part of the agricultural extension program, which serves a wide area around the college.

The health center also serves the surrounding area in addition to the college, and the present medical staff consists of a recently returned Sierra Leonean from the area, Dr. Sama, and a Roman Catholic Sister. They are not doing any family planning, but are prepared to offer the pill to clients who request it. The nearest family planning clinic,where all methods are available, is one of the PPA's centers at Bo, some twenty-five miles away.

There are no courses in demography as such at Njala. The Department of Geography, now transferred to Education, has a proposal to develop environmental and development studies on which Dr. R. Mondeh, the enthusiastic dean of the Faculty of Education, is very keen.

The Department of Agricultural Economics and Extension has a staff of well-qualified and active Sierra Leoneans who are often consulted on research projects outside the college, and are engaged on important research themselves. The data being collected on in-and-out migration might be extended to include fertility and family characteristics. It is probably the department most interested in population studies. The research potential of this department is one of the high points of Njala University College, and promises to produce useful results for the future of Sierra Leone.

The National School of Nursing

The National School of Nursing* is a government-supported school of excellent standard which trains nurses up to the SRN (United Kingdom) standard. Nurses training has been available for several years in hospitals

*Located at Wallace-Johnson Street, Freetown, Sierra Leone.

in Sierra Leone, some in mission hospitals and some in the government hospital (Connaught) in Freetown, but it has only been since 1961 that a School of Nursing was set up with WHO assistance. A private United States foundation (AHEAD) helped with a fine new building opened in 1971 and USAID has helped with furniture, books, and equipment.

Two types of training are carried out at the school -- the State Registration (SRN) and the State Enrollment (SEN), a more practical course. The SRN is a three year course and requires a fairly high academic level of entrance, and the SEN is a two-and-a-half year course with a lower level of entry. The training is very thorough and well organized; the graduates are capable.

The curriculum covers all the main clinical fields as well as four specialties:

Medical Nursing - Male and Female	16 weeks
Surgical Nursing - Male and Female	16 weeks
Gynecological Nursing	8 weeks
Pediatric Nursing	16 weeks
Operating Theatre	8 weeks
Out Patient/Casualty	8 weeks
Obstetrics	12 weeks
Specialties:	
Tuberculosis and Infectious Diseases	4 weeks
Ear, Nose, and Throat	4 weeks
Ophthalmology	4 weeks
Public Health Field and Maternal and Child Health	8 weeks
Total	104 weeks

The rest of the time is spent in the classroom.

Five hospitals are used for teaching, including the main government Connaught Hospital in Freetown and also The Mental Hospital, and a TB and Infectious Diseases Hospital about twelve miles from Freetown.

The present class of nurses totals just over 100, with about two-thirds in the SEN and one-third in the SRN class. There about six males in each class. This is approximately the proportion each year, owing to the lower standard required for SEN entry. To date they have trained over 200 nurses who are working all over the country.

Midwifery is taught as a separate section of the Midwifery Hospital in Freetown, using the same nursing tutors as the school. There are six well trained and qualified nursing tutors attached to the school in addition to the principal, Mrs. Palmer, a very highly qualified nursing sister. Although family planning as such does not appear on the curriculum, she told me that it was being taught unofficially to the students in the Public Health and Maternal and Child Health specialty (eight weeks) when they work at a clinic for Maternal and Child Health or go out with a public health team. They were awaiting government sanction before formally undertaking the teaching of family planning in the school. It would obviously be an advantage to have trained nurses when family planning services are extended to all government clinics and hospitals.

In the small school for dispensers attached to the government hospital in Freetown, the Peace Corps volunteer teacher is a pharmacist who is particularly interested in oral contraception, and her pupils (about twelve per year) have a good up-to-date knowledge of oral contraceptives. Dispensers are often put in charge of small provincial health stations which have no doctor, and some of the dispensers become quite experienced in treating local diseases.

V. CONCLUSION

Immediate future needs of population work in Sierra Leone may be divided into two parts: (a) demographic work and (b) program activities.

Demographic work consists of obtaining accurate census figures (the present one due in December 1974) and assessing the present rate of population increase. This may help the government to formulate a population policy. It would also be useful for the fertility work started by Thomas Dow and Tim Devie, which was interrupted, to be continued by high level demographers who have a good relationship with the University of Sierra Leone.

Program activities may be considered under three heads, education, evaluation, and training.

Education of the leaders and government planners about the importance of family planning in maternal and child health is urgently needed in order to obtain a policy statement in favor of family planning. This can be done in several ways: by holding seminars possibly tied with development, by the use of the media, distribution of literature, and so on. Education should also be extended to the adolescent groups among whom there is a high rate of illegal abortion.

Evaluation of the present program of the local Planned Parenthood Association is very important. This should be done by independent observers and probably with outside help, as there is no one at present within the association who is qualified to do this. Methods should be analyzed, including methods of public information and contact. This could be followed by a longer term review, with research into mortality and fertility figures and tied in with the demographic work above.

Training of personnel for family planning work is linked with the training of personnel for better delivery of health services. Family planning should be part of the training of all grades of medical personnel, and special emphasis should be placed on the training of village maternity assistants and health aides. Literacy may be considered as one of the target goals of the program.

SOURCES OF DATA:

Site visit to Sierra Leone, February 1974. Country Profiles: Sierra Leone.

Population Council, September 1969. Fertility and Family Planning in Sierra Leone. Studies Population Council.

IPPF Situation Report, June 1972

PPASL Annual Report, 1972 (latest available)

Bank of Sierra Leone Information Booklets

Fourah Bay College Catalogue, Gazette, etc.

Njala University College: 10 Years of Service (Brochure)

Institute of African Studies - reports and files.

Vital Statistics publication, Medical Statistics Unit, Ministry of Health

February 1974

CONTENTS

TANZANIA

TANZANIA

Antoinette Henin, M.D., James Kocher, and Roushdi A. Henin

I. COUNTRY SETTING

The United Republic of Tanzania is comprised of the mainland (formerly Tanganyika) and Zanzibar which consists of many islands, the largest of which are Zanzibar and Pemba islands. The land area of Tanzania is about 945,000 square kilometers of which the islands of Zanzibar comprise only 2,461 square kilometers. The most recent census was taken in August 1967. According to the census results, the total population of Tanzania was 12,313,000 of which about 350,000 were living on the islands of Zanzibar. The rural population accounted for 93.3 percent of the total. In 1967 the crude birth rate was estimated as 47 per thousand and the crude death rate as 22 per thousand, with a population growth rate of 2.5 percent annually. Life expectancy at birth was estimated at 41-42 years; the infant mortality rate was estimated at about 165 per thousand, and the total fertility rate was estimated at 6.6. The total population in mid-1974 is estimated to be between 14.5 and 15 million.

II. HEALTH POLICY AND PROGRAMS

Health services are provided through hospitals, dispensaries, and rural health centers which are operated through cooperation between the central government, local authorities, and religious voluntary agencies. Voluntary agencies operate about 50 percent of total health services.

The present policy of the government is to rapidly develop the rural health infrastructure, and about 20 to 25 rural health centers and 100 rural dispensaries are to be constructed annually up to 1980. This will also mean

expanding the training of key rural health personnel who will provide the rural health services, primarily medical assistants, rural medical aides, maternal and child health aides, and health auxiliaries. The emphasis will be on preventive medicine with family planning one important aspect.

Below is provided some information on medical personnel and training facilities in Tanzania:

Available personnel providing medical services:

Category	1969	1972
Physicians	439	494
Licensed medical practitioners (without university degrees)	103	140
Medical assistants	235	355
Professional nurse-midwives	683	877 (A) 2,382 (B)
Auxiliary village midwives	?	702
Rural medical aides	?	578

Training Institutions

Faculty of Medicine	University of Dar es Salaam (Dar es Salaam). (The only medical school.)
Medical assistant training	5 centers located in different parts of the country
Rural medical aides	9 training centers, 5 of which are "permanent" centers; the other 4 are of temporary premises
Nurse-midwives, grade A	3 training centers
Nurse-midwives, grade B	20 training centers located in various parts of the country
Health education officers	A course is given at Muhimbili Hospital in Dar es Salaam
Auxiliaries	A course is given in Tanga

III. POPULATION POLICY AND PROGRAMS

The government of Tanzania does not have a specific population or family planning policy, nor is official government support provided to family planning. However, the Family Planning Association of Tanzania, a private non-profit organization, has been permitted to operate in Tanzania since 1959.

In 1969 the government directed the regional medical officers to make available family planning services in government health facilities.

President Nyerere has made at least two public statements of considerable importance:

> "Giving birth is something in which mankind and animals are equal, but rearing the young and especially educating them for many years is something which is a unique gift and responsibility of men. It is for this reason that it is important for human beings to put emphasis on caring for children and the ability to look after them properly, rather than thinking only about the number of children and the ability to give birth. For it often happens that men's ability to give birth is greater than their ability to bring up children in a proper manner." (May 1969, introduction to Second Five-Year Plan.)

> "In assessing our progress, however, it must always be remembered that whatever we produce has to be divided between an increasing number of people every year. An extra 380,000 mouths are calling for food this year as against last year . . . It is no use saying that these extra 380,000 people have hands as well as mouths. For the first ten years of their lives, at the very least, children eat without producing; we as adults have therefore to increase our production accordingly." (September 1973, Report to the 16th Biennial Meeting of the Party -- TANU.)

Organized child spacing services started in Tanzania only in 1959. The services were organized by the then Family Planning Association of Dar es Salaam. There was only one clinic which served some residents of Dar es Salaam, mainly expatriates.

In 1967 the Association changed its name to the Family Planning Association of Tanzania. With the help of IPPF funds, new clinics were established in Dar es Salaam, and child spacing facilities, equipment and services became available outside Dar es Salaam, mostly in Voluntary Agency Hospitals.

In 1969 the regional medical officers were directed by the then Ministry of Health and Social Welfare to obtain child spacing supplies, equipment, and advice for their maternal and child welfare clinics from the

Family Planning Association of Tanzania. For the past four years a rapidly increasing demand for services has been experienced both in Dar es Salaam and upcountry.

In mid-1973 a movement was led by the press against the idea of family planning and the dangers that result from the use of contraceptives. It was understood that the attack was mainly due to personal grudges. Nevertheless, the chairman of the Family Planning Association of Tanzania who is also the Minister for Labour and Social Welfare issued a statement to some members of the press explaining to them the objectives of the Family Planning Association. Some of the press were still not convinced and subsequently attacked the minister in the newspapers. The minister's statement appeared only in the Swahili papers. A few weeks later the problem was discussed in the National Executive Committee meeting (made up of the senior officials of the political party, TANU -- Tanzanian African National Union). The National Executive Committee members agreed that the practice of child spacing is essential for the health of Tanzanian mothers and children and so for the health of the nation as a whole, and that child spacing is also needed for the economic development of the country.

Since then there have been no more attacks from the press and twelve new family planning branches have been started in different districts. Before June 1973 there were only seventeen branches; by December 1973 there were twenty-nine different branches. Most of the branches are chaired by important persons who hold key posts in their districts.

The Family Planning Association (UMATI) is a voluntary nonprofit organization; it receives financial and advisory support from IPPF of which it has been a member since 1971. It is still affiliated with the U.W.T.

(Union of Tanzanian Women). The government does not give any financial assistance but it grants duty-free status to all commodities supplied to the association; it also adopts a generally favorable attitude towards its work. The clinics outside Dar es Salaam are run by government personnel.

In Zanzibar political attitudes are opposed to family planning and the importation of contraceptives is forbidden. The law which makes abortion illegal is strictly enforced. Abortion is also illegal in the mainland except where there is a grave risk to the mother's life.

The four departments in the association are information and education; medical and field work; training; administration and finance. These four departments are coordinated and controlled by the Executive Committee.

The information and education department makes known to the public what child spacing is about and emphasizes its importance. It gives health education talks at factories or places where workers gather, and arranges for talks at meetings. This department is helped by the members of the branches outside Dar es Salaam. In 1972 there were only thirteen branches, but by December 1973 the number had increased to twenty-nine spread all over the country. The chairmen of these branches meet in Dar es Salaam every six months; they help in arranging for local seminars and in spreading knowledge among the people in their areas.

The medical and field work department is responsible for the operation of Dar es Salaam child spacing clinics; it also provides field workers who help in the clinic work outside Dar es Salaam. There are five clinics in Dar es Salaam; four have permanent premises and run fifteen sessions per week. The fifth clinic is mobile and supplies services to the people in the suburbs of Dar es Salaam. There is a team which moves daily between five places;

each place is visited once weekly. These clinics are conducted by four doctors helped by the nursing and health education staff.

Outside Dar es Salaam there are about 100 clinics in different districts. Some are placed in government hospitals and the others are placed in missionary hospitals. In fact only sixty are active but the rest give contraceptive advice on an individual basis. These clinics are run by doctors of either voluntary agencies or government hospitals or health centers as part of their maternal and child health services. The association helps these clinics by providing advice on running the clinics, provides needed equipment, trains their staff, and supplies contraceptives free of charge. The clinics are also used for the practical training of medical students and the participants of the training courses.

This department offers health education; contraceptives; screening services (all attendees are examined before supplying them with contraceptives, so that some diseases might be discovered, especially cancer of the breast or cervix); infertility services (infertile couples are examined and given some form of treatment); counselling services on an individual basis whenever needed; and training of medical students and some paramedical staff.

As a result of the spread of knowledge of family planning and the need for services, a critical shortage of qualified practitioners has arisen. To help meet this need for medical manpower, the Family Planning Association has assumed a major responsibility for training family planning workers and practitioners. The Association is helping to train medical students, organizes courses for tutors from nurse training centers, midwife training centers, medical assistants training centers, and rural medical aides training centers. New teaching methods are discussed with these totors (instructors). Also, four-week courses are arranged for nurse-midwives and medical assistants

working upcountry. These courses enable such people to run family planning clinics in the areas of their work under the supervision of the medical officer in charge. Sometimes the association receives requests from various organizations and training institutes to participate in their seminars or workshops. This enables the association to reach a wide cross-section of the population.

The administration and finance department coordinates the activities of the various departments and establishes liaison between the committees of the association and IPPF headquarters in Nairobi and London. It works out policies and plans for the association which are consistent with national policies. It is also responsible for the development of good relations between the association and other organizations such as TANU, government departments, and UWT.

Below is a report on Dar es Salaam clinic activities for the year 1972 and for the first 10 months of 1973:

Year	New Attendance	New Members					Re-visits					Total Attendance
		Loop	Pill	Inj.	Other	Total	Loop	Pill	Inj.	Other	Total	
1972	3536	203	1646	279	20	2177	1416	9437	3936	91	14,880	27,783
1973 (10 mo.)	3787	186	1712	647	68	2613	1028	5660	4133	97	10,919	23,764

Clinic activities upcountry:

1972	4842	732	3667	566	144	4842		11,399	19,181

A few people who are important in family planning are listed below:

Mr. A. C. Tandau, Minister of Labor and Social Welfare and Chairman of the Family Planning Association of Tanzania.

Mrs. Christine Nsekela, Executive Secretary of the Family Association of Tanzania.

Dr. Achim, Senior Medical Officer, Ministry of Health.

Mrs. Achim, Family Planning Association.

IV. UNIVERSITY DATA

The University of Dar es Salaam

Faculty of Medicine

The Faculty of Medicine was established in 1968 when the School of Medicine (which had been established in 1963 by the Ministry of Health) was incorporated into University College, Dar es Salaam (University College subsequently became the University of Dar es Salaam). The Faculty of Medicine teaches a five year undergraduate curriculum which leads to the qualifying degree of M.D. Current enrollment is 45-50 students per year or about 240 students enrolled in the five year program. However, commencing with the 1974-75 Academic Year (July 1974), the first year class will double in size to 100 students initiating a planned doubling of total enrollment within the next five years.

The departments of the Faculty are grouped into the three divisions of Biomedical Sciences, Clinical Practice, and Social and Community Medicine. Each division is organized into several "subjects". The division of Biomedical Sciences includes Anatomy and Histology, Physiology, Biochemistry, Pharmacology, Pathology, and Microbiology and Immunology. The division of Clinical Practice is responsible for the teaching of Medicine, Surgery, Child Health, Obstetrics and Gynecology, Psychiatry, and Anaestheasia. The division of Social and Community Medicine teaches Community Health, Epidemiology and Biostatistics, Behavioral Sciences, and Parasitology and Entomology. The

undergraduate curriculum attempts to integrate these several subject areas and is broadly organized so that the first year consists of normal biological studies of man and the community; the second year consists of pathological studies; the third year consists of therapeutic studies; the fourth year eight week clerkships in child health, community health practice, medicine, surgery, obstetrics and gynecology; and the fifth year, clinical rotations. Currently there are about fifty members of the teaching staff of the Faculty, about one-third of them are Tanzanians. The Dean of the Faculty is Dr. W.J. Makene, a Tanzanian trained as a cardiologist.

All teaching of demography and family planning is within the Division of Social and Community Medicine. All first year students take a course in elementary statistics and demography. Also, all students participate in a first-year field project in which some attention is given to relationships between family size, child spacing, and malnutrition. All third year students take a basic family planning course, consisting of 12 to 14 lecture hours. The course content includes attention to all common contraceptive methods, some aspects of the psychology of contraceptive use, and emphasis on the doctor's role in providing contraceptive services. The principle text for this course is Methods of Contraception Control: A Pro-Instructional Course, Ortho Pharmaceutical Corporation, Raritan, New Jersey. In addition, at the conclusion of the course students are given the following text for their own reference use: John Reel and Malcolm Potts, Textbook of Contraceptive Practice, Cambridge University Press. They also take a health education course, of which about four class hours are given to the "role of family planning in health education." In the past year two of the four hours were a talk presented by a staff member of the Family Planning Association of Tanzania. In addition, during the past year as part of their course work, students were required to prepare and

deliver teaching exercises on health education. Some of the students in the course prepared teaching materials on family planning which they then presented in a teaching situation at a girls secondary school.

All fourth year students spend a two month "clerkship" in the Division of Social and Community Medicine. Of the two months, about one-half week is devoted to more practical aspects of family planning, including visits to clinics both in and outside of Dar es Salaam, instruction in insertion of loops and so forth. Fifth year students are required to give a number of personal reports or seminars on topics of their choice. The staff of the Division of Social and Community Medicine report that many of the students are interested in population and family planning topics, and these are frequent seminar topics. There is a two-month period between the fourth and fifth years for which students select specific topics for in-depth training. In the past some students have chosen to receive special training in family planning and have been sponsored to go to the U.S.A. on an eight week travel and training grant. Funds have apparently been provided by USAID, the Population Council, and perhaps other donor organizations.

The staff of the Division of Community Medicine generally feels that within the limits of the five-year undergraduate program, it will not be possible to increase the time and emphasis given to demography and family planning; that is, there is no prospect for increasing the amount of time the average studen devotes to these topics. They report, however, that the Dean of the Faculty is generally supportive of the teaching of demography and family planning. They have experienced no overt resistance, although they feel the potential always exists. (For example, the press attack described earlier.) They also report that most of the medical students are supportive of family planning. This is confirmed by a symposium on the relationships between population con-

trol and economic development which was arranged by Professor Bennett in August 1973. Although family planning was criticized by some invited speakers, a number of medical students defended family planning as one of the solutions for Tanzania's economic and social problems.

While there are no prospects for increasing student training, the amount of staff time given to these topics will be increased because of the forthcoming doubling of total undergraduate enrollments to nearly 500 students, and because of the newly instituted (July 1973) postgraduate training program. The Division of Community Medicine is now offering a three-year postgraduate training program. Subject matter will be fairly general in the first year and at the end of the first year the student will receive a Diploma of Public Health. Students will be more specialized in the second and third years and can choose family planning as one specialty. At the end of the third year they will be awarded an MPH.

One result of the increase in undergraduate and postgraduate teaching responsibilities is that a new post of Lecturer/Senior Lecturer in Epidemiology and Biostatistics has been created, effective for the Academic Year 1974-75. Prospects for filling this post are dim due in part at least to the low university salary scale. There is no possibility of filling the post with a Tanzanian, and an expatriate appointed at a lecturer's level would receive a salary of about $7,000 of which about 20 percent would go for Tanzanian taxes, leaving a net annual income of about $5,600. The salary of a senior lecturer would be about 20 percent higher. Previously the faculty member teaching statistics and demography also taught epidemiology, but now two separate posts will exist.

The major research project in demography and family planning continues to be the one started by Dr. Cris Woods (now working in Kenya) about

six years ago with a Population Council grant, and subsequently funded for the period 1971-74 by a grant from the University of North Carolina. Mr. B. Takolia of the Division of Social and Community Medicine (his training includes an MPH from Johns Hopkins) has taken over field responsibility for this project.

The project was originally designed to combine a vital registration system in six rural areas of Tanzania plus Dar es Salaam with an annual census in these areas. In three of the rural areas the project has recently been expanded to include provision of family planning services; one family planning worker serves each of the three areas. It is hoped to improve on the services recently introduced as well as to extend services to the remaining areas. It was deemed necessary (or at least desirable) to carry out a KAP study in each of the areas prior to introducing family planning services. This was done in November-December 1973 in two of the three areas (in which a family planning worker subsequently began offering services). In these two areas a total of 500-600 women and 200-300 men were included in the KAP sample. Data are now being analyzed. Eventually, Mr. Takolia hopes to allocate a certain population (for example, 1,000 women) to each family planning worker and ask the worker to arrange a schedule of regular home visits.

Although the North Carolina grant terminates June 30, 1974, not all the funds have been spent, and Mr. Takolia is hopeful that North Carolina will permit expenditure of funds beyond the termination date.

Perhaps the major problem with this project has been the inadequate data analysis and evaluation, and lack of information provided to the Ministry of Health. A Dr. Venema has just completed an MS in demography in the U.K. in which he analyzed some of the data collected during the first four years of the project. However, his analysis has not yet been made available in Tanzania.

Another research project has been initiated by Dr. H. Gosling, also

of the Division of Social and Community Medicine, supported by a grant of $20,000 from the Social Sciences, Law and Humanities Program of the Ford and Rockefeller Foundations. Dr. Gosling has devised an intelligence test for East African children and using the same populations that are included in the Wood-Takolia project, he will analyze the relationships between intelligence of school children and family size and child spacing.

Key people at the medical school are

> Professor John Bennett, head of the Department of Community Health in the Division of Social and Community Medicine. Prof. Bennett teaches part of the health education course to third year students including aspects of family planning.
>
> Dr. Harry Gosling, head of the Subject of Behavioral Sciences in the Division of Social and Community Medicine. Dr. Gosling teaches the basic family planning course to third year students.
>
> Dr. Jane McCusker, lecturer in Epidemiology/Biostatistics in the Division of Social and Community Medicine. Dr. McCusker teaches statistics and demography to first year medical students.
>
> Mr. Harbans Takulia, senior lecturer in Behavioral Sciences, teaches part of the third year health education course which includes aspects of family planning.

In addition, the above four staff members together provide all the other training in demography and family planning in the Faculty of Medicine at both the undergraduate and graduate levels.

> Dr. W. J. Makene, Dean of the Faculty of Medicine.
>
> Dr. Pius Msekwa, Vice Chancellor of the University of Dar es Salaam.
>
> Mr. Amon Nsekela, President of the University Council (the governing board of the university); also, member of parliament and chairman of the Board of Directors of the National Bank of Commerce; husband of the Executive Secretary of the Family Planning Association of Tanzania.

The Faculty of Medicine is located about ten miles from the main campus of the University of Dar es Salaam. The medical students therefore do not have ready access to items in the main university library. The medical faculty

does have a small library of its own but it has very few books in family planning and demography. We have recommended that they submit a request for a set of essential books in both family planning and demography to the Basic Library Program of the Population Council.

Equipment needs in the Division of Social and Community Medicine

Undergraduate teaching. The bulk of the undergraduate teaching, for which calculating equipment is required, falls into the first year in the courses in basic statistics and demography (weekly practical sessions throughout the academic year) and analysis of the first year project (a three week period at the end of the first year, during which the students carry out a demography survey in selected villages and conduct a nutritional survey of the under five year olds in the same areas). There is additional need during the second year epidemiology course when the whole class engages in frequent data analytic exercises and conducts group research projects requiring data analysis. During the third year there is another field project -- an infectious disease survey of a rural population, for which the students perform much of the analysis. In addition, interested students would be expected to make occasional use of the equipment in other years.

The present intake of students is 50 and is expected to increase to 96 in 1975. Even if this class is divided for practical sessions, there may be up to 50 students using calculating equipment at any one time. Based on 3 students to a machine, allowing for up to 2 machines being out of order at any one time, this gives an estimate of 19 teaching machines.

Seven basic Facit electronic machines (without memory accumulation) will be ordered in July 1974. There will be a need for a further 12 such machines by next year.

Postgraduate teaching. A D.P.H. course is starting this year with six to seven students. Among their basic courses will be statistics and demography and introduction to computers. They will be expected to carry out fairly sophisticated analyses including correlations and statistical significance testing, in addition to punching some of their own data for computer analysis.

They currently have access to a programmable calculator (Olivetti 101) near the Faculty and are ordering a calculator with memory storage for postgraduate use. At present there is no key-punch equipment in the medical faculty.

Research. They are rapidly expanding their use of the university computer facilities to the point where they are unable to deal with requests without delays of several months. The biggest bottleneck is in punching and verifying data. Although they have a research assistant who is capable of key punching, there is no equipment in the Faculty for him to work on. The main research projects at present requiring key-punch equipment are:

(1) Demographic project: KAP survey analysis

(2) Obstetric record analysis of all "complicated" cases and 10 percent sample of "uncomplicated" cases delivering in Dar es Salaam maternity hospitals

(3) Analysis by Faculty of field project data

(4) Analysis of new antenatal record card being piloted at antenatal clinics in Dar es Salaam

There is also a need for a calculator (preferably programable), in addition to the one ordered for postgraduate use, to be located in the Department of Epidemiology and Biostatistics.

Demography and Related Social Sciences

In 1970 the Population Council posted a field associate in Dar es

Salaam with two functions: to teach a course in demography to statistics majors, and to advise the Central Statistical Bureau in the Ministry of Economic Affairs and Development Planning on the demographic analysis of the 1967 population census of Tanzania. Subsequently a volume was published entitled 1967 Population Census of Tanzania: A Demographic Analysis.

In 1971, a masters degree program in demography (by thesis only) was launched. It was an attempt to integrate field research with teaching. A survey was jointly undertaken by two candidates who collected data on fertility and mortality from four regions in Tanzania. Two of the regions were relatively more developed with high birth rates and low death rates. The other two regions were less economically developed and with relatively low birth rates and relatively high death rates. Some 5,500 households were covered and the results of the analysis appeared in two dissertations, one entitled "Fertility differentials in Tanzania with reference to four regions," and the other "Mortality differentials in Tanzania with reference to four regions." One of the M.A. graduates is now head of the Population Statistics Unit at the Central Statistical Bureau, and the other is on the staff of the Department of Statistics, University of Dar es Salaam but is currently following a Ph.D. program in economic-demography at the University of Pennsylvania.

A third student completed his masters degree with a thesis on "The Impact of Urbanization on Fertility and Child Mortality: Tanzania and Uganda as Case Studies." He is now enrolled in the Ph.D. program in demography at Australian National University.

A demographic unit was established in 1972 in the Bureau of Resource Assessment and Land Use Planning at the University of Dar es Salaam, with financial assistance from the Population Council. It is a service unit in that it provides demography courses for students from several departments in

the Faculty of Arts and Social Sciences (economics, geography, sociology, and statistics as well as students from the Faculty of Science who take statistics).

The unit is staffed by an economist/demographer (who is in charge), an agricultural economist/demographer, and, until June 1974, a population geographer/demographer. The latter left Tanzania in June and will be replaced by an economist/demographer who will assist in the analysis of the National Demographic Survey (see below). The following courses are offered by the unit.

(1) Undergraduate training

(a) a course in formal demography for statistics students (full year, 16 students in 1973-74).

(b) a course in substantive demography for students taking sociology, economics and geography (half year, 110 students in 1973-74)

The Department of Sociology plans to expand its undergraduate teaching in 1974-75 with the assistance of the unit. Three new courses will be added: an introduction to population studies for second year students, a course in formal demography for third students, and a course in social demography for third year students. Eventually students will be able to earn a B.A. in sociology with a specialization in population studies.

(2) Postgraduate training

(a) An optional paper in economic demography for M.A. Economics

(b) Optional paper in advanced formal demography for M.A. statistics students

(c) Demographic project for M.A. statistics students, also optional.

(d) Masters Degree in Demography

As noted above, three students have so far obtained their M.A. degree in demography. Two students are currently working on masters degrees. One is working on tribal differences in fertility in Tanzania and the factors

behind those differences, using data collected in the National Demographic Survey. The second is on fertility patterns and levels in Dar es Salaam, also with NDS data. Two additional candidates will be registered for the 1974-75 academic year, a Nigerian with training in mathematics, and a Tanzanian selected by the Department of Statistics at the University of Dar es Salaam for staff development.

(e) The Department of Sociology has indicated an interest in establishing a masters degree in sociology (by thesis) with a speciality in population

(f) Ph.D. training

Three students are currently being supervised for Ph.D. degrees in demography. A staff member of the Department of Geography, University of Nairobi, is co-supervised by Professor Ominde from Nairobi and Professor Henin from Dar es Salaam. The thesis will deal with "Fertility Trends in Kisumu District." A staff member of the Department of Sociology, University of Nairobi, is being admitted for Ph.D. under the joint supervision of Professor Henin from Dar es Salaam and a staff member from the Department of Sociology, University of Nairobi. Her topic is "Changing attitudes, practices, and beliefs on family size among the Akamba." A staff member of the Department of Sociology, Makerere University, is being admitted for Ph.D. at the University of Dar es Salaam under Henin's supervision. He will work on patterns and causes of errors in African fertility data.

Training and Staff Development Issues. One of the major issues facing the unit is its inability to utilize all available postgraduate fellowships. At the undergraduate level, enrollment in population courses has been increasing. The undergraduate course in substantive demography grew from 50 students in 1972-73, to 110 in 1973-74, and is expected to grow further to 150 in 1974-75. On the other hand, only three of six available places for masters degree

students were filled between 1971 and 1974, and only two of three places for 1974-75 are filled. (One of the three masters degrees completed was by a non-Tanzanian.) At the postgraduate level this is a problem faced by the University as a whole.

The University of Dar es Salaam is the youngest of the East African universities. The output is therefore still small in relation to the demand. A student is usually earmarked to a government department and has to join that department on completing his undergraduate training.

Every year, the university has to go, hat in hand, to the Central Establishment for its requirements of candidates for staff development. In recent years the university never managed to get more than 50 percent of its original request. This situation has been aggravated during the last two years by the decentralization policy which meant that certain functions of some ministries were decentralized and handled at the regional level. This applied to planning, health, education, labor, and agriculture. The result is that the demand for university graduates increased so much that the university was finding it more and more difficult to satisfy its staff development plans. Indeed some staff members of the university were absorbed by decentralization as "regional development directors."

Other sources of recruitment of graduates for the postgraduate program had to be sought, and the Demographic Unit found it necessary to go to the ministries and government departments for this purpose. Efforts were also made to offer the postgraduate courses to non-Tanzanians, that is, Ugandans and Kenyans who are graduates of the University of Dar es Salaam.

Research. A guiding principle behind the work of the unit is that training and research should be integrated and mutually reinforcing. Postgraduate students are required to participate in the overall research program of the unit. All of the following research projects undertaken by the unit

involved students as well as staff.

Demographic Analysis of the 1967 Population Census of Tanzania. One of the first tasks of the unit was to assist in the analysis of data collected in the 1967 census. The analysis showed that while the population census threw a great deal of light on overall levels of fertility and mortality in the country, it was not possible to study in depth fertility and mortality differentials at the community level and the factors behind those differentials. A National Demographic Survey was therefore considered necessary to obtain information of this nature at the community level.

In line with the unit's desire to integrate its teaching and research activities, the first two masters degree students trained by the unit designed the research for their theses to serve as pilot studies for the National Demographic Survey. As noted above, one did his research on fertility differentials in four regions, the second on mortality differentials in the same four regions.

National Demographic Survey. The pilot survey stage covered by the two M.S. students was followed by the National Demographic Survey. This is a joint undertaking by the Central Statistical Bureau, Ministry of Economic Affairs and Development Planning and the Demographic Unit. Half of the funding for the survey comes from the government of Tanzania and half from the International Development Research Centre of Canada.

The survey was launched in May 1973. The field work has been completed and the data processing has started. About 65,000 households have been covered, with data collected on fertility levels, trends and differentials, mortality levels and differentials, and rates of growth at the regional level.

One of the unique aspects of this survey is the study of fertility and mortality differentials not only by such characteristics as education,

literacy, occupation, religion, place of birth, and so forth, but also by mode of life (referred to sometimes as community level). For this purpose clusters of about 800-900 households (in about half the 18 regions of Tanzania) were selected, representing, for example, pastoral communities, subsistence agriculture, modern agriculture, cash crops, highlands and others. The sample also covers the urban population of eleven large towns and eleven small towns.

Two currently registered M.A. students are engaged on certain aspects of the analysis.

Interest in DARSS Outside the University

In a speech to the 16th biennial meeting of TANU (the one political party in mainland Tanzania) on September 26, 1973, President Nyerere stated that for economic and social reasons it was desirable for Tanzania to slow its population growth rate. One result of these comments is that the dean of the Faculty of Arts and Social Science at the university urged the unit to produce as many masters degree level demographers as possible, and has expressed his fullest support for the program and its efforts to attract more students. As a result of discussions between the Minister of Labor and Social Welfare and the head of the demographic unit, the unit will organize a series of seminars for labor union leaders, party leaders, regional planning officers, women's groups, and others, The Minister of Labor has also indicated that two civil servants from his ministry would be selected to work for masters degrees on manpower planning and related topics, under the supervision of the unit.

Other Interest

Dr. Chagula was Vice Chancellor, University of Dar es Salaam, before becoming Minister for Economic Affairs and Development Planning. He has always been a great supporter of DARSS. He takes pride in being instrumental in the

appointment of the professor of demography at the University of Dar es Salaam. Not only is he a supporter of DARSS training and research at the university but also in his ministry. The Central Statistical Bureau, jointly responsible with the demographic unit, for the National Demographic Survey, is part of his ministry. Finally, he has shown on many occasions both interest and awareness of the problems resulting from high rates of population growth.

Mr. Tandau, Minister of Labor and Social Welfare, is president of the Family Planning Association of Tanzania and secretary-general of the National Union of Tanganyika Workers (NUTA). He has suggested that the Demographic Unit run workshops and seminars for leaders in TANU, NUTA, for regional planning officers, and others on population growth and economic and social development. He has also shown willingness to suggest the names of one or two civil servants from his ministry to attend postgraduate training in population studies.

Mr. Nskela, president of the University Council and chairman of the Board of directors of the National Bank of Commerce, is (informally) the president's economic adviser. He is fully aware of the population question and has been a strong supporter of our activities in the demographic unit. (His wife is the executive secretary of the Family Planning Association.)

Mr. Mpogolo is commissioner of statistics and head of the Central Statistical Bureau. He holds the M.A. degree in Statistics (U.S.A.) So far two officials from his bureau have followed the M.A. program in demography.

Mr. Ngallaba is head of the population statistics unit, Central Statistical Bureau, and the only demographer in the government. Holder of the M.A. degree in demography, university of Dar es Salaam, he is second in command in the Central Statistical Bureau.

V. CONCLUSIONS

In the medical school, the teaching of contraceptive techniques, the psychology of contraception, demography, family planning in health education and the role of physicians in family planning programs are integrated in the curriculum of the divisions of Clinical Practice and of Social Sciences and Community Medicine. Besides this academic teaching, students participate in field surveys and clinical work in family planning clinics. It would seem that from a teaching point of view no outside assistance is required, and even the contemplated expansion of the training program to accommodate the expected doubling of undergraduate classes and a new postgraduate training program will probably be provided for by the university in time. The only needs are for twelve calculating machines without memory for the teaching of statistics and demography to undergraduate medical students. Interesting research projects are ongoing in the Division of Social Sciences and Community Medicine. It appears that the research and training needs of the new Doctorate in Public Health include punching and verifying equipment and a programmable calculator.

A modest and useful investment for international agencies would be to provide the library of the medical faculty with a basic set of books in family planning and demography.

However, in view of the governmental priority to provide health services to rural populations in the shortest delay, the five Medical Assistants training centers and the five schools of Rural Medical Aides should be surveyed. Such an inventory should assess the extent of family planning training provided in such schools and, if necessary consider the feasibility of creating a pilot program to integrate family planning services in the basic health services.

The Demographic Unit within BRALUP is an active and influential unit. Its teaching and research activities have increased significantly since the unit was established in 1972. An important new area of activity is the provision of short-term training and seminars to Tanzanian government officials. The unit, however, is staffed entirely by expatriates. No senior Tanzanian demographers exist, and only one university staff member is currently receiving Ph.D. training abroad in demography. He will not complete his degree for at least another two years. Thus the unit will need external core support, including senior staff, at least through 1977. After that, it should be possible to begin phasing out external support as local capacities become stronger. At the minimum, external support will still be needed after 1977 in the form of research grants, short-term consultations, and a variety of informational and technical support services of the type generally provided by the Population Council and other donors in the population field.

SOURCES OF DATA:

Site visit to Tanzania May 1974.

May 1974

CONTENTS

ZAIRE

ZAIRE

Robert G. Castadot and Donald F. Heisel

I. COUNTRY SETTING

Zaire has in excess of 22 million people, according to the "population census" of 1970. It is a large sprawling country with an average density of around 9 people per square kilometer. It is thus by far the largest Francophone country in Black Africa; the population is something like three times the next largest Francophone country and it is the third largest of all independent Black African nations.

Information concerning population dynamics are skimpy. It is estimated that the crude birth rate is about 50 and the crude death rate around 20. Nevertheless, the population is officially estimated to be growing at around 2.5 percent per year. These figures are little more than educated guesses since the data are not sufficient to provide more detailed or reliable information for the nation. Zaire remains essentially rural. According to the results of the 1970 "census" no more than 15 percent of the population was found in the eleven largest cities of the country. The urban population of Zaire is dominated by the capital, Kinshasa, with a population estimated to be around 1.3 million. Kinshasa is among the two or three largest cities of Black Africa. It is estimated to be growing at a rate higher than 10 percent per year, chiefly from rural-to-urban migration. Most of the demographic information for Zaire comes from an administrative census taken in 1970. The information is of limited reliability since the census was not based on a house-to-house enumeration. It followed upon and was

essentially an up-dating of the permanent listing for each household, originally established during the colonial period. Each head of a household was required to present himself at the local census bureau office in order to furnish information about himself and about individuals dependent upon him. The census agent recorded this information on an individual household card. The cards were tabulated manually in each local office and results were submitted to a central authority to be assembled and officially reported.

The census of 1970 was the first carried out after political independence. It was attended by a good deal of publicity and public education, including support from the national political party. The census results provide the basis for electoral lists, so some political pressures on reported totals could have existed.

Information gathered through this administrative census are not worthless. However, they are obviously severely limited and do not provide anything like an adequate basis for an understanding of population dynamics in Zaire. There appears to be no serious planning for participation in the African census program being funded by UNFPA nor to take any other form of census at this time.

In addition to the census of 1970, demographic data are obtainable from a series of urban surveys, beginning with the social demographic surveys of Kinshasa taken in 1969. Seven additional cities have subsequently had social demographic surveys. These have been funded by external sources, most recently with the assistance of IDRC in Canada.

Zaire has also recently begun participation on a limited scale with the World Fertility Survey. A pilot enquiry will be carried out in one region of the southeastern part of the country in the near future.

The lack of demographic data would be more serious if the country were engaged in a serious attempt to plan its economic and social development. In fact, Zaire has given rather less attention to systematic economic and social planning than most other Black African countries. The government has not attempted to prepare a national five year plan for development and does not have a major planning agency functioning within the government. To a very considerable degree, decisions related to economic development come from the president's office and are often a reflection of the very personal decisions and aspirations of President Mobutu Sese Seko.

Current preoccupations include an urgent search for an authentic Zairois identity -- liberation from the colonial heritage -- and rapid economic growth based on exploitation of the prodigious national resource base. There is an atmosphere of strong nationalism, verging on xenophobia, in a boom town economy. Much pressure is felt to replace foreigners by Zairois -- especially in small and medium-sized business enterprises.

Zaire's population comprises a large number of tribes, each using a different language. Two main tongues --Swahili in the east and Lingala in the center and in Kinshasa -- are the major vernaculars. Approximately half the population is Christian, the largest group being Catholic; the remainder are mostly traditionalists with some Moslems in the northeast.

It is estimated that 70 percent of school-aged children benefit from some kind of primary education. It would appear that something on the order of one-fifth of the primary school students go on to attend secondary school. The Universite Nationale du Zaire (UNAZA), with its three main campuses in Kinshasa, Lubumbashi, and Kisangani, completes the formal educational structure.

With large energy resources (the hydro-electric complex at Inga) and exceptional mineral deposits (copper, diamonds, cobalt, uranium, and so forth) as well as great agricultural resources, Zaire has great potential for economic development. However, the potential remains largely unrealized as yet; per capita annual income is of the order of US$100 and is growing at a little over 3 percent annually (figures are for the late 1960's -- the most recent available).

II. HEALTH POLICY AND PROGRAMS

As in many other developing countries, there are few reliable health statistics available in Zaire. Existing evidence indicates that the major health problems are infectious and parasitic diseases which, with malnutrition, are the main causes of death for infants and preschool children, and probably for many adults. Measles is reported as the primary cause of death among children from the age of one to five.

Basically, four health delivery systems serve the population of Zaire: the government, the university, the missionary hospitals, and the private sector.

The 1972 budget for the Ministry of Health was 4.5 million Zaires (1 Zaire=US$2.00), about 1.3 percent of the national operating budget. Besides limited funding and overwhelming morbidity and mortality problems, the Ministry of Health must function with a severe shortage of adequately trained personnel and very weak administration. Another government agency, "Fond Médical de Coordination" (FOMECO), is an autonomous organization directly related to the presidency with a budget roughly equal to that of the Ministry of Health. It has responsibility for the main hospital in Kinshasa -- Hôpital Mama Yémo. Other FOMECO programs include experiments in maternal

and child health and family planning in Kinshasa, and in comprehensive health care along the Zaire River. High expenditures have produced relatively high quality health delivery services and administration at Hôpital Mama Yémo, which could provide for the educational needs of other health personnel if proper coordination between the Ministry of Health, FOMECO, and the university existed.

UNAZA provides health services through its three university hospitals in Kinshasa, Lubumbashi, and Kisangani. In Lubumbashi the university clinics are located in the main city hospital -- Hôpital Sendwe.

The missions have made a substantial contribution to health services in Zaire. They administer a large number of health facilities (680 general and maternity hospitals and dispensaries, with a total of 25,000 beds). These facilities are usually distributed through rural areas or small cities. Very often, indeed, the missionary activities are substitutes for government health services, and in some areas there is an effort to reach the community with basic health care.

An important health delivery system and, in some areas, one that is probably the best equipped and wealthiest is funded by private business, especially by mining companies.

At the end of 1973 it was estimated that there were slightly more than 800 physicians in Zaire (that is, about 1 per 25,000 persons). Of these, 300 were in Kinshasa alone, with another 100 in the mining area of Shaba; 350 physicians are Zairois. The program to train medical assistants, created during colonial times, has been phased out.

At the recommendation of the Rockefeller Foundation, a National Health Council is being established in the Office of the Presidency. This

Council is intended to represent the government, the university, the hospital systems, and the consumers. Its purpose is to draft a national policy for the delivery of health services, to prepare a five- or ten-year plan for health services, and to train health manpower. It is expected that the Health Council will gear the training of physicians and paramedicals to the real need of the population. It has been reported that 10 to 15 percent of the gross national product could be allocated to such a program.

With the number of medical graduates from UNAZA increasing perhaps too rapidly, the number of paramedical personnel necessary for the delivery of health services is clearly inadequate and will severely limit the effectiveness of the medical graduates. Little progress can be expected unless major reform of the medical curriculum is undertaken to train Zairois physicians to respond to the health needs of the population. Training of paramedicals should be given highest priority and new mechanisms for planning, coordinating, implementing, and evaluating health delivery systems need to be developed.

III. POPULATION POLICY AND PROGRAMS

Zairois officials, including the Minister of Health, acknowledge the falling mortality rates and escalating rates of natural increase as problems. Nevertheless, perhaps the most important immediate factors initiating concern for the population issue have been the very heavy migration from rural areas to urban centers and the prevalence of illegal abortion among urban high school girls and unmarried women.

In a December 1972 speech, after a long period of pronatalist policy, President Mobutu Sese Seko endorsed the idea of family planning in the broader concept of "naissances désirables," with the aim of protecting the

health of mother and child and avoiding undesired births. Following this speech, a family planning unit was opened at Mama Yémo Maternity Hospital, Kinshasa, in January 1973. In February 1973 a National Council for the Promotion of Desirable Births was created, with the responsibility of planning a program to inform and to deliver "desired birth" services to the population of Zaire and to coordinate all family planning activities. More recently, in March 1974, at the seminar on "Naissances Désirables basée sur la Maternité," held in Kinshasa the Minister of Health summarized the goal of the program as "a moderate demographic growth limited to desired births" in order to help the economic development of the country and to offer a better quality of life to the population. Two different governmental population programs have evolved in the past twelve months. The Ministry of Health provides family planning information as part of its general health education program. A booklet on the goals of "les naissances désirables" and contraceptive technology has been printed. The Ministry of Health has requested assistance to send one of its physicians to the forthcoming family planning course at Rennes.

The other program was developed by FOMECO in the Hopital Mama Yémo in Kinshasa. During its first year, the family planning program at Mama Yémo emphasized staff training with a course for physicians and one for nurses (eighty-three hours). The family planning clinic, which started at the beginning of 1973 with two weekly sessions became a daily clinic toward the end of the year. The program of "naissances désirables" includes basically three components: family planning, a sterility clinic, and under-five child care. In this program nurses are given the role of motivating the population, providing the services, and administering the clinic. The physicians supervise the program activities, review contra-

indications, and treat for complications. During the first twelve months of the program, 700 family planning acceptors were recruited. The most popular family planning methods were the IUD, depo-provera, and sterilization (15 percent). The information and education program developed at Mama Yémo includes the production of a flip-chart, projection of films, television, and radio spots, and an adequate face-to-face communication system in the clinic. The main support for the program was channeled by USAID via ORT (Organization for Rehabilitation through Training). FOMECO has requested assistance from the International Institute for the Study of Human Reproduction (Columbia University) to design a service statistics system which could be applicable to the rest of the country, as well as suggestions for KAP and other relevant social and demographic studies. The University of North Carolina, via Dr. Roger Bernard, has provided some assistance in handling the family planning data and general statistics from the maternity hospital.

Besides the government program, several private groups have developed MCH-based family planning activities in various parts of Zaire. This includes "l'Eglise du Christ au Zaire," which is seeking support to send three candidates to the family planning course at Rennes, and a Baptist missionary group based at Vanga Hospital, which is attempting to provide comprehensive care to the surrounding rural area with technical input from the Department of International Health at the Johns Hopkins School of Hygiene. There is also an experimental family planning information program under the guidance of a team from Brussels University (CEMUBAC) in Kivu, under the leadership of Dr. Vis.

IV. UNIVERSITY AND INSTITUTIONAL DATA

Despite the rudimentary state of formal institutionalized development planning, there is growing recognition of the need for more accurate information about the size, characteristics and changes of population. In the field of demography, as with health services, the shortage of trained personnel is a leading impediment to further development.

Attention has already been given above to the need for medical personnel. Regarding needs for demographic training, it should be noted that virtually the only actual or potential consumer in Zaire for persons with higher demographic training, apart from those needed to sustain the university teaching program itself, is government. The leading agency within the government presently doing demographic work is the National Institute of Statistics. It is a section of the National Office of Research and Development, which in turn reports directly to the Office of the President. It is thus not a component of the regular ministerial structure of government. The institute is the agency that has carried out the urban surveys mentioned above. In addition, it routinely carries out surveys of business enterprise and industrial production. The institute has a regular staff of about 300 people. There are around 130 field interviewers; the rest of the staff consists of administrative personnel, data processing specialists, research assistants, and a scientific research staff of about thirty. The scientific director of the institute estimates that he will need approximately five new university trained demographers in each of the next five years.

In addition to the National Statistical Institute, regular ministries such as Agriculture, Education, Health, Labor, and so forth each maintain their own specialized statistical service agencies. Each of these agencies likewise become potential consumers of demographically higher

trained personnel.

Finally, it should be noted that given the vast spread of territory in Zaire, a good many activities must inevitably become regionalized. To the extent that demographic data gathering becomes more actively pursued in coming years, the need for local staffs with qualified personnel to direct them in regional offices will expand the demand. (The country is now divided into nine provinces, with populations between 1.3 and 3.6 million each.) Gathering and analyzing demographic data for national and provincial planning purposes over the next five years might well employ the efforts of something like fifty university-trained professionals.

The supplies of both demographic and medical talent to meet the needs of Zaire depend upon work within the National University of Zaire. Formal departmental structures in both areas already exist within UNAZA and no other institution in the country offers any realistic alternative.

After independence, three universities evolved in Zaire. The Catholic University of Louvain, Belgium, created a branch in Kinshasa (formerly Léopoldville) called "Lovanium." The Universities of Brussels and Liège helped to create the "Université Officielle du Congo" (UOC) in Lubumbashi (formerly Elizabethville), and a Protestant missionary group started a university in Kisangani. Based on three different philosophies, this university system became unacceptable to the government of Zaire, and in 1971 President Mobutu decided to merge the three universities and created the "Université Nationale du Zaire" (UNAZA) based in Kinshasa, with the various faculties relocated among the three campuses of Kinshasa, Lubumbashi, and Kisangani. In addition, organized under the umbrella of the National University are included a large number of special purpose higher schools covering a wide array of disciplines.

The budget of UNAZA comes from the Ministry of Education with supplementary assistance from the budget of the presidency. There is a moderate degree of autonomy in the university, but some potential for conflict with the government exists.

UNAZA has its central administration and main campus in Kinshasa and two additional campuses in Lubumbashi and Kisangani. The Faculties of Law, Medicine, Theology, Economics, Physical Science, and the Institute of Paramedical Personnel, among others, are located in Kinshasa. Agronomy and Pedagogy are in Kisangani, and the Faculties of Literature and History, Sciences (biology, botany, geography, and geology), Polytechniques, Social, Political and Administrative Sciences, and Veterinary Medicine are located in Lubumbashi. This public university is headed by Rector Tshibangu Tshishiku; Vice-Rector Lokwa Ilwa Loma is in charge of the Kinshasa campus, Vice-Rector Koli Elombe Motukoa is in charge of the Lubumbashi campus, and Vice-Rector Elungu Pene Elungu is in charge of the Kisangani campus. The faculty at the campuses of Kinshasa and Lubumbashi consists of a large number of expatriates who have either been recruited directly and are paid by the university or have been recruited by bilateral assistance (mostly Belgian and French) or by multi-lateral assistance. Enrollments have recently been on the order of 2,000 students at Kisangani, nearly 4,000 at Lubumbashi, and 8,000 at Kinshasa.

Because of the newness of the organizational structure as well as the great distances between campuses, the amount of information that flows among members of the three faculties is very limited indeed. For example, no catalog has been produced in recent years.

The physical separation of the three campuses contributes to the problem of adequate administration of university affairs. It is difficult enough to maintain day to day control over university activities, quite

apart from the possibility for innovation in curriculum.

Another important source of strain on the administration has been an extremely rapid growth that has taken place since independence. It is estimated that the increase in the number of students in the whole National University of Zaire has been something like 30 percent per year since 1960. A good deal of this growth has taken place through the development of the special purpose higher schools, but increases in enrollment on the three main university campuses has been very rapid, as well. Increases in the number of students has been considerably more rapid than increases in university budget. Moreover, the growth has come during a time of occasional political instability. This has probably led to excessive faculty turnover and losses of key personnel. The quality of education has probably declined. In addition, the increased numbers of students have placed heavy strains on the physical plant, which now, in Kinshasa at least, shows severe evidence of deterioration.

In part, the very rapid increase in higher education was a result of educational policies maintained by the Belgian colonial administration. At the time of independence, Zaire had only a handful of the university-trained students so there was much ground to be made up (comparatively more than in the former British or French territories). However, there is no evidence to suggest that the pressure to continually increase the numbers of new students will slacken in the near future. One study indicates that the structure of degrees in the Zairois system is such that the satisfactory completion of work at one academic level really leads only to entrance into the next level. Zaire has already reached the point where a student who has completed secondary school does not find ready entry

into the labor force. The pressure to seek even higher degrees in order to assure ultimate job security continues to be very great.

The structure of diplomas in Zaire is quite simple. Primary and secondary schools consist of a sequence of six years, two years, four years. Following the completion of secondary education, a student may enter a higher school or may go to one of the three main campuses of the university. On a university campus, the student spends two years in a comparatively non-specialized program. After that he enters a specialized departmental course of about two years duration, referred to as a course for the "licence" degree. If the student successfully completes the "licence" formal course, work in the university is ended and the student may proceed to the "doctorat." Work for the "doctorat" is done while the student is employed as a regular member of faculty acting as a laboratory or teaching assistant. The assistant also continues to work privately on a thesis.

The remainder of this report deals with those departments of UNAZA directly concerned with population. First, attention will be given to the Faculty of Medicine, the Institute of Health Techniques in Kinshasa, and the health related activities on the Lubumbashi campus. Within the Faculty of Medicine, this report will be restricted to the Department of Obstetrics and Gynecology and the Department of Public Health. Second, the Department of Demography will be discussed.

Faculty of Medicine and Pharmacy, Kinshasa

The Faculty of Medicine and Pharmacy is located on the main campus of UNAZA, about twenty kilometers from Kinshasa. The university's 460-bed hospital is within short walking distance from the university campus. This

faculty is under the directorship of Dean Paul Fischer, a pharmacist on leave from Liège University until next July. He is likely to be replaced by the present vice-dean, a Zairois pharmacologist who has been working for many years in the laboratories of Louvain University in Belgium.

The total student body for the Faculty of Medicine and Pharmacy, which includes the Medical School, Dental School, and School of Pharmacy, is around 1,500 students. Following the 1971 reform of the Medical School, the seven year program was reduced to six years. The policy of open admission, resulting from the government's desire to produce large numbers of graduates as soon as possible, has been responsible for large classes in each of the six years of the medical school: in year one and two there are over 300 students; in year three, 280; in year four, 400 (this results from the 1971 decision to merge year two and three); in year five, 200; in year six, 98. Such large numbers of students have resulted in overcrowded auditoriums during the first years of medical school and the impossibility of providing adequate laboratory space. In the clinical years, it is estimated that the university hospital can accommodate only forty students; the faculty has used alternate clinical training sites at Hopital Mama Yémo and Hopital Sendwe in Lubumbashi, and is seeking other clinical facilities. This situation has obviously raised the question of reopening the Medical School in Lubumbashi. Official sources have categorically stated that a new medical school will be opened next year in Lubumbashi, while other equally official sources have also categorically stated that there will be no second medical school next year in Lubumbashi. This should be viewed as one aspect of the contradictions existing between the government policy and the university capabilities. The government wants first to train large numbers of students to meet the health needs

of the country, and second to see the university play a role in providing care in some communities in Zaire, including rural health centers. On the other hand, the faculty does not have adequate staffing or financial resources to properly train the present number of students, and seems to prefer teaching a more individually-oriented type of medicine with emphasis on the traditional specialities.

Over the past two years the Rockefeller Foundation has sent two missions to Zaire to assess the health needs of the country and the potential of UNAZA in meeting these needs. In a May 1973 report, the Rockefeller Foundation considered the possibilities of assisting UNAZA in the development of a program of community based medicine either in Kinshasa or Lubumbashi. Although the report has generally been accepted, some faculty members have criticized the emphasis on preventive medicine and public health. It appears now that the Rockefeller Foundation would rather fund the Institute of Health Techniques to train paramedical trainers.

To summarize, the Faculty of Medicine is still searching for its proper role, as well as the means to fulfill it, in the difficult and changing context of this new nation.

Department of Public Health

The head of the Department of Public Health is Professor Ngwete, who is also the director general of the National Office of Research and Development (ONRD) and consequently heads the department in absentia. The man next in line unfortunately has responsibilities with the French Technical Assistance in Zaire and cannot devote much time to the department. Consequently, most of the responsibility is presently assumed by a Belgian professor from the Institute of Tropical Disease in Antwerp, whose main

interest is parasitology. Two teaching positions in public health have been open for two years, but neither the Belgian Technical Assistance nor WHO has been able to fill them. Dr. Cecile de Sweemer was offered the position by the Belgian Technical Assistance but declined in favor of her present assignment with the Ford Foundation in West Africa. The present plan is that a professor from the Brussels School of Public Health will come in the fall for two to three months to teach some public health at the university. At the present time one may consider the department of Public Health as nonoperative; it remains to be seen what the professor from Brussels will be able to accomplish in a few months.

Department of Obstetrics and Gynecology

The Department of Obstetrics and Gynecology is headed by Dr. Emirze, a Turkish gynecologist from Istanbul, who has had ten years of experience with WHO. He was first at Hopital Mama Yémo, then was appointed professor of obstetrics and gynecology at Lubumbashi and finally at Kinshasa. Dr. Emirze is quite discouraged by the situation at the university and intends to return to Istanbul in the near future. Dr. Emirze has five Zairois associates, among whom are Dr. Ndayitadi, Dr. Bofunda, and Dr. Nbiye. Dr. Nbiye is presently assigned to Lubumbashi. The associate professors assume other clinical responsibilities besides their university assignments. Ten residents (four juniors, six seniors) complete the staff of the department. With about 2,500 deliveries a year at the university hospital, the department is unable to provide adequate clinical training to the medical students. Fourth-year students are taught thirty hours of obstetrical practice and sixty hours of theory, thirty hours of gynecological practice and seventy-five hours of theory. Two hours are devoted to contraceptive technology. During the sixth year, medical students spend three months doing clinical work in obstetrics and gynecology. Limited staff and curriculum

requirements result in a largely theoretical training.

There is no family planning clinic at the university hospital. Until now, family planning has probably been very low on the priority list of the Obstretics and Gynecology Department. The recent seminar, organized in Kinshasa by FOMECO and in which the department played an important technical role, might possibly increase interest in this field. But this will depend on the future head of the department. Dr. Tsibangu, a gynecologist now doing postgraduate studies in the department of Dr. Hubinont at Brussels University has often been mentioned as a likely candidate.

Institute of Paramedical Training

Of possible greater potential in the short run is the Institute of Paramedical Training (L'Institut des Techniques de la Santé) led by Dr. Roseti, an Italian physician under WHO contract. Basically, the institute has two levels for training paramedical personnel: one level accepts students with three years of secondary education and provides a three-year training program; the other takes students who have completed their secondary education and enrolls them also in three-year programs. The first program, although more realistic under local conditions and attractive to larger numbers of students, appears neglected by the university.

The institute trains the following types of personnel: hospital managers, radiology technicians, physiotherapy technicians, laboratory technicians, hospital nurses, midwives, nurse anesthetists, and nursing instructors ("monitrices"). In the future they plan to train dental technicians and psychiatric assistants.

The hospital nursing section enrolls 100 students in the first year, fifty in the second and twenty-seven in the third. In the midwifery section, there are ten students in the second year and four students in the third year.

The program for nursing instructors includes only fourteen students.

The discrepancy between the number of medical students and the number of paramedical students could become a major obstacle in delivering health services to the population. This problem has been partially recognized by the university, the government, and FOMECO. Because of this, the institute would seem to have greater autonomy and hopefully a higher priority in terms of funding and international support. The Rockefeller Foundation has shown interest in this institution, which might align with their policy of training health workers. Recent information seems to indicate that the Rockefeller Foundation will attempt to cooperate with WHO in developing the institute as a center to train teachers for other paramedical institutions in Zaire.

Dr. Roseti is particularly eager to obtain help in developing a training program in MCH and family planning as well as other fields. Presently, the institute is very poorly equipped with books, films, and other teaching materials. The development of this institution might be a very worthwhile investment in Zaire; the program of the Rockefeller Foundation should be observed with care.

Campus of Lubumbashi

The campus of Lubumbashi, like its parent organization, UNAZA - Kinshasa, is a government-funded and administered institution operating under the "Commissaire d'Etat" for National Education. The university activities are divided among three locations: the campus, a few kilometers from town where the Faculties of Science (biology, botany, geography, and geology), of Polytechniques and Social and Political Sciences, as well as the student and faculty houses are located; the administrative building where Vice-Rector Koli and the deans for Academic and Administrative Affairs have their offices; and Hopital Sendwe,

where the seventeen university physicians work with their colleagues from the MOH and where the Faculty of Veterinary Medicine (graduating class of eighty students) is also located.

There are presently 2,436 students in Lubumbashi: 638 in first year, 610 in second, 119 in third, and 25 in fourth year. At the masters ("licence") and doctorate level, there are 502 students in first year, 327 in second and 20 in third. The Medical School in Kinshasa plans to send thirty sixth-year (last) medical students to Lubumbashi during the 1974-75 academic year. Presently only ten are there. There is a School of Nursing and Midwifery near the hospital, but it stopped requesting physicians to teach there two years ago. It graduated twenty midwives in 1973 through a four-year program.

The university and MOH staff at Hopital Sendwe are overwhelmed with emergency care, inadequate hospital facilities, poor hospital administration, the attraction of private practice, and deep internal dissentions (university versus MOH, expatriates versus Zairois, WHO versus Belgians, and so forth). The resulting atmosphere is very tense, communications are reduced to a minimum, and the main priority seems to be staying out of trouble by doing as little as possible. There are exceptions, however, to this picture. Dr. Wierzbicki (WHO, Poland), head of surgery, runs a clean and seemingly efficient department. He strongly supports a public health approach including MCH-FP for a country like Zaire, even at the expense of the hospital system. Dr. Talleyrand collaborates with his unpaid pediatrician wife on a study of maturation of the African child. Dr. Compere, a neurosurgeon and professor of anatomy, is able to continue a study of the brain of the baboon because he has given up surgical practice and apparently any activity at the hospital. Similarly, Dr. Vincke has given up all medical practice to teach anthropology and do research on the African child in the Faculty of Social and Political Sciences. Dr. Vincke

teaches sociology to sixty students in the second year of social sciences and anthropology to twenty students at the master level. He is interested in studying the various traditions and customs influencing fertility, including infanticide, postpartum sexual taboos, traditional contraceptives, and abortifacients.

The Department of Obstetrics and Gynecology, under Dr. Jean Dierickx and Professor S. Leszczynski, has major problems. It accounts yearly for 8,000 deliveries with only 175 beds. With a staff of eight physicians, it offers prenatal care to about half the expectant mothers and no postpartum visits. All normal deliveries are attended by auxiliary midwives. The low level of care provided is criticized. Nevertheless, all babies receive BCG and smallpox immunizations. The physicians in charge of the department blame the present situation on a total breakdown of authority in the hospital. Dr. Tshibamba, a gynecologist and director of the hospital, plays an active role in this department. Another gynecologist, Dr. Mutash, has been asked by Vice-Rector Koli to develop some type of family planning activities in Lubumbashi. Unfortunately, at the time of my visit, Dr. Mutash was in the United States on a Rockefeller Foundation fellowship to study English and observe family planning activities. I was told that Dr. Mutash was considering the creation of a family planning clinic for students and faculty on the campus of the university.

The university also has the responsibility of providing medical services in a health center that has worked without physicians or supervision for some time. The level of care and the working conditions are reported to be atrocious. There was a recent epidemic of tetanus neonatorum among children born in the center -- six cases in a few weeks.

Until UNAZA decides to reactivate the Medical School in Lubumbashi (and everybody there seems convinced that it will happen this fall), there will

be little training potential in the health field. Even if such a decision is made, the need for adequate teaching facilities and competent faculty, the heavy clinical load, and the almost total lack of research facilities do not augur well for training or research in the near future. It would certainly be wise to defer any support until the Rockefeller Foundation has clarified its policy and started implementing its program.

Library facilities seem generally adequate for the university with the exception of health books and journals, which stopped coming to Lubumbashi in 1970. Computer facilities are available at the university.

There is interest in developing family planning activities in the Provincial Health Department section of MCH. Nevertheless, it seems that the need for MCH services and health education is so great that it could not be met in the foreseeable future, and it is questionable whether adding family planning services to such a weak program could be of any value.

One should certainly not omit a reference to the luxurious hospital, by African standards, run by Gecamines (government owned copper mine). Such a facility could certainly be an interesting testing ground for the role that private companies could play in the field of family planning. Dr. Roc, a United States-trained Haitian surgeon, has demonstrated interest in family planning in the past, but whether he would be able to enroll the support of Gecamines for a large scale program remains to be seen.

Department of Demography

The Faculty of Economic Sciences is located on the Kinshasa campus. It comprises three departments: Economics, Commerce, and Demography. The departments have enrollments of 210, 270, and 15 students, respectively.

The Department of Demography was begun in the autumn of 1974 and

thus has just completed its first year of operation. It is fully approved and has the same authority and qualifications as any department in the university. It was established with the assistance of the Population Council, using funds made available by USAID.

In order to enter the program in demography, a student must have completed two years of undergraduate training in one of the following fields: law, administration, economics, political science, sociology, mathematics or statistics, medical science, history, or anthropology. Students may therefore enter the program with training obtained outside a department located on the Kinshasa campus. In particular, social science graduates from Lubumbashi have the necessary qualifications.

The curriculum of the Department of Demography is built around a program of some 400 hours of lectures during the first year and little more than 300 hours of lectures during the second year. The lectures are reinforced by a substantial time in discussion sections. The students are also required to participate in research seminars comprising about 100 hours during the two years and to produce a "memoire" -- equivalent to a brief thesis -- during the final year.

The curriculum is divided into individual subjects. Topics in the first year include techniques of demographic data collection, mathematics and statistics applied to population, fertility and nuptiality, mortality and morbidity, population history, use of computers, human genetics, population geography, and environment and the human habitat. During the second year, the subjects covered are migration and urbanization, economic aspects of population, socio-cultural aspects of population, population doctrines and population policies, the regulation of births, demographic models, something called "demographic perspectives," and a course on the application of demography to

development planning.

This program of lectures is very complete in its effort to cover all possible relevant subjects. It is very much in the teaching style of the University of Zaire -- the program in economics is very similarly organized. There appears to be a tendency to overstress formal lectures emphasizing findings from demographic research elsewhere, at the expense of local field experience for the students.

The program in demography is built around Father Joseph Boute. It was he who developed the curriculum, serves as head of the department and offers the largest share of lectures. Additional teaching (equivalent to about 40 percent of the total offering) is provided by faculty drawn from other departments of the university. For example, a member of the Geography Department gives the lectures on geography and population, the Department of Public Health of the medical faculty provides lectures on human genetics, the computer center covers the utilization of computers and programming, and so forth. In addition, the department has the support of two young assistants to cover the discussion sections. Plans for next year include the addition of two members of staff to the Department of Demography.

It is anticipated that the Department of Demography will develop an active research program as quickly as possible. At this stage in its development, however, research activities have been severely restricted.

The research seminar during the first year has taken up a particular project of some interest. The students have compiled a large number of texts used in a variety of courses in secondary schools in Zaire and are analyzing them for their population content. Father Boute reports that the students have responded to the seminar with enthusiasm and hard work. Some of the most provocative findings have come from the review of texts used for literary and

historical subjects. In addition to analyzing the existing population references in secondary school text books, the students are recommending topics to be covered and modes of approach that might be considered in curriculum changes.

It is expected that by next year more field research adapted to the needs of the students will be included in the program.

V. CONCLUSION

Medical

Aside from a few hours of teaching contraceptive technology in the Department of Obstetrics and Gynecology on the Kinshasa campus, there are practically no family planning activities at UNAZA. The Department of Public Health is so understaffed that it has only a nominal existence. The future of the Department of Obstetrics and Gynecology will have to await the nomination of a replacement for Dr. Ermize. Presently, the Institute of Paramedical Training is the most interesting institution and has the greatest potential, mainly due to the leadership of its director, Dr. Roseti. In Lubumbashi not even minimum conditions for institutional development exist.

Over all the Université Nationale du Zaire is an infant institution whose reputation is still to be established and whose priorities have been to produce large numbers of graduates without giving enough importance to quality. There is some minimal interest in family planning activities among the staff of various institutions, and it is possible that such interest will grow now that family planning has become politically acceptable in Zaire. Nevertheless, it seems premature to expect any major program at the university. Foreign donor agencies could assist the university in reviewing alternate strategies for training health workers to meet the needs of the country. But until the university has succeeded in implementing an educational system to meet these

needs and requests specific assistance, there is little that foreign donors can do to bring their resources to bear effectively. The Rockefeller Foundation has demonstrated interest in helping UNAZA adapt its health sciences curriculum to the needs of the country. Should this interest develop into a program of assistance, it would be worth watching carefully for possible new opportunities.

Demographic

Given the highly centralized organization of the educational system in Zaire and the fact that a start has already been made, the only reasonable present course of action is to support the Department of Demography. For the moment the primary need of the program is to entrench itself and to continue to build and produce a cohort or two of students. Priority must be given to assuring the complete establishment of the teaching program already begun into the basic structure of the university.

For the slightly longer term, there are several issues that will require attention and that may eventually lead to modifications in the program as it is now organized.

1. Staffing is likely to remain a matter of importance for some time to come. It is essential that additional permanent staff be obtained with the department as their primary affiliation within the university. Very much now rests upon the shoulders of Father Boute alone. It is extremely useful to have staff support from other departments, visitors from abroad and eventually also personnel from other campuses. The department, however, will need its own core staff to provide the continuity, commitment, and the requisite autonomy.

In addition, the department will have to work toward being independent of any single individual. The strong pressure toward Zairianization presents the risk that Father Boute may not be able to continue functioning as

head of the department indefinitely. Attention should be given to the development of local personnel as quickly as possible. The contribution already made by Father Boute and the potential in his further efforts are immense and readily recognized. However, departmental continuity calls for realistic prudence.

Finally, in view of the inefficient administration of the university, special attention must be given to nonsubstantive activities. At present, Father Boute devotes considerable time to administrative and even clerical work. The department needs an administrative assistant with experience in university operations, or at least someone who can learn to function within the university as quickly as possible. The person who fills this position should be of higher than average remuneration. It is essential that the person who fills the position be a Zarois citizen.

2. Given the present state of university finances, on the heels of a period of extremely rapid growth, it must be recognized that additional equipment needed for the development of the program will have to continue to come from outside. The university has been remarkably generous in providing office and classroom space to the department, given its limited resources. To expect any more would be unrealistic. Nevertheless, substantial needs for additional equipment for the research program, remain unmet.

3. The organization of the university on three separate campuses provides a potentially favorable environment for the development of some degree of competition among the centers. There is some evidence that such competition has already begun to appear. It is reported that members of the Department of Sociology at Lubumbashi argue that demography should be located on that campus. There does not appear to be any advantage to moving the department now.

On the other hand, there may be considerable advantage in attempting

to encourage intercampus cooperation, to broaden and reinforce the impact of the department. Several things might be explored: Faculty seminars, research and fellowship support for faculty at Lubumbashi and Kisangani. Another form of cooperation might be to use the campuses as bases for the research programs to be developed by the department. Research involving students from the department in Kinshasa and faculty members from the three different campuses could be of considerable interest throughout the university.

4. An issue facing the Department of Demography, as it does the whole University of Zaire, is to improve working relationships with relevant agencies of government and other institutions in the country. It is recognized in Zaire, and even on the campus, that the university tends to be somewhat unresponsive to the needs of the country. To a considerable degree this is a reflection of the heavy demands of increased enrollment placed on the university during recent years. Rapid expansion has made it difficult for the university to develop innovative and more responsive curricula. Moreover, some of the remoteness goes back to the founding of the universities in the colonial era, when separation from the government was quite intentional.

Whatever the precise cause, the urgent need now facing the various departments is to develop close working relationships with government. In the case of the Department of Demography, the relationship should chiefly be with the National Statistical Institute and the National Office of Research and Development.

Some frictions in this area have already begun to develop. A notable manisfestation of this is that Father Boute was recently relieved of a part-time appointment at the National Statistical Institute. The reason given was that the institute would no longer retain part-time affiliations.

Whatever the underlying causes of the friction, it is something that

should be minimized or resolved if at all possible. Although the Zairois government has not provided a particularly good model of demographic data gathering or analysis for a Third World country, it might be desirable to have personnel from NSI participate in the teaching program of the university. The NSI is the organization in which many students will have to work after graduation from the university.

A number of possibilities come to mind which might be considered. In addition to exploring the possibility for members of the NSI or the National Office of Research and Development to lecture students in the Department of Demography, it may be possible to develop an internship program. This could be a regular arrangement for some of the students during the vacation between their first and second years. They could be used in supervision of field work, data processing, or analysis of information already gathered, working under the joint supervision of members of faculty and NSI staff. Another possibility might be to call upon NSI or NORD staff to help develop a set of teaching materials specifically adapted to the needs of Zaire. There are undoubtedly other possibilities, as well.

5. The department needs to develop a research program of genuine substantive as well as heuristic value. It is important that this program be designed to give the students experience with the kind of research most suited to conditions and needs in Zaire.

The development of the demographic program would probably be best served by placing emphasis on accurate measurement and careful sampling for basic variables, rather than the testing of elaborate theories of causation which draw heavily upon work already done in other countries. Stress should be placed on the problems of field work. In particular, the students should have experience working not only in Kinshasa but in rural communities as well.

It may be useful to have outside advice on the development of the

research program early in the next academic year, after new full-time members of staff have arrived. That would be a good time to plan an extended research program that might span a couple of years. This would give a basis for developing an integrated body of research with a reasonably intensive examination of some significant issue, although beginning in a small way from the limited resources of the new department.

In general, it is a matter of some importance to begin research which will give the students field experience in the Zairois context, to move demography away from the more theoretical and academic framework.

6. In a similar vein, it will be important to continue to adjust the curriculum to put maximum focus upon problems and data arising in Zaire itself. Father Boute has already made a start in this direction but it is important that once he has additional staff support the development of local teaching materials be pressed as quickly as possible. Moreover, the rather full curriculum might well be reviewed from time to time to see whether it is productive to continue teaching the full range of academic materials. It is possible that careful examination will show that the range of topics can be narrowed to give greater focus on issues of greater local concern. As the research program continues to develop, it should be quite possible to base more of the lecture materials on local findings and problems.

7. Finally, it may well be that Zaire presents a greater challenge than was found in almost any of the Anglophone institutions in which demographic training and research has already been developed. If nothing else, the academic institutions of Zaire have faced more severe pressures of rapid growth from a very small base. The data is certainly less adequate.

In view of this, the continuing need for outside consultation (as distinct from staffing) will be considerable. The department will need regular

visits for discussions of the whole range of issues involved in its development. The consultation will be most effective if done with adequate time by someone familiar with the Zairois background.

SOURCES OF INFORMATION

Site visits: D. Heisel, February to March 1974; R. Castadot, March 1974.

June 1974

CONTENTS

ZAMBIA

ZAMBIA

Joel Montague

I. COUNTRY SETTING

Zambia, formerly Northern Rhodesia, is bordered by Zaire, Tanzania, Malawi, Mozambique, Rhodesia, and Namibia. The country is largely plateau and covers approximately 291,000 square miles. The Zambian economy is based primarily on copper, of which Zambia is the world's third-largest producer. In mid-1978 Zambia's population was estimated at 4.7 million, with a crude birth rate of 50 and a crude death rate of 21. (The 1969 census showed a population of 4.1 million.) A national census is scheduled for 1979. Although the rate of natural increase is 2.9 percent, urban areas are growing at an estimated 8 to 10 percent per year.

II. POPULATION POLICY AND PROGRAMS

There is no official population policy in Zambia, but the Family Planning and Welfare Association was established in September 1971. Its headquarters are in Ndola, the heart of the copper belt. The need for family planning services was expressed by various bodies that felt such services would be useful not only for population control but also for child spacing.

The president of the Zambian Family Planning Association is Mr. Lukutati. A conference on women's rights in Zambia was held in November 1970, and participants expressed the need for immediate family planning services. Since 1972, abortions can be performed legally. The operation will be allowed

if three doctors agree that there is a risk to the life of the woman, risk of injury to the physical or mental health of the woman, or substantial risk that the child will be born with a serious mental or physical deformity.

III. UNIVERSITY AND INSTITUTIONAL DATA

Public Health and Family Planning

University of Zambia

The University of Zambia in Lusaka is likely to develop into a center of some regional influence. This is particularly true now that Dr. E.S. Grech is head of the Department of Obstetrics and Gynecology.

The capital city, Lusaka, has a total population of 400,000. Approximately 85 percent of the births in Lusaka each year take place at the University of Zambia's teaching hospital. There the Department of Obstetrics and Gynecology has at its disposal 167 maternity and 72 gynecological beds. In 1973 there were 15,558 deliveries and some 3,966 gynecological admissions. Abortions account for about 20 percent of the gynecological admissions.

Under Dr. Grech's direction, the university hopes to undertake a considerable expansion of its training activities in family planning. It plans to:

1. Interview and instruct all delivered patients in family planning before they leave the hospital, and provide service to whatever extent is practical.

2. Integrate the services of the hospital with thirteen outlying clinics in Lusaka, so that patients unable to return to the hospital for postnatal care can attend the nearest clinic. This type of referral is necessary, because most patients are discharged from the hospital forty-eight hours after confinement. A mobile team from the hospital will visit the peripheral clinics

on a regular basis to teach, take part in the antenatal and postnatal supervision of patients, and provide family planning services.

3. Start a three to four-week training course in family planning for nurse-midwives, a four week course for all residents and interns at the Medical School, and a four-week course in family planning for field workers and social workers in conjunction with the University School of Social Work and the local IPPF affiliate. The university authorities believe that a more integrated type of service between the hospital and peripheral clinics will improve the selection of high-risk patients and also the standard of postnatal care, which will in turn motivate the patients toward family planning.

The new program at the University of Zambia, supported in part by a Population Council grant, will be the first in East Africa in which a university has been, in effect, made responsible for the delivery of a capital city's entire maternal and child-health family planning service and has also shown interest in teaching and training all categories of workers interested in family planning and in research in the most modern contraceptive technology.

Demography and Related Social Sciences

University of Zambia

The university had approximately 3,200 students in 1973. During the past few years, approximately 125 students have been graduated each year. The faculty is still approximately 85 percent expatriate, although efforst are underway to increase the Zambian staff. Thirty university graduates were studying abroad for higher degrees in mid 1973, although none was enrolled in a demography program.

Teaching of demography began at the University of Zambia in March

1968 with the appointment of Dr. Patrick Ohadike, a Nigerian, assigned to the Institute for Social Research at the university (formerly in the Rhodes-Livingston Institute). Professor Ohadike also taught a course in demography in the Department of Geography. The Population Council provided a grant in support of his research on population growth in selected urban and rural areas of Zambia in 1969. A second grant, supporting a study of rural-urban migration, was cancelled when Professor Ohadike left Zambia in 1970 to join the Economic Commission for Africa, based in Addis Ababa.

Subsequently, the Institute for Social Research became the Institute of African Studies at the university. The institute has been trying for some time to recruit a demographer for a research position. Efforts in this direction have continued ever since Ohadike left, but they have thus far been unsuccessful.

The vice-chancellor of the university is very much in favor of appointing a demographer either at the university (in one of its schools) or at the Institute of African Studies. (The Institute of African Studies is the research arm of the School of Humanities and Social Sciences.) Such a post would initially have to be filled by an expatriate with some local facilities, such as housing, provided by the university. Hopefully, after a year or two, one or more of the better B.A.-level Zambian students specializing in demography could be sent abroad to do master's level work in that discipline. According to the vice-chancellor, there is no immediate need for Zambians trained in demography at the Ph.D. level. The process of Zambianization and the creation of graduate schools is taking place simultaneously, as Zambian faculty members become available. At the present time, most Zambian faculty are trained to the M.A. level only.

The School of Humanities and Social Sciences has been undergoing a reorganization from a traditional departmental structure toward three interdisciplinary concentrations. development and economics, management and administration, and government and social change. Until the reorganization is completed, along with anticipated personnel changes, no plans for incorporating demography into the curriculum can be made final.

Central Statistical Office

The UNFPA has been providing the services of a demographer-statistician (Mr. Sheikh) to the Central Statistical Office (CSO) since late 1973. He has been assisting in the analysis of data collected in the 1969 census, the design of various sample surveys on fertility, mortality, and migration scheduled for execution in 1975, and preparations for the 1979 national census.

Preliminary analysis of the 1969 data has been completed only in 1974. Although the results are certainly useful, it is difficult to ascertain from the data real growth rates at the provincial and national levels. A major difficulty is overlapping enumeration areas, a problem that will have to be corrected for the 1979 census.

The CSO is part of the Ministry of Planning and Finance. Of particular concern to the ministry are problems of rural-to urban migration, particularly in the copper belt and to the capital. The CSO has been assigned the responsibility of collecting, analyzing, and publishing data on these and other problems but has inadequate trained staff to fulfill all the data collection and analysis functions necessary to fulfill current and anticipated national development plans. The CSO has eight regional offices and a total staff of 430 with 26 professional posts, of which only three are currently occupied by Zambians.

Several Zambians are currently undergoing advanced statistical or demographic training abroad, but thus far only one intermediate-level Zambian staff member has returned to the CSO. An in-service training unit will be established in 1975.

IV. CONCLUSIONS

The development of greater interest in family planning research and services and in demographic research and activities in Zambia is hampered by the serious lack of staff trained in these fields. External agencies can make their greatest contributions in the form of staff development awards for overseas training of Zambian personnel and the initial provision of expatriate advisors at the University of Zambia and the Central Statistical Office. Some efforts in these directions have already been made; more are needed.

SOURCES OF INFORMATION

Site visit Joel Montague, June 1973.

July 1973