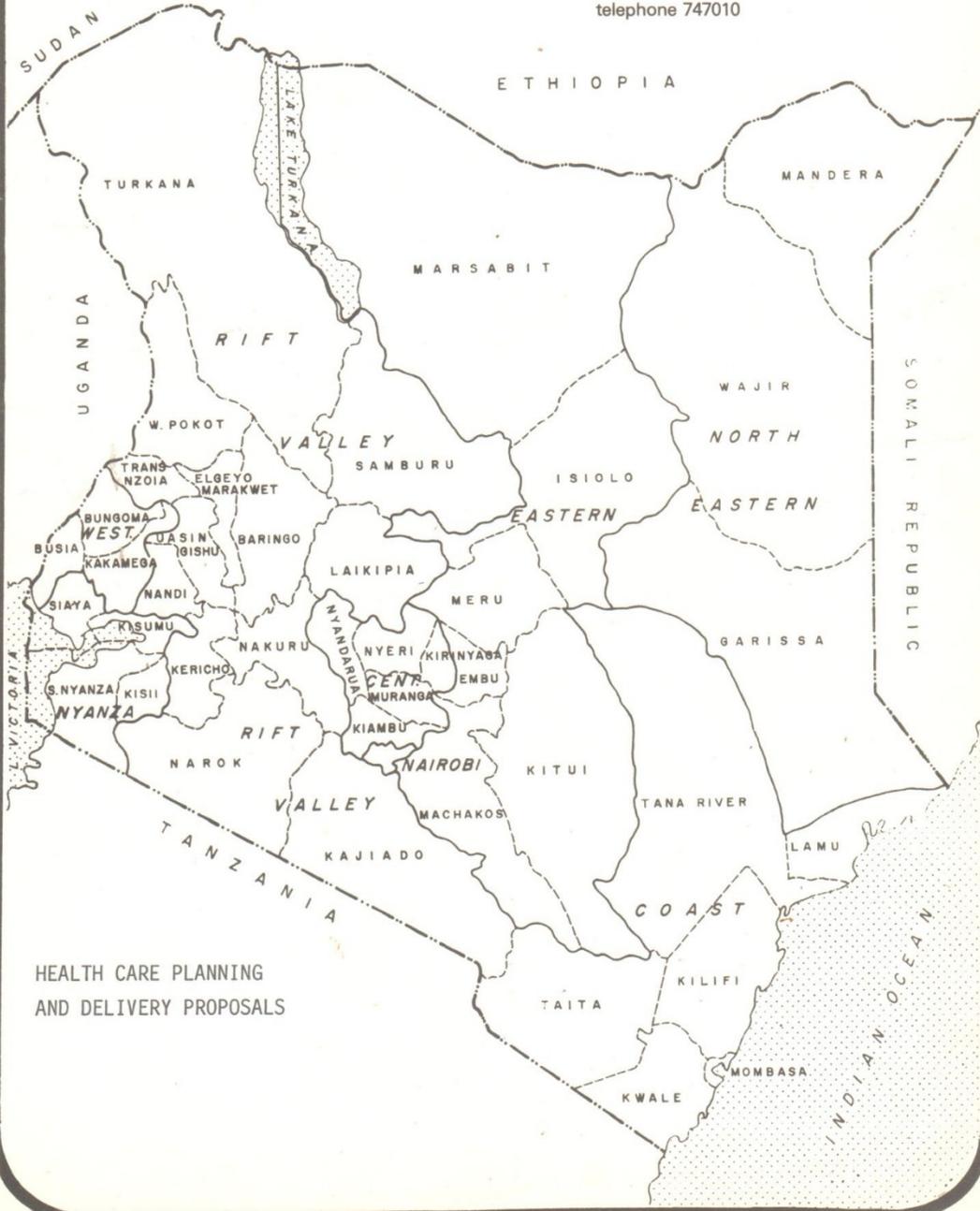


muticon/health 1/84



**mutiso consultants ltd.**  
development management  
p.o. box 14333 nairobi  
telephone 747010



HEALTH CARE PLANNING  
AND DELIVERY PROPOSALS



**mutiso consultants ltd.**  
development management  
p.o. box 14333 nairobi  
telephone 747010

14th August, 1984

The Secretary,  
National Council of Science & Technology,  
9th Floor. Utalii House,  
Box 30623,  
Nairobi.

Attn. Science Secretary ( Health Sciences )

Dear Sir,

RE : HEALTH CARE PLANNING AND DELIVERY RESEARCH PROPOSALS.

Enclosed please find our research proposals as required in your advertisement in Daily Nation of June 9th 1984.

The proposals are :-

1. Health Training and Management	P. 1
2. Health Manpower Planning	P. 6
3a Health Care Financial Analysis	P.12
3b Financing Mechanism for Health Care Delivery	P.21
4. Public Health Program Development	P.27
5a Food and Nutrition	P.35
5b Socio - Cultural Factors in Health Delivery	P.43
5c Effectiveness of Health Centres	P.50
5d Strategies for Integrating Traditional Medicine	P.57
The curriculum vitae of the researchers	P.66

We look forward to working with you in this crucial sector.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Mutiso', with a stylized flourish at the end.

Prof. G-C. M. Mutiso  
Managing Director

1. **TITLE** Health Training and Management.
2. **PRINCIPAL INVESTIGATOR:** Prof. G - C. M. Mutiso.
3. **INSTITUTIONAL BASE:** Mutiso Consultants Ltd.,  
Box 14333, Nairobi.  
Phone: 747010/501780.
4. **POSITION:** Research Director - Policy Specialist.
5. **COLABORATING RESEARCHERS.**
  - a) **Name:** Mutsembi Manundu BA (Nairobi) MA (Michigan)  
**Address:** Dept. of Economics  
University of Nairobi,  
Box 30197,  
NAIROBI  
**Position:** Lecturer - Resource Economist.
  - b) **Name:** Dr. Joshua Akonga BA (Nairobi) Ph.D. (Santiago)  
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- b) Dr. P.A. Agwa,MB,CHB. - Kijabe Medical Centre (Surgery)  
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- c) Dr. (Miss) B.W. Kamau - MB,CHB. MRC. Path. Candidate (KNH)  
(Pathology)  
Box 41172,  
NAIROBI.
- d) Dr. J.K. Mutiso - MB,CHB. Medical Officer (General Medicine)  
Infectious Diseases Hospital,  
Kenyatta N. Hospital,  
Box 41172,  
NAIROBI.

#### B. BACKGROUND OF PROJECT.

There is no formal and substantive training in administration or management for all cadre in health delivery services. There is urgent need to institute such training to improve the delivery of health care services in the country.

#### C. OBJECTIVES OF THE STUDY.

This study intends to investigate the following problems :-

- a) What training programs exist for middle level health workers in Kenya.
- b) How do the curricula for the health cadres relate to the demands of their work. For example, does it enable them to acquire administrative and managerial skills necessary to do their work effectively ?

#### D. APPLICABILITY OF RESEARCH TO PRESENT CONDITIONS IN KENYA.

It is expected that the research will enable the researchers to recommend modifications in the current curricula so that the training institutions can produce manpower that can manage the country's health resources more efficiently and effectively.

#### E. METHODS OF THE STUDY.

1. The first task will be to take a complete inventory of all training programs in Kenya as required by the client.
2. The second task will be to collect the curricula for each of the cadre and evaluate them with respect to the length of training and course content relating to management and administration.
3. A cross-section of all the cadre in the field will then be interviewed. About three districts in Kenya will be selected at random so as to meet the following criteria :-
  - a) a district in the hot humid zones like the Coast or the Lake Region.
  - b) a district in the dry zones like the Eastern Province.
  - c) a district in the high potential areas like Central Province and Western Province.
4. The project will then consider programs to facilitate the continuing of education for each cadre both at headquarters and in the field.

## References:-

- 1) Ndlovu : "Assessment of Needs and Training of Medical Assistants in Zambia".
- 2) Government of Kenya : "Guidelines for the Management of Hospital Outpatient Services" Ministry of Health, 1982.
- 3) Republic of Kenya : "Proposal for the Improvement of Rural Health Services and the Development of Rural Health Training Centres in Kenya", Ministry of Health; Nairobi, Kenya. 1982.
- 4) Republic of Kenya : "Organisation, Management and Transport Study : Final Report." by Coopers and Lybrand Associates. September, 1982.

## F. BUDGET SUMMARY (SIX MONTHS)

Item		For six months.
Personnel	-	KShs.132,000.
Equipment	-	KShs. 2,000.
Expendable Supplies	-	KShs. 10,000.
Travel	-	KShs. 40,000.
Subsistence	-	KShs. 35,000.
Data Analysis	-	KShs. 40,000.
Reports and Publications and Typing	-	KShs. 20,000.
Miscellaneous (Contingencies)	-	KShs. <u>15,000.</u>
Total	-	KShs. <u>294,000.</u>

## G. BUDGET JUSTIFICATION

## (i) Personnel.

- a) Six research assistants for one month (two in each district)  
@ KShs.1,500. = KShs.9,000.
- b) One statistical assistant for two months to help in computing data @ KShs.1,500. p.m. = KShs.3,000.
- c) One researcher (Social Scientist) with at least an M.A. degree for two man-months @ KShs.20,000. p.m. = KShs.40,000.
- d) Principal Investigator for two months @ KShs.40,000. p.m.  
= KShs.80,000.

## (ii) Expendable Supplies.

Stationery, etc = KShs.10,000.

## (iii) Subsistence.

Six research assistants for 30 nights	@ night	KShs.150.	=	KShs.27,000.
One researcher for 10 nights	@ night	KShs.400.	=	KShs. 4,000.
Principal Investigator for 10 nights	@ "	KShs.400.	=	KShs. <u>4,000.</u>
Total Subsistence			=	KShs.35,000.

## (iv) Data Analysis :

Manual and by computer = KShs.40,000.

## (v) Typing of Final Draft and Binding :

= KShs.20,000.

## (vi) Equipment :

A calculator = KShs.2,000.

## (vii) Travel car engine capacity 1,600 cc -

three districts = KShs.40,000.

1. **TITLE** Health Manpower Planning
2. **PRINCIPAL:  
INVESTIGATOR:** Prof. G - C. M. Mutiso.
3. **INSTITUTIONAL  
BASE:** Mutiso Consultants Ltd.,  
Box 14333, Nairobi.  
Phone: 747010/501780.
4. **POSITION:** Research Director - Policy Specialist.
5. **COLABORATING RESEARCHERS.**
  - a) **Name:** Mutsembi Manundu BA (Nairobi) MA (Michigan)  
**Address:** Dept. of Economics  
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NAIROBI  
**Position:** Lecturer - Resource Economist.
  - b) **Name:** Dr. Joshua Akonga BA (Nairobi) Ph.D. (Santiago)  
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- g) **Name:** Nicholas Munyaka Nzioki.
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- Position:** Researcher - Education Planning.
6. **COLLABORATING MEDICAL ADVISORY TEAM.**
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(Community Health,) Box 41172, **Nairobi.**
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- c) Dr. (Miss) B.W. Kamau - MB,CHB. MRC. Path. Candidate (KNH)  
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Box 41172,  
**NAIROBI.**
- d) Dr. J.K. Mutiso - MB,CHB. Medical Officer (General Medicine)  
Infectious Diseases Hospital,  
Kenyatta N. Hospital,  
Box 41172,  
**NAIROBI.**

## B. BACKGROUND INFORMATION.

Health manpower planning (ie. the CHOICE of types of health professionals and health workers, their numbers, duration of their training, areas of their deployment in a health care system after completion of training etc.), ought to be guided by the following :-

- a) The health needs of the population.
- b) The existing health care technology.
- c) The resources available for manpower development.
- d) Health care demand patterns.
- e) The government's commitment to the principle of equity in the provision of health services.

Criteria (a) and (b) determine the types of health personnel to be trained. The numbers of health workers and medical professionals in each type of health cadre is arrived at on the basis of (c), (d) and (e) above, thus essentially a national health manpower planning requires : -

- (i) a method of predicting health manpower needs over a given period of time.
- (ii) criteria for deploying the available manpower efficiently and equitably.

## C. OBJECTIVES OF THE STUDY.

1. To develop practical criteria for rationalising manpower posting at various levels of the primary health care ladder in Kenya.
2. To develop a method of predicting health manpower requirements.

The Research will attempt to answer the following questions :-

- a) Given the health needs of Kenya's population, what kinds of manpower are needed for primary health care system ?
- b) Given the available resources, how many of each kind of health manpower can the country afford to have over the next five or ten years ?
- c) Does Kenya have a health manpower shortage ? if a shortage exists, what is its magnitude ? what should be done about it ?

D. APPLICABILITY OF RESEARCH TO PRESENT CONDITIONS IN KENYA.

It is anticipated that the results of this project will lead to the preparation of health manpower planning programs which reflect the availability of resources and health needs of the population.

E. MATERIALS AND METHODS OF THE STUDY.

No special materials will be needed to carry out this study.

The major research instruments will mainly be questionnaires. These will be administered to a sample of providers of health services at the provincial, district and divisional levels. However data will also be collected from secondary sources - mainly from the government health facilities. Secondary data will also be collected from private hospitals and clinics.

References

1. Ministry of Health. Rural Health Development Project. Instructors and Students Manuals, Maseru, Lesotho.
2. Moore, T.G. "The purpose of licensing", The Journal of Law and Economics, October 1961.
3. Republic of Kenya. "A proposal for the improvement of Rural Health Services and the Development of Rural Health Training Centres in Kenya," April, 1973.
4. Yett, D.E. "An Economic Analysis of the Nurse Shortage," Lexington Mass D.C., Health & Co., 1975 .

## F. BUDGET SUMMARY.

Item	For six months
Computer data analysis	KShs. 40,000.
Personnel	KShs.152,000.
Equipment	KShs. 2,000.
Travel	KShs. 50,000.
Expendable Supplies	KShs. 15,000.
Subsistence	KShs. 18,000.
Typing of Draft Reports	KShs. 20,000.
Reports and Publications	KShs. 20,000.
Miscellaneous (Contingencies)	KShs. <u>20,000.</u>
Total	KShs.337,000.

## G. BUDGET JUSTIFICATION.

## (i) Personnel :

- a) Two research assistants for collecting secondary data and analysing them for four months @ KShs.1,500. p.m.  
= KShs.12,000.
- b) One researcher to help design questionnaires and interview medical officers for three months @ KShs.20,000. p.m.  
This one should have at least an M.A. degree in the social sciences. = KShs.60,000.
- c) Principal Investigator, for two months @ KShs.40,000. p.m.  
= KShs.80,000.

## (ii) Equipment :

One hand calculator @ KShs.2,000. = KShs.2,000.

## (iii) Expendable Supplies :

Stationery, etc. = KShs.15,000.

## (iv) Travel :

To interview medical officials in the provinces, a car of engine capacity 1,600 cc = KShs.50,000.

## (v) Subsistence:

- a) One researcher  
for 30 nights @ night KShs.400. = KShs.12,000.
  - b) Principal Investigator  
for 15 nights @ night KShs.400. = KShs. 6,000.  
Total Subsistence = KShs.18,000.
- (vi) Data Analysis - Manual and Computer = KShs.40,000.
- (vii) Training - none needed.
- (viii) Typing of Draft Report = KShs.20,000.
- (ix) Reports and Publications = KShs.20,000.
- (x) Miscellaneous (Contingencies) = KShs.20,000.

1. **TITLE** Health Care Financial Analysis
2. **PRINCIPAL INVESTIGATOR:** Prof. G - C. M. Mutiso.
3. **INSTITUTIONAL BASE:** Mutiso Consultants Ltd.,  
Box 14333, Nairobi.  
Phone: 747010/501780.
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Infectious Diseases Hospital,  
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Box 41172,  
NAIROBI.

## B. BACKGROUND OF THE PROJECT.

An important prerequisite in preparation of a financial budget for a health facility (a hospital, a health centre, or a dispensary), is information about unit costs of the services provided by the facility in question. Once unit costs of providing various services in health facility are known, estimation of total cost of operating that facility over a given time period is a straight-forward matter. An additional use of unit costs of providing health services is that they give health services managers an idea of the type and amount of the services they can afford to provide with the financial resources allocated to them by the government.

In this project, a method will be developed for finding unit costs of providing health services at different levels in Kenya's referral health care system. Particular attention will be paid to the factors that cause changes in unit costs of providing health care across different facilities and also in the same facility over time.

An attempt will also be made to compute ratios of recurrent health expenditures to development expenditures in various health facilities. These ratios (the  $r$  - coefficients) can be used to determine health care recurrent budgets that are consistent with given levels of development budgets and thus avoid inefficient allocation of financial resources between development and recurrent activities in health facilities.

A lot of work has been done on costs of providing health services (Feldstein, 1979). This work has been done mainly on cost of hospital care in developed countries. This study hopes to provide detailed information about the behaviour of health care costs in a cross section of hospitals and clinics in a developing country.

Total cost (expense) of providing health care in a health facility is equal to the size of the population that is served by that facility in a given time period, eg., one year, times the average cost per capita.

The average cost per capita consists of the average expenses required to treat one outpatient case, or to keep an inpatient for one day in a health facility.

Total costs at a health facility in a given time period depend on the health problems that a health facility deals with. In other words, the health care at a health facility differ by type of illness and also by case mix. This implies that budgets for health facilities must be allocated according to the health problems they deal with.

Studies on health care costs in developed countries (Evans, 1971, Feldstein, 1968, Berry, 1973), have shown that a good understanding of the behaviour of average costs at health facilities can be gained by splitting average cost of treating patients into two parts : the cost on labour inputs and the cost on non-labour inputs. This cost disaggregation can be done for all categories of activities at a health facility.

The cost of labour inputs consists of expenditures on various types of personnel in a hospital or clinic. The non-labour expenses comprise costs on such items as food, fuel, water, maintenance and repairs drugs, medical supplies and equipment and transport. Note that the relative proportions of cost of labour and non-labour inputs would indicate at a glance whether the medical care technology at health facilities is labour or capital intensive.

When other factors (Factors other than type of illness, case mix and input costs.) that affect average cost of health care are controlled, it is possible to study the behaviour of various average costs as one moves from the peripheral facility of a primary health care system to its specialized units at the district or provincial levels. The idea here is to discover whether there are scale economics in providing medical services in large health facilities such as hospitals. That is, to find out whether large health facilities provide medical care more cheaply than small scale facilities such health centres and dispensaries. Research in developed countries on scale economies in health care has shown that even where these economies exist, they are so small that they cannot be used as an argument for building large hospitals (Paul Feldstein, 1979 p.186).

In brief, a study of unit costs in the public health care system in Kenya, would throw considerable light, not only on financial and management aspects of health facilities, but also on medical care technology at those facilities.

C. OBJECTIVES OF THE STUDY.

1. Calculate the average costs of providing a variety of health services at different levels of Kenya's referral health care system.
2. To identify the factors that cause changes in average costs of health care in government health facilities in Kenya. An attempt will also be made to estimate the magnitudes of the effects of the identified factors on average costs.
3. To demonstrate how the average costs obtained in (1) above, can be used to estimate financial budgets for various health facilities in the national health care system.

D. APPLICABILITY OF RESEARCH TO PRESENT CONDITIONS IN KENYA.

It is expected that the results of this study will provide a sound basis for the programming of health care delivery financing in Kenya. In a situation of acute resource scarcity as the one Kenya finds itself in at present, resources must be used to bring the greatest good for the health of the population. The study will identify the optimal financing strategies for health care delivery in the country.

The study will also recommend the best approaches to the financing of health services in Kenya. For example, how much (if any) of the financing burden should be borne by the patients themselves, how much by the state, and how much by other parties. In some areas of health care delivery there is scope for involving the patients to share in the cost of the services provided. The study will seek to identify these areas.

## E. MATERIALS AND METHODS OF THE STUDY.

### 1. Materials.

It is expected that no special materials will be needed in this study.

### 2. Methodology.

A random sample of health centres, dispensaries, hospitals and other health care delivery institutions will be drawn, stratified by type. A questionnaire will be administered to the officers in charge of these institutions to determine the costs of delivering various categories of health services (for example to in-patients versus out-patients, to patients receiving treatment for various diseases, and so on.)

Thus much primary data will be generated using questionnaires. These data will be analysed to generate policies.

### References :

#### Prominent Literature on Hospital Cost Studies :

1. Berry, R. "Returns to Scale in the Production of Hospital Services", Health Services Research 2, Summer 1967.
2. Berry, R "On Grouping Hospitals for Economic Analysis", Inquiry, 10, December 1973.
3. Evans, R.G. "Behavioral Cost Functions for Hospitals", Canadian Journal of Economics 4 (May 1971)
4. Carr J and P. Feldistein, "The Relationship of Cost to Hospital Size", Inquiry 4, June 1967.
5. David Salrever, A Microeconomic Study of Hospital Cost Inflation, Journal of Political Economy, Vol. 80, 1972.
6. Feldistein M., "Economic Analysis for Health Service Efficiency " (Chicago, Markham Publishing House, 1968)
7. Francisco, E, "Analysis of Cost Variation Among Short-term General Hospitals" in H. Klarman Ed., Empirical Studies in Health Economics, Bultimore, John Hopkins, Press, 1970.

8. Hefty, T.R. Returns to scale in Hospitals: "A Critical Review of Recent Research," Health Services Research, 4 Writers, 1969.
9. Karen Davis, "Theories of Hospital Inflation : Some empirical evidence," Journal of Human Resources, Spring 1973.
10. Lave J.R. and L.B. Lave, "Hospital Cost Functions" in George Chacko, Ed., Health Handbook, 1976 (Amsterdam : North Holland Publishing Co.)
11. Lave J.R. and Lave, L.B. "Estimated Costs for Pennsylvania Hospitals", Inquiry, Vol. 7. June 1970.
12. Lee, M and R.L. Wallace, "Classification of Diseases for Hospital Cost Analysis Inquiry, 9 (June 1972)
13. Paul J. Feldstein, Health Care Economics, John Wiley and Sons, Inc. 1979.

F. BUDGET SUMMARY.

Item	For eight months.
Personnel	KShs.284,000.
Equipment	KShs. 2,000.
Expendable Supplies	KShs. 10,000.
Travel	KShs. 30,000.
Subsistence	KShs. 78,000.
Data Analysis	KShs. 40,000.
Typing and Publications	KShs. 25,000.
Contingencies	KShs. <u>10,000.</u>
Total	KShs.479,000.

## G. BUDGET JUSTIFICATION.

## (i) Personnel

- (a) Four research assistant  
for three months @ KShs.1,500. p.m = KShs.18,000.
- (b) Two statistical  
assistants for coding  
data, manual analysis,  
etc. for two months @ KShs.1,500. p.m = KShs. 6,000.
- (c) One health economist  
to do financial analysis  
for 1½ months @ KShs.40,000.p.m = KShs.60,000.  
(This will also help design  
the questionnaire)
- (d) Land Economist/Valuer/  
Planner for three months @ KShs.40,000. p.m = KShs.120,000.
- (e) Principal Investigator  
for two months @ KShs.40,000. p.m = KShs. 80,000.

- (ii) Travel - to the various  
districts to be sampled.  
Large car = KShs.30,000.

- (iii) Equipment : a calculator. = KShs. 2,000.

## (iv) Subsistence

- a) Four research assistants  
for 60 nights @ KShs.150.00 p.n = KShs.36,000.
- b) Health economist for  
thirty nights @ KShs.400.00 p.n = KShs.12,000.
- c) Land Economist/Valuer/  
Planner for sixty nights @ KShs.400.00 p.n = KShs.24,000.
- d) Principal Investigator  
for fifteen nights @ KShs.400.00 p.n. = KShs. 6,000.
- Total, Subsistence = KShs.78,000.

- (v) Data Analysis.
- Computer time and  
programmer, supplies, etc. = KShs.40,000.
- (vi) Typing Reports and Publications = KShs.25,000.
- (vii) Expendable supplies eg.stationery  
etc. = KShs.10,000.
- (viii) Contingencies = KShs.10,000.

1. **TITLE** The Financing Mechanism for Health Care Delivery.
2. **PRINCIPAL:  
INVESTIGATOR:** Prof. G - C. M. Mutiso.
3. **INSTITUTIONAL  
BASE:** Mutiso Consultants Ltd.,  
Box 14333, Nairobi.  
Phone: 747010/501780.
4. **POSITION:** Research Director - Policy Specialist.
5. **COLABORATING RESEARCHERS.**
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  - b) **Name:** Dr. Joshua Akonga BA (Nairobi) Ph.D. (Santiago)  
**Address:** Department of Sociology,  
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Box 30197,  
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**Position:** Lecturer - Social Anthropologist.
  - c) **Name:** Dr. Roberta Mutiso BA(Pembroke) MSW (Syracuse)  
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  - d) **Name:** Patricia Bifani B.Sc. (Chile) Diploma (CIFCA).  
**Address:** Dept. of Literature,  
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NAIROBI.  
**Position:** Lecturer - Medical Planner.
  - e) **Name:** Dr. Joseph M. Mbindyo, BA (Nairobi) MA (Nairobi)  
MA (Stanford) Ph.D. (Stanford).  
**Address:** School of Journalism,  
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**Position:** Director/Lecturer - Communication Specialist.

- f) **Name:** Mr. Johnstone Mutisya Kiamba. BA.(Nairobi)  
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- Address:** Dept. of Urban and Regional Planning,  
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Box 30197,  
NAIROBI.
- Position:** Lecturer - Planner.
- g) **Name:** Nicholas Munyaka Nzioki.
- Address:** Dept. of Land Development BA (Nairobi) M.Sc.  
(Reading),  
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Box 30197,  
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- Position:** Lecturer - Building Management.
- h) **Name:** Mrs. Agnes M. Kithimba, Teacher's Certificate -  
Home Science (Manchester) B. Ed. - Home Economics  
(Bristol).
- Address:** Kilimambogo Teachers College,  
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THIKA.
- Position:** Senior Lecturer - Nutritionist.
- i) **Name:** Mr. Ben M. Makau BA (Makerere) Diploma ( Makerere).
- Address:** I. D. S.,  
University of Nairobi,  
Box 30197,  
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- Position:** Researcher - Education Planning.

6. **COLLABORATING MEDICAL ADVISORY TEAM.**

- a) Dr. J.K. Waswa - MB,CHB,MPH (Candidate) - Kenyatta N. Hospital,  
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- b) Dr. P.A. Agwa,MB,CHB. - Kijabe Medical Centre (Surgery)  
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- c) Dr. (Miss) B.W. Kamau - MB,CHB. MRC. Path. Candidate (KNH)  
(Pathology)  
Box 41172,  
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- d) Dr. J.K. Mutiso - MB,CHB. Medical Officer (General Medicine)  
Infectious Diseases Hospital,  
Kenyatta N. Hospital,  
Box 41172,  
NAIROBI.

#### B. BACKGROUND OF THE STUDY.

The government would like to provide good and adequate health care for all Kenyans. The usual approach has been to provide health services free of charge to the public or at highly subsidised rates. However, it is becoming increasingly clear that the government does not have sufficient resources to achieve this noble objective (ie. free and good quality medical care for all). Drug shortages are prevalent, and the quality of services provided by health care units is falling due to lack of resources. At the same time, it has been observed that many people are now by-passing the public health delivery units which offer free services and are going to private clinics or to traditional healers where the charges are exorbitant. This is because the public health units are perceived to be offering lower quality services (sometimes no services at all) compared to the private clinics.

It is proposed that it is possible to formulate financing mechanisms for health care delivery to come out with options whereby the government, private sector and the public share some aspects of health care delivery without loss of overall government welfare policies and objectives. This is the basis of this proposal.

#### C. OBJECTIVES OF THE STUDY.

The main objectives of this study are :-

1. To investigate why people by-pass public health clinics which offer free services and go to private clinics which charge exorbitant fees.
2. To investigate people's willingness to pay for health services.
3. To formulate policies on financing mechanisms for health care delivery showing optimal choice options for sharing the burden of financing health care in the country without negating the government's overall welfare policies and objectives.
4. To suggest a cost-sharing experiment in the country which is easily replicable in all areas.

#### D. APPLICABILITY OF RESEARCH TO PRESENT CONDITIONS.

The study seeks to formulate financing mechanisms for health care delivery in the country. The objective is to make it possible to increase health services and to improve quality. This would have significant beneficial impact on health status of the population by increasing drug availability and improving health care delivery in general. There is no doubt that the public health care delivery system in Kenya is grossly inadequate and is experiencing serious difficulties. Measures are needed to increase resource availability to the sector. The results of this study will go a long way towards resolving these problems.

#### E. MATERIALS AND METHODS OF THE STUDY.

No special materials will be needed.

This is basically a study on the pricing of health care services. To carry out the study effectively, the following populations will be studied:

- a) households to determine their attitudes and preferences vis-a-vis public health care units, public clinics and clinics of traditional medicinemen. Also to determine their willingness to pay for various health services.
- b) providers of health services in private clinics.
- c) traditional medicinemen.
- d) officials, Ministry of Health, and policy makers in the country.

The most important population is that of households. A sample of households will be selected using random procedures. A questionnaire will be administered on this sample, and this questionnaire will provide the primary data for analysis. These data will be augmented with data from interviews of providers of health care in public health delivery units, private health clinics, traditional healer clinics and officials and policy makers.

## References :

1. Gish, O. "Planning the Health Sector : The Tanzanian Experience" Holmes and Meier, New York, 1975.
2. Grossman, M. "The Demand for Health : A Theoretical and Empirical Investigation" Columbia University Press, New York, 1972.
3. Hanson, W.L. : "Equity and the Finance of Higher Education" J. Political Econ. 80, S260, 1972. (This gives a discussion of the concept of equity in education which is applicable to health).
4. HU, T. (ed.) : "International Health Costs and Expenditures" U.S. Department of Health, Education, and Welfare Publication No. (NIH) 76 - 1067.
5. World Bank : "Health Sector Paper" Washington, D.C., March 1975.

## F. BUDGET SUMMARY.

Item	For six months
Personnel	KShs.218,000.
Equipment	KShs. 2,000.
Expendable Supplies	KShs. 10,000.
Travel	KShs. 50,000.
Subsistence	KShs. 72,000.
Data Analysis	KShs. 40,000.
Typing and Publications	KShs. 20,000.
Contingencies	KShs. <u>10,000.</u>
Total	KShs.422,000.

## G. BUDGET JUSTIFICATION.

- i) Personnel
  - a) Four research assistants for three months @ KShs. 1,500 p.m. = KShs. 18,000.
  - b) One Health Economist for three months @ KShs. 40,000.p.m. = KShs.120,000.
  - c) Principal Investigator for two months @ KShs. 40,000.p.m. = KShs. 80,000.
- ii) Equipment :
  - One calculator = KShs. 2,000.
- iii) Expendable Supplies eg. stationery, etc. = KShs. 10,000.
- iv) Travel : A car of 1,600cc capacity. Research in various regions of the country = KShs. 50,000.
- v) Subsistence :
  - a) Four research assistants for ninety nights @ KShs. 150.p.n. = KShs. 54,000.
  - b) Health Economist for thirty nights @ KShs. 400.p.n = KShs. 12,000.
  - c) Principal Investigator for fifteen nights @ KShs. 400.p.n. = KShs. 6,000.  
Total, Subsistence KShs. 72,000.
- vi) Data Analysis Manually and by computer = KShs. 40,000.
- vii) Typing and Publications = KShs. 20,000.
- viii) Contingencies = KShs. 10,000.

1. **TITLE** Public Health Program Development
2. **PRINCIPAL:  
INVESTIGATOR:** Prof. G - C. M. Mutiso.
3. **INSTITUTIONAL  
BASE:** Mutiso Consultants Ltd.,  
Box 14333, Nairobi.  
Phone: 747010/501780.
4. **POSITION:** Research Director - Policy Specialist.
5. **COLABORATING RESEARCHERS.**
  - a) **Name:** Mutsembi Manundu BA (Nairobi) MA (Michigan)  
**Address:** Dept. of Economics  
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Box 30197,  
**NAIROBI**  
**Position:** Lecturer - Resource Economist.
  - b) **Name:** Dr. Joshua Akonga BA (Nairobi) Ph.D. (Santiago)  
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  - c) **Name:** Dr. Roberta Mutiso BA(Pembroke) MSW (Syracuse)  
Community Dev. Certificate (Syracuse) Ph.D. Nairobi.  
**Address:** Department of Sociology,  
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**Position:** Lecturer - Social Worker.
  - d) **Name:** Patricia Bifani B.Sc. (Chile) Diploma (CIFCA).  
**Address:** Dept. of Literature,  
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**Position:** Lecturer - Medical Planner.
  - e) **Name:** Dr. Joseph M. Mbindyo, BA (Nairobi) MA (Nairobi)  
MA (Stanford) Ph.D. (Stanford).  
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- f) **Name:** Mr. Johnstone Mutisya Kiamba. BA.(Nairobi)  
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- Address:** Dept. of Urban and Regional Planning,  
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- Position:** Lecturer - Planner.
- g) **Name:** Nicholas Munyaka Nzioki.
- Address:** Dept. of Land Development BA (Nairobi) M.Sc.  
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- Position:** Lecturer - Building Management.
- h) **Name:** Mrs. Agnes M. Kithimba, Teacher's Certificate -  
Home Science (Manchester) B. Ed. - Home Economics  
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- Address:** Kilimambogo Teachers College,  
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**THIKA.**
- Position:** Senior Lecturer - Nutritionist.
- i) **Name:** Mr. Ben M. Makau BA (Makerere) Diploma ( Makerere).
- Address:** I. D. S.,  
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**NAIROBI.**
- Position:** Researcher - Education Planning.

6. **COLLABORATING MEDICAL ADVISORY TEAM.**

- a) Dr. J.K. Waswa - MB,CHB,MPH (Candidate) - Kenyatta N. Hospital,  
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- b) Dr. P.A. Agwa,MB,CHB. - Kijabe Medical Centre (Surgery)  
Box 20,  
**KIJABE.**
- c) Dr. (Miss) B.W. Kamau - MB,CHB. MRC. Path. Candidate (KNH)  
(Pathology)  
Box 41172,  
**NAIROBI.**
- d) Dr. J.K. Mutiso - MB,CHB. Medical Officer (General Medicine)  
Infectious Diseases Hospital,  
Kenyatta N. Hospital,  
Box 41172,  
**NAIROBI.**

## B. BACKGROUND OF PROJECT.

The strategic control measures for diarrhoeal and infectious diseases are well known in the medical profession. However, it has been observed that even with well - funded and well-coordinated public campaigns to increase the use of such measures, some households are reluctant to use them. For example, it has been observed that some people will go to relieve themselves in the bush even when they have latrines, some mothers will deny their children liquids when the children have diarrhoea although they may have been advised against it, and so on. The questions are : Why would this happen ? What factors determine the adoption of control measures for diarrhoeal and infectious diseases by households ? What policies are needed to increase the rate of adoption of these measures by the public ?

The strategic control measures for Diarrhoeal diseases are :

1. Health education to the public.
2. Providing sanitary environment through :
  - a) human waste disposal in toilets and latrines.
  - b) waste disposal in pits and burning.
  - c) provision of adequate amounts of water for cleanliness.
3. Water Supply :
  - a) protecting water sources.
  - b) chlorinating water in urban areas.
  - c) providing enough water per head of population.
4. Curative :
  - a) providing access to health facilities.
  - b) making drugs available, especially in the case of cholera.
  - c) oral rehydration therapy.
5. Discouraging bottle feeding :

The strategic control measures for vector - borne diseases are :-

1. Control of vector :
  - a) spraying water pools.
  - b) health education.

2. Treating those infected to prevent the disease from spreading.  
For example in the case of malaria and kalazar.
3. Combatting elephantiasis along the Kenya Coast.
4. Combatting sleeping sickness in Lambwe Valley.

The strategic control measures for worms (Helminthiasis) disease are :-

1. Making toilets compulsory.
2. Determining prevalent worm infestations and eradicating the worms.
3. Deworming, especially in schools.

The strategic control measures for infectious diseases like Measles, T.B., Whooping Cough, Diptheria and Cholera are :-

1. Large scale immunisations.
2. T.B. treatment.
  - a) access to health facilities.
  - b) preventing people from defaulting on the 18 month treatment.
  - c) consider whort term chemotherapy of six to nine menths.  
This is expensive in terms of drug cost.

However, a major goal of the project will be to determine and investigate the socio-economic factors that inhibit people from adopting the strategic control measures for these infectious diseases. For example, why is it that some people will not use latrines even when they have them ? Why will some people fail to boil water for drinking ? Why will people fail to go to hospital when they are ill ? Why will people stop taking the recommended drugs even before they are cured ? For a program intended to control infectious diseases to succeed it must investigate these and related factors.

#### C. OBJECTIVES OF THE STUDY.

The objectives of this study are :

- a) to generate interventional measures to help control certain infectious and other diseases.
- b) to identify commonly used materials and measurements to help ensure people can carry out the measures with little professional help.

Emphasis will be placed on the control measures for :

- i) diarrhoeal diseases.
- ii) vector-borne diseases like malaria.
- iii) helminthiasis.
- iv) measles
- v) T.B.

#### D. APPLICABILITY OF RESEARCH TO PRESENT CONDITIONS IN KENYA.

If factors that inhibit the adoption of strategic control measures for diarrhoeal and other infectious diseases are identified, it becomes possible to formulate policies to increase the rate of adoption of such measures and thereby improve the health status of the population.

This is needed in Kenya.

#### E. MATERIALS AND METHODS OF THE STUDY.

No special materials will be needed.

This study will be mainly socio-economic in nature. The objective will be to investigate the socio-economic factors that inhibit households from adopting some control measures for diarrhoeal and infectious diseases. To carry out this study two main populations will be interviewed :

- a) health personnel dealing with such diseases.
- b) households in the general population, especially in the major areas of occurrence of these diseases.

Statistically significant samples will be drawn by some random process, and on these samples questionnaires will be administered. These questionnaires will constitute the main research instruments and will provide the primary data for analysis. The samples will be stratified by ecozones in the country, since these tend to reflect the spatial distribution of the most important infectious diseases. Thus some areas to be sampled are the Coast Province which is in the hot and humid zone, the Eastern Province which is in the semi-arid zone, the Western Province, in the wet zone. Therefore the sample will be spread over the whole country.

References :

1. Government of Kenya : "Guidelines for the Management of Hospital Outpatient Services" Ministry of Health, Administrative Support Unit, Kenya. 1982.
2. Republic of Kenya : "Proposal for the Implementation of Rural Health Services and the Development of Rural Health Training Centres in Kenya". Ministry of Health, Kenya. Nairobi, 1972.
3. Wasunna, A. et al. "Strategies of Integrated Diarrhoeal Disease Control". Mimeo.
4. UNDP/WHO/World Bank - "Sixth Program Report : Special Program for Research and Training in Tropical Diseases." 1982.

## F. BUDGET SUMMARY.

Item	For twelve months.
Personnel	KShs.164,000.
Equipment	KShs. 2,000.
Expendable Supplies	KShs. 10,000.
Travel	KShs. 50,000.
Subsistence	KShs. 70,000.
Data Analysis	KShs. 40,000.
Typing and Publishing	KShs. 20,000.
Contingencies	KShs. <u>10,000.</u>
Total	KShs.366,000.

## G. BUDGET JUSTIFICATION.

- i) Personnel:
  - a) Four research assistants for three months @ KShs. 1,500.p.m. = KShs.18,000.
  - b) One Graduate Researcher for three months @ KShs.20,000.p.m. = KShs.60,000.
  - c) Principal Investigator for two months @ KShs.40,000.p.m. = KShs.80,000.
  - d) One Statistical assistant for four months @ KShs. 1,500.p.m. = KShs. 6,000.
- ii) Equipment :  
One calculator = KShs. 2,000.
- iii) Expendable Supplies :  
eg. stationery, etc. = KShs.10,000.
- iv) Travel : car engine capacity of 1,000 cc = KShs.50,000.
- v) Subsistence :
  - a) Four research assistants for ninty nights @ KShs.150.p.n = KShs.54,000.
  - b) One Graduate Researcher and one Principal Investigator for twenty nights @ KShs.400.p.n. = KShs.16,000.  
Total, Subsistence = KShs.70,000.
- vi) Data Analysis manually and by computer : = KShs.40,000.
- vii) Typing and Publications : = KShs.20,000.
- viii) Contingencies : = KShs.10,000.

1. **TITLE** Food and Nutrition.
2. **PRINCIPAL:  
INVESTIGATOR:** Prof. G - C. M. Mutiso.
3. **INSTITUTIONAL  
BASE:** Mutiso Consultants Ltd.,  
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4. **POSITION:** Research Director - Policy Specialist.
5. **COLABORATING RESEARCHERS.**
  - a) **Name:** Mutsembi Manundu BA (Nairobi) MA (Michigan)  
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  - b) **Name:** Dr. Joshua Akonga BA (Nairobi) Ph.D. (Santiago)  
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- Address:** Dept. of Land Development BA (Nairobi) M.Sc.  
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- d) Dr. J.K. Mutiso - MB,CHB. Medical Officer (General Medicine)  
Infectious Diseases Hospital,  
Kenyatta N. Hospital,  
Box 41172,  
NAIROBI.

## B. BACKGROUND OF THE PROJECT.

At the national level Kenya does not have a food shortage or a problem of under-nutrition. The supplies of food nutrients (calories and protein) are above those recommended by the World Health and the Food and Agriculture Organisation of the United Nations [Development Plan, 1984 - 1988]. However, there are periods of food shortages in Kenya.

At the national level, the food problem is not apparent because food shortages in one year are often offset by surpluses from the previous years. Further-more household data indicate that there are families who are unable to feed themselves adequately. For example, Migot Adholla has recently shown that over 55 per cent of the households in Nyanza Province are below the poverty line (ie. their income is too low to enable them to purchase adequate food). The corresponding figures for other provinces are 51.6 per cent for Western Province, 43.5 per cent for Coast, 38.8 per cent for Rift Valley, 28.5 per cent for Eastern and 18.2 per cent for Central [Migot - Adholla, 1984].

To deal with the problem of hunger and under-nutrition in Kenya, the policy makers need to :

1. step up the production of food in the country, ensuring that surplus food is stored properly.
2. improve the mechanisms of food distribution and marketing in the country.
3. ensure that food storage facilities are adequate in number and in quality and they are well distributed across provinces.

### C. OBJECTIVES OF THE STUDY.

The main objectives of this study are :

1. To investigate methods of increasing food production in the country. Given that there is limited high potential land in Kenya, the question is : what are the best strategies to increase food production ? The study will focus on the following food production strategies :
  - a) increasing food production per unit land through better farm practices.
  - b) increasing food production by expanding land under irrigation.
2. To investigate cost - effective methods of food storage in different parts of the country.
3. To investigate efficient and equitable ways of distributing food. In particular, the welfare effects of removing restrictions on food movement within the country will be investigated.
4. To investigate the administrative procedures normally followed in times of crises to move food from an area of surplus to one of deficit.
5. To investigate the best approach to increase the access by the poor to food.

### D. APPLICABILITY OF RESEARCH TO PRESENT CONDITIONS IN KENYA.

The results of this study will :

1. Provide information regarding the administrative procedures that are normally followed to deal with food crises in a given region, and how these procedures might be improved.
2. Enable policy-makers to formulate rational strategies of increasing food production in the country and also of improving food storage systems and practices.
3. Facilitate the formulation of policies aimed at increasing the access of the poor to food.

#### E. MATERIALS AND METHODS.

No special equipment will be required.

Considerable research has been done on food production, distribution and consumption in the country. This project will not try to duplicate such research. However, its results will be reviewed for the sake of completeness. The secondary data collected for this study will be augmented with interviews of the following populations :

- a) Policy makers in the country, especially those dealing with food issues.
- b) Health personnel, especially those dealing with child and mother nutrition issues in health delivery units in the country.
- c) Households, to determine their resource endowments, attitudes to food production, storage and consumption.

The major instrument of investigation will be the questionnaire. This will be administered to a randomly selected sample of households. Informal interviews of government officials and policy makers will constitute the other sources of primary data.

The sample will be drawn from across the country, particularly from the regions with most cases of malnutrition (for example, Nyanza Province, Eastern Province and Western Province).

#### References :

1. Barnum, H., and Squire, L., "An Econometric Application of the Theory of the Farm - Household" *Journal of Development Economics*, 6(1979) 79 - 102.
2. Central Bureau of Statistics : "Economic Survey 1984". Republic of Kenya, Nairobi, 1984.
3. Central Bureau of Statistics : "Child Nutrition in Kenya", Ministry of Finance and Planning, Kenya. 1978.
4. Greer, J. and Therbecke, E. (1983) : " Patterns of Food Consumption and Poverty in Kenya and Effects of Food Prices". Ithaca, N.Y. Cornell University, Mimeo.

5. Mc Carthy, F.D. and Mwangi, W.M : "Kenyan Agriculture : Toward 2000" International Institute for Applied Systems Analysis, Laxenburg, Austria.
6. Migot - Adholla : "Rural Development, Health, Nutrition and Community Participation" Joint UNICEF/MOH International Workshop on Health and Nutrition, Kisumu, Kenya. July 1984.
7. Republic of Kenya : "Development Plan 1984 - 88."
8. Republic of Kenya : "Sessional Paper No.4 on National Food Policy." Nairobi, 1981.

F. BUDGET SUMMARY.

Item	For six months.
Personnel	KShs.158,000.
Equipment	KShs. 2,000.
Expendable Supplies	KShs. 10,000.
Travel	KShs. 50,000.
Subsistence	KShs. 78,000.
Data Analysis	KShs. 40,000.
Typing and Publications	KShs. 20,000.
Contingencies	KShs. <u>10,000.</u>
Total	KShs.368,000.

## G. BUDGET JUSTIFICATION.

## i) Personnel :

a) Four research assistants for three months @ KShs. 1,500.p.m. = KShs.18,000.

b) Graduate Researcher (Social Scientist) for three months @ KShs.20,000.p.m. = KShs.60,000.

c) Principal Investigator for two months @ KShs.40,000.p.m. = KShs.80,000.

## ii) Equipment :

One calculator = KShs. 2,000.

## iii) Expendable

Supplies :

eg. stationery

etc.

= KShs.10,000.

## iv) Travel:

1600 cc. car to

cover three

provinces (eg.

Western, Nyanza

and Eastern

Provinces)

= KShs.50,000.

## v) Subsistence:

- a) Four research assistants for ninety nights @ KShs.150.p.n. = KShs.54,000.
  - b) Graduate Researcher for thirty nights @ KShs.400.p.n. = KShs.12,000.
  - c) Principal Investigator for thirty nights @ KShs.400.p.n. = KShs.12,000.  
Total, Subsistence = KShs.78,000.
- vi) Data Analysis  
Data will be analysed both manually and by computer = KShs.40,000.
- vii) Typing and Publications = KShs.20,000.
- viii) Contingencies = KShs.10,000.

1. **TITLE** Socio-Cultural Factors in Health Delivery
2. **PRINCIPAL:  
INVESTIGATOR:** Prof. G - C. M. Mutiso.
3. **INSTITUTIONAL  
BASE:** Mutiso Consultants Ltd.,  
Box 14333, Nairobi.  
Phone: 747010/501780.
4. **POSITION:** Research Director - Policy Specialist.
5. **COLABORATING RESEARCHERS.**
  - a) **Name:** Mutsembi Manundu BA (Nairobi) MA (Michigan)  
**Address:** Dept. of Economics  
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Box 30197,  
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**Position:** Lecturer - Resource Economist.
  - b) **Name:** Dr. Joshua Akonga BA (Nairobi) Ph.D. (Santiago)  
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**Position:** Lecturer - Social Anthropologist.
  - c) **Name:** Dr. Roberta Mutiso BA(Pembroke) MSW (Syracuse)  
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**Position:** Lecturer - Social Worker.
  - d) **Name:** Patricia Bifani B.Sc. (Chile) Diploma (CIFCA).  
**Address:** Dept. of Literature,  
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Box, 30197,  
NAIROBI.  
**Position:** Lecturer - Medical Planner.
  - e) **Name:** Dr. Joseph M. Mbindyo, BA (Nairobi) MA (Nairobi)  
MA (Stanford) Ph.D. (Stanford).  
**Address:** School of Journalism,  
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- f) **Name:** Mr. Johnstone Mutisya Kiamba. BA.(Nairobi)  
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- Position:** Lecturer - Planner.
- g) **Name:** Nicholas Munyaka Nzioki.
- Address:** Dept. of Land Development BA (Nairobi) M.Sc.  
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Box 30197,  
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- Position:** Lecturer - Building Management.
- h) **Name:** Mrs. Agnes M. Kithimba, Teacher's Certificate -  
Home Science (Manchester) B. Ed. - Home Economics  
(Bristol).
- Address:** Kilimambogo Teachers College,  
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THIKA.
- Position:** Senior Lecturer - Nutritionist.
- i) **Name:** Mr. Ben M. Makau BA (Makerere) Diploma ( Makerere).
- Address:** I. D. S.,  
University of Nairobi,  
Box 30197,  
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- Position:** Researcher - Education Planning.

6. **COLLABORATING MEDICAL ADVISORY TEAM.**

- a) Dr. J.K. Waswa - MB,CHB,MPH (Candidate) - Kenyatta N. Hospital,  
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- b) Dr. P.A. Agwa,MB,CHB. - Kijabe Medical Centre (Surgery)  
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KIJABE.
- c) Dr. (Miss) B.W. Kamau - MB,CHB. MRC. Path. Candidate (KNH)  
(Pathology)  
Box 41172,  
NAIROBI.
- d) Dr. J.K. Mutiso - MB,CHB, Medical Officer (General Medicine)  
Infectious Diseases Hospital,  
Kenyatta N. Hospital,  
Box 41172,  
NAIROBI.

## B. BACKGROUND OF PROJECT.

At the moment, the most binding constraint in government's efforts to improve the health status of the population is the scarcity of resources. The health budget is not sufficient to cover the whole population with health services. Coupled with this problem of a serious budget constraint is the problem of under-utilization of the existing health services. Inadequate quality of service is the reason commonly given for health facility under - utilization. This research project will attempt to answer the following question : Suppose in fact, the technical, economic and quality constraints in health delivery system were removed, are there factors that would restrict utilization of health services from being at the desired levels ? We hypothesise that even if the technical and economic issues of health care delivery are resolved, there are other factors that would frustrate the government's objective of improving the health status of the population. These are the social and cultural factors on the demand and supply sides of the health delivery system.

The social and cultural factors on the demand side of the health care delivery system.

The social and cultural factors affecting the utilization of health care services (curative, preventive, Maternal and Child Health/ Family Planning) are :

1. Person - specific factors :
  - a) age
  - b) sex
  - c) race, ethnic group.
2. Social factors :
  - a) marital status
  - b) religion
  - c) educational attainment
  - d) household's income status
  - e) occupation.

### 3. Cultural factors :

- a) mode of dress
- b) usual source of treatment,
- c) beliefs about cause of illness
- d) perception about quality of treatment
- e) traditions and attitudes to life in general

All these social and cultural factors affect the utilization of health services. For example :

- i) Men may not want to seek treatment for some illnesses from a particular clinic if the staff in that clinic are all women. The reverse applies to women.
- ii) Some mothers may prefer maternity services from traditional midwives due to habit persistence.
- iii) Taboos. For example, some mothers may refuse to take food at maternity homes after they deliver since they consider such food to be the wrong type for a mother who has just delivered. They may become weak and malnourished.
- iv) Some people are influenced by what others say about the services being provided in a particular clinic (this is the so - called "bandwagon effect").

The social and cultural factors on the supply side of the health care delivery system. These are :

#### 1. Person - specific factors :

- a) the age of the health worker or doctor.
- b) sex of the health worker or doctor.

#### 2. Social factors :

- a) the marital status of the health worker or doctor.
- b) religion of health worker or doctor.

#### 3. Cultural factors :

- a) the work habits, socialization, etc. of the health worker or doctor.

For example :

- i) Some patients who are elderly may not like to be treated by very young health workers.
- ii) Some patients may not like to be treated by health workers of the opposite sex.
- iii) Some men may not want their wives to be seen by unmarried young male workers who do not have good reputation.
- iv) Some patients may not want to be treated by health workers belonging to another religion or ethnic group, especially when there is hostility between such groups.

All these social and cultural factors may impair the ability of a health delivery units to deliver health care, even when such a unit is reasonably staffed and equipped with drugs, etc. for effective health care delivery.

#### C. OBJECTIVES OF THE STUDY.

The objectives of this study are :

1. To identify the social and cultural factors affecting the delivery of health services in Kenya.
2. To investigate the quantitative and qualitative significance of each factor.
3. To formulate policies aimed at increasing the effectiveness of health care delivery units in delivering health services.

#### D. APPLICABILITY OF THE RESEARCH TO PRESENT CONDITIONS.

The results of this research project can have important bearing on the management of health services in the country. If factors hindering full utilization of the health services are identified, it is possible to formulate policies aimed at increasing the efficiency and effectiveness at which health care is delivered and consumed in the country. This should lead to improved health status of the population.

#### E. METHODS OF THE STUDY.

No special materials will be needed to carry out this study.

The populations to be studied will be health personnel involved in health care delivery and the general population. A statistically significant sample will be drawn by some random process to represent each of these populations. Questionnaires, which will be the main research instruments, will be administered to these samples to generate primary data for analysis. The results will be made available to policy makers in the government, particularly in the Ministry of Health.

#### References :

1. Dunlop, D.W. "Alternatives to "Modern" Health Delivery Systems" in Africa : Public Policy Issues of Traditional Health Systems. Soc. Sci. & Med. 9, 581, 1975.
2. Dunlop, D.W. and Caldwell, H.R. "Priority Determinants for the Provision of Health Services : An Economic and Social Analysis".
3. Navarro V. "Social Class, Political Power and the State and their Implications in Medicine". Soc. Sci. & Med. 10, 437, 1976.
4. Nowell, K. (ed.) "Health by the People". World Health Organisation; Geneva, 1975.
5. World Health Organisation "Formulating Strategies for Health for all by the year 2000". World Health Organisation, Geneva, 1980.

#### F. BUDGET SUMMARY.

Item	For six months.
Personnel	KShs.158,000.
Equipment	KShs. 2,000.
Expendable Supplies	KShs. 10,000.
Travel	KShs. 30,000.
Subsistence	KShs. 62,000.
Data Analysis	KShs. 40,000.
Report and Publications	KShs. 20,000.
Contingencies	KShs. <u>10,000</u>
Total	KShs.332,000.

## G. BUDGET JUSTIFICATION

- i) Personnel
- a) Four research assistants for three months @ KShs. 1,500. = KShs.18,000.
  - b) One Graduate Researcher for three months @ KShs.20,000.p.m. = KShs.60,000.
  - c) Principal Investigator for two months @ KShs.40,000.p.m. = KShs.80,000.
- ii) Equipment :
- One calculator = KShs. 2,000.
- iii) Expendable Supplies eg. stationery etc. = KShs.10,000.
- iv) Travel - travel to the field using large car = KShs.30,000.
- v) Subsistence :
- a) Four research assistants for ninety nights @ KShs.150.p.n. = KShs.54,000.
  - b) Principal Investigator and Graduate Researcher for ten nights @ KShs.400.p.n. = KShs. 8,000.
  - Total, Subsistence = KShs.62,000.
- vi) Data Analysis by computer and manually = KShs.40,000.
- vii) Typing and Publication = KShs.20,000.
- viii) Contingencies = KShs.10,000.

1. **TITLE** Effectiveness of the Health Centres.
2. **PRINCIPAL:  
INVESTIGATOR:** Prof. G - C. M. Mutiso.
3. **INSTITUTIONAL  
BASE:** Mutiso Consultants Ltd.,  
Box 14333, Nairobi.  
Phone: 747010/501780.
4. **POSITION:** Research Director - Policy Specialist.
5. **COLABORATING RESEARCHERS.**
  - a) **Name:** Mutsembi Manundu BA (Nairobi) MA (Michigan)  
**Address:** Dept. of Economics  
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**Position:** Lecturer - Resource Economist.
  - b) **Name:** Dr. Joshua Akonga BA (Nairobi) Ph.D. (Santiago)  
**Address:** Department of Sociology,  
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**Position:** Lecturer - Social Anthropologist.
  - c) **Name:** Dr. Roberta Mutiso BA(Pembroke) MSW (Syracuse)  
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  - d) **Name:** Patricia Bifani B.Sc. (Chile) Diploma (CIFCA).  
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  - e) **Name:** Dr. Joseph M. Mbindyo, BA (Nairobi) MA (Nairobi)  
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- f) **Name:** Mr. Johnstone Mutisya Kiamba. BA.(Nairobi)  
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- Position:** Lecturer - Planner.
- g) **Name:** Nicholas Munyaka Nzioki.
- Address:** Dept. of Land Development BA (Nairobi) M.Sc.  
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- Position:** Lecturer - Building Management.
- h) **Name:** Mrs. Agnes M. Kithimba, Teacher's Certificate -  
Home Science (Manchester) B. Ed. - Home Economics  
(Bristol).
- Address:** Kilimambogo Teachers College,  
Box 8,  
THIKA.
- Position:** Senior Lecturer - Nutritionist.
- i) **Name:** Mr. Ben M. Makau BA (Makerere) Diploma ( Makerere).
- Address:** I. D. S.,  
University of Nairobi,  
Box 30197,  
NAIROBI.
- Position:** Researcher - Education Planning.

6. **COLLABORATING MEDICAL ADVISORY TEAM.**

- a) Dr. J.K. Waswa - MB,CHB,MPH (Candidate) - Kenyatta N. Hospital,  
(Community Health,) Box 41172, Nairobi.
- b) Dr. P.A. Agwa,MB,CHB. - Kijabe Medical Centre (Surgery)  
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- c) Dr. (Miss) B.W. Kamau - MB,CHB. MRC. Path. Candidate (KNH)  
(Pathology)  
Box 41172,  
NAIROBI.
- d) Dr. J.K. Mutiso - MB,CHB. Medical Officer (General Medicine)  
Infectious Diseases Hospital,  
Kenyatta N. Hospital,  
Box 41172,  
NAIROBI.

## B. BACKGROUND OF THE PROJECT.

The basic question this project raises is : To what extent are the Health Centres achieving the government's objective of improving the health status of the rural populations ?

To answer this question we need to :

1. Evaluate the conditions of the Health Centres : Are they up to date in terms of buildings equipment, manpower and so on ? Are they up to the standards they are supposed to be in terms of staffing, drugs, water availability, beds and so on ?
2. Evaluate the utilization rates of Health Centres.
3. Identify the health needs of the population served by the Health Centre.
4. Investigate the budget allocations for these centres. Are they adequate ?
5. Investigate how the allocated resources are utilised.

The major point made here is : Given the activities on which the Health Centre spends its financial and other resources, Can it hope to improve substantially the health of the population it is supposed to serve ? This question must be answered in relation to budget allocations of a Health Centre across various activities and the health needs of the population it serves. If the answer to this question is yes, What needs to be done to help the Health Centre improve its performance ? If the answer to the question is no, How should the Health Centre re-orient its program to increase its effectiveness ?

Other questions needing to be investigated are : (i) Can the Health Centre carry out a preventive health care program on a massive scale without community participation ? (ii) What should be the mechanism for community in a "Rural Health Unit" ?

Operationally, there are several areas of community participation. For example, the problem of the 'free - rider' in vector control, the perception of the causes of illness, and implementing environmental sanitation measures.

C. OBJECTIVES OF THE STUDY.

The principal objectives of this study are :

1. To assess the effectiveness of the Health Centre in primary health care delivery.
2. To generate policies to improve the effectiveness of health care delivery systems in the country.

D. APPLICABILITY OF THE RESEARCH TO PRESENT CONDITIONS IN THE COUNTRY.

Since the Health Centre is the one of the key units in health care delivery in Kenya, the results of this study will have important policy implications. For example the results would show how effective the Health Centre is in delivering health care services, and point to policy changes needed at the Health Centre level to make this unit more effective. This would lead to improved welfare of the recipients of health care from Health Centres.

E. MATERIALS AND METHODS.

It is expected that no special materials will be needed to carry out this project.

To answer the questions raised in the section on the background to project, the research team will need to make field visits to randomly selected Health Centres. The purpose of these visits will be to observe how the facilities and resources available are being used and to administer questionnaires pertaining to use of resources at the Health Centres. The costing buildings and equipment will also be undertaken. The primary data generated in this way will be the main sources of information to study the problem.

## References :

1. Dr. J. Maneno : Primary Health Care. Mimeo, June 1984.
2. Joseph K. Wang'ombe : Economic Evaluation in Primary Health Care. The Case of Western Kenya Community Based Health Care Project. Soc. Sci. Med. Vol. 18 No.5 pp.375 - 385 - 1984.

## F. BUDGET SUMMARY.

Item	For six months
Personnel	KShs.346,000.
Equipment	KShs. 2,000.
Expendable Supplies	KShs. 10,000.
Travel	KShs. 30,000.
Subsistence	KShs. 53,000.
Data Analysis	KShs. 20,000.
Reports and Publications	KShs. 20,000.
Contingencies	KShs. <u>10,000.</u>
Total	KShs.491,000.

## G. BUDGET JUSTIFICATION.

## i) Personnel

a) Two research assistants for two months @ KShs. 1,500.p.m. = KShs. 6,000.

b) One researcher (M.A. degree Level) preferably a social scientist for three months @ KShs.20,000.p.m. = KShs. 60,000.

c) One Land Economist/Valuer/Planner for four months @ KShs.40,000.p.m. = KShs.160,000.

d) One Principal Investigator for three months @ KShs.40,000.p.m. = KShs.120,000.

## ii) Equipment.

One calculator = KShs. 2,000.

iii) Expendable Supplies eg. stationery etc. = KShs. 10,000.

iv) Travel - a large car. travel to the Health Centres selected = KShs. 30,000.

## v) Subsistence :

- a) For two research assistants, for thirty nights @ KShs.150.p.n. = KShs. 9,000.
  - b) One researcher for ten nights @ KShs.400.p.n. = KShs. 4,000.
  - c) Principal Investigator for ninety nights @ KShs.400.p.n. = KShs.36,000.
- Total, subsistence = KShs.53,000.

## vi) Data analysis :

Manually and by computer = KShs.20,000.

vii) Typing and publication of reports = KShs.20,000.

viii) Contingencies = KShs.10,000.

1. **TITLE** Strategies for Integrating Traditional Medicine
2. **PRINCIPAL:  
INVESTIGATOR:** Prof. G - C. M. Mutiso.
3. **INSTITUTIONAL  
BASE:** Mutiso Consultants Ltd.,  
Box 14333, Nairobi.  
Phone: 747010/501780.
4. **POSITION:** Research Director - Policy Specialist.
5. **COLABORATING RESEARCHERS.**
  - a) **Name:** Mutsembi Manundu BA (Nairobi) MA (Michigan)  
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**Position:** Lecturer - Resource Economist.
  - b) **Name:** Dr. Joshua Akonga BA (Nairobi) Ph.D. (Santiago)  
**Address:** Department of Sociology,  
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Box 30197,  
**NAIROBI.**  
**Position:** Lecturer - Social Anthropologist.
  - c) **Name:** Dr. Roberta Mutiso BA(Pembroke) MSW (Syracuse)  
Community Dev. Certificate (Syracuse) Ph.D. Nairobi.  
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  - d) **Name:** Patricia Bifani B.Sc. (Chile) Diploma (CIFCA).  
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  - e) **Name:** Dr. Joseph M. Mbindyo, BA (Nairobi) MA (Nairobi)  
MA (Stanford) Ph.D. (Stanford).  
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**Position:** Director/Lecturer - Communication Specialist.

- f) **Name:** Mr. Johnstone Mutisya Kiamba. BA.(Nairobi)  
MA. (Nairobi).
- Address:** Dept. of Urban and Regional Planning,  
University of Nairobi,  
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- Position:** Lecturer - Planner.
- g) **Name:** Nicholas Munyaka Nzioki.
- Address:** Dept. of Land Development BA (Nairobi) M.Sc.  
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University of Nairobi,  
Box 30197,  
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- Position:** Lecturer - Building Management.
- h) **Name:** Mrs. Agnes M. Kithimba, Teacher's Certificate -  
Home Science (Manchester) B. Ed. - Home Economics  
(Bristol).
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**THIKA.**
- Position:** Senior Lecturer - Nutritionist.
- i) **Name:** Mr. Ben M. Makau BA (Makerere) Diploma ( Makerere).
- Address:** I. D. S.,  
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**NAIROBI.**
- Position:** Researcher - Education Planning.
6. **COLLABORATING MEDICAL ADVISORY TEAM.**
- a) Dr. J.K. Waswa - MB,CHB,MPH (Candidate) - Kenyatta N. Hospital,  
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- c) Dr. (Miss) B.W. Kamau - MB,CHB. MRC. Path. Candidate (KNH)  
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- d) Dr. J.K. Mutiso - MB,CHB. Medical Officer (General Medicine)  
Infectious Diseases Hospital,  
Kenyatta N. Hospital,  
Box 41172,  
**NAIROBI.**

## B. BACKGROUND OF PROJECT.

According to recent data (Kenya's Economic Survey, 1984, p.3) only about 15.5 per cent of Kenya's population is within two kilometres of a Health Centre. The rest of the population must travel more than two kilometres to receive medical care from a Health Centre. Thus for most households in Kenya, modern health care is not easily accessible. Traditional healers are probably the sole source of medical care for the households who do not have easy access to modern medicine. Moreover, it is also a well known fact that in Kenya, as in many other parts of the Less Developed World, patients use traditional healers in conjunction with the modern healers.

Since traditional healers are an important source of medical care for many people, there is reason to believe that wherever traditional healers exist, they should be integrated with formal health care systems. However, to a policy - maker, the initiative to integrate traditional medicine with modern health care, is something analogous to an adventurous act. Basically, such an integration initiative is a step into an unknown domain of health care delivery. The purpose of this research project is to explore this new domain of Kenya's health care system.

The exploration is in form of a conceptual framework of a health care delivery system in which, unlike in the existing health care system, the role of traditional healers is officially recognized by the government. Field data will be gathered to test the policy implications of the framework. The basic elements of the model are as follows :

- i) Health status of a population depends on the effort devoted to the care of its health.
- ii) In order for Kenyans to improve their health status, they must increase the effort they allocate to their health care.
- iii) Integration of traditional healers with Kenya's modern health care system will bring forth the additional effort needed in (ii) above.

- iv) However, in the initial period of integration, the traditional and modern healers will have areas of conflict in the new health care system. This conflict will undoubtedly arise because of the adjustment problems to the new system. In subsequent periods, areas of cooperation between these two types of healers will develop, but areas of conflict will remain. Areas of cooperation are likely to be in the development of drugs from local materials and in referrals of patients. Conflict between the two types of medical experts will result from differences in their professional interests, competition for patients, prestige etc. and differences in choice of treatment techniques.

This research project will try to find out how to integrate traditional healers with the modern health care system so as :

- a) To reduce areas of undesirable conflict in the new system.
- b) To increase as much as possible, areas of cooperation in the new system.

Two strategies of integrating traditional medicine with modern medicine will be studied :

- a) Nominal official recognition of traditional healers by the government. This strategy would take the form of a "public announcement" by the government of its recognition of medical fields.
- b) Government's permission to the well qualified traditional healers to have offices in government clinics and hospitals.
- c) Training of traditional birth attendants (TBAs) in basic elements of modern methods of delivering babies.

Other traditional practitioners will not be given official government recognition under this strategy. The TBAs will also be given a bit of tools to use when delivering babies.

The study will pay particular attention to the attitudes of traditional healers, TBAs and the modern healers toward each of the above forms of integration. On the basis of analysis of field data, the study will recommend what needs to be done before any of the above integration strategies are implemented.

A research on integration of traditional medicine and modern medicine in Zaire ( IDRC, 1980 ), has pointed out that there are two types of arrangements that must be avoided in such integration :

- i) An arrangement whereby modern medicine takes over traditional medicine "by appropriating to itself certain medicinal products and techniques used by the healer with a view to eventually eliminating them."
- ii) An arrangement in which modern medicine absorbs the healers into its structured system, and then relegates them to the role of a mini-nurse, ignoring the rest of their talents.

#### C. OBJECTIVES.

1. To formulate a conceptual model of health care delivery in which integration of a group of health care providers known as "traditional", with another group known as "modern", first creates a state of conflict in a health care system, and then develops into a situation of cooperation and conflict between modern and traditional healers. The state of conflict and cooperation between the two types of providers in the new health care system is permanent and it is one of its main strengths.
2. To collect data to test the "conflict" and the cooperation - conflict", hypotheses of the theoretical framework.
3. To use the results of empirical validation of the model to anticipate what will happen after integration.
4. To use the model as a guide in choosing the appropriate integration strategy. An appropriate integration strategy is one that would promote activities of cooperation between the two types of providers and discourage activities in which their conflict is not desirable.

#### D. APPLICABILITY OF THE RESEARCH TO PRESENT CONDITIONS IN KENYA.

The results of this research project will form a concrete basis for discussions on how best to integrate traditional medicine with the modern medicine in Kenya's context. It will also advance the policy maker's knowledge about the attitudes of the modern and traditional healers about integration.

#### References :

1. Dunlop, David W., " Alternatives to Modern Health Delivery Systems in Africa : Public Policy Issues of Traditional Health Systems," Social Science and Medicine, Vol. 9, 1975.
2. IDRC, " Traditional Medicine in Zaire," IDRC, Monograph, 1980.
3. IDRC, "Rural Health Care in Egypt," IDRC, Monograph, 1980.
4. Republic of Kenya, "Economic Survey" 1984.

#### E. METHODS OF THE STUDY.

The primary data will come from interviews using questionnaires. The parties to be interviewed are traditional medicinemen, doctors and other medical officers in private clinics as well as those in government health care institutions. The respondents will be selected using random sampling procedures.

## F. BUDGET SUMMARY.

Item	For six months
Personnel	KShs. 152,000.
Equipment	KShs. 2,000.
Expendable Supplies	KShs. 10,000.
Travel	KShs. 40,000.
Subsistence	KShs. 44,000.
Data Analysis	KShs. 40,000.
Typing and Publications	KShs. 20,000.
Contingencies	KShs. <u>10,000.</u>
Total	KShs. 318,000.

## G. BUDGET JUSTIFICATION.

## i) Personnel

a) Four research assistants for two months @ KShs. 1,500.p.m. = KShs.12,000.

b) Graduate Researcher (social scientist) for three months @ KShs.20,000.p.m. = KShs.60,000.

c) Principal Investigator for two months @ KShs.40,000.p.m. = KShs.80,000.

## ii) Equipment.

One calculator = KShs. 2,000.

iii) Expendable Supplies = KShs.10,000.

iv) Travel - a large car = KShs.40,000.

## v) Subsistence :

a) Four research assistants for sixty nights @ KShs.150.p.n. = KShs.36,000.

b) For Principal Investigator and Graduate researcher for ten nights @ KShs.400.p.n. = KShs. 8,000.  
Total Subsistence = KShs.44,000.

- vi) Data Analysis by calculator and computer = KShs.40,000.
- vii) Typing and Publication = KShs.20,000.
- viii) Contingencies = KShs.10,000.

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Date of Birth: November 1942.

Place of Birth: Kangundo, Kenya.

Marital Status: Married. Three children.

Education: B.A. Political Science - 1965 (Cum Laude)  
Parsons College, Fairfield, Iowa.  
M.A. Political Science - 1966.  
University of Kansas, Lawrence, Kansas.  
Thesis Topic: "The use of Economic and Political Development  
as Ideology in Kenya, 1952 - 1963".  
Ph.D. Political Science - 1968.  
Syracuse University, Syracuse, New York.  
Thesis Topic: "Socio-political Ideas in Africa Literature  
in English, 1945 - 1967".

Teaching  
Experience:

1. Tutor. Department of Government, Parsons College, Fairfield, Iowa, 1965.
2. Tutor. Department of Political Science, University of Kansas, Lawrence, Kansas. Summer, 1966.
3. Lecturer. Program of East African Studies, Syracuse University, Syracuse, New York. Summer 1967.
4. Lecturer. Program of East African Studies Syracuse University, Syracuse, New York. Summer 1966.
5. Assistant Professor: African Politics, Montclair State College, Montclair, New Jersey. September, 1968 - June, 1969.
6. Adjunct Assistant Professor. African Politics. St. John's University, Jamaica, New York. Spring 1969.
7. Assistant Professor. African Politics, Rutgers University, New Brunswick, New Jersey. September 1969 - June, 1970.
8. Lecturer, Department of Government, University of Nairobi, June, 1970 - 1972.
9. Senior Lecturer, Department of Government, University of Nairobi, September, 1972 - 1976.
10. Associate Professor. Department of Government, University of Nairobi 1976 - 1979.

- Subjects Taught:
1. American Government - Undergraduate.
  2. African Social and Political Theory - Graduate.
  3. Introduction to Political Science - Undergraduate.
  4. Governments of South-East Asia - Graduate.
  5. Comparative European Governments - Graduate.
  6. Contemporary African Politics - Graduate.
  7. African Political Thought - Undergraduate.
  8. Governments of the U.K. U.S.S.R: and U.S.A. Graduate.
  9. Politics and Literature of the Carribean - Undergraduate.

10. Comparative Politics of the U.S. and U.S.S.R. Undergraduate.
11. Comparative Politics of Post Industrial State (Japan, U.S. and U.S.S.R.) - Undergraduate.
12. Issues in African Public Policy - Undergraduate.

Administrative  
Experience:

- (a) Deputy Director - Diplomacy Training Programme  
1973 - 1974.
- (b) Assistant Managing Editor, Daily Nation 1979 - 1983.

- Consultancies:
1. Consultant: Management of District Focus : GoK. Office of the President : Development Coordination and Cabinet Office.
  2. Consultant: Commodity Imports : Swedish Development Cooperation Office 1984.
  3. Consultant: Funding Culture : Ford Foundation 1984.
  4. Consultant: University/Industry Manpower Use Linkages : Economic Commission for Africa. 1984.
  5. Consultant. District Focus and Kitui Arid and Semi - Arid Programme. To Louis Berger/USAID and GOK. 1983.
  6. Consultant. Government of Kenya/World Bank, Second Urban Project. Kenya Low Cost Housing By Laws Study - 1979.
  7. Consultant. Government of Kenya/CID/USAID Marginal Semi Arid Lands Preinvestment Inventory. Institutions Report No. 7, 1978.
  8. Consultant. IDEP/ENDA, Clark University, Drought Data 1976 (Dakar).
  9. Consultant. ILO/ARLAC Labour Training, Arusha, 1976.
  10. Consultant. Kenya Government National Committee on Educational Objectives and Policies, 1976.
  11. Consultant. Unesco Methods and Analysis Division, Paris. 1974.
  12. Consultant. World Council of Churches CCPD Division 1974 (Geneva).
  13. Consultant. Education and Development. All Africa Conference of Churches, 1972.
  14. Consultant. Kenya Government Special Rural Development Evaluation Team, 1972.
  15. Consultant. Kenya Government Employment Mission, ILO/UNDP 1971/1972.
  16. Consultant. General African Programme Urban Institute Montclair State College, Upper Montclair, New Jersey - 1969.
  17. Consultant. General African Programme New Jersey Urban Education Corps, Camp Kilmer, Edison, New Jersey. 1969.
  18. Consultant. Urban Institute, Montclair College.
    - (a) Reading Programme Evaluation. 1969.
    - (b) Development of Social Science and Literary Materials for in the TRY and Upward Bound Programmes 1969.
  19. Consultant. New Jersey Urban Education Corps. Development of Africa Materials and Training of Teachers Teaching African History. 1969.
  20. Consultant. New Brunswick Board of Education. Development of African Materials for use in Grades K-7th. Under contract to New Jersey Urban Schools Development Council. 1969.

Books Published/Edited/Contributing Author:

1. Akina: EALB. 1978.
2. Politics, Economics and Technical Training (with Martin Godfrey), EALB, 1976.
3. Hadith IX: B.A. Ogot (Ed) (Contributing author) EALB. 1976.
4. La Civilization de la Femme dans la Tradition Africaine.
5. To Break the Chains of Oppression. CCPDY. (Contributing Consultant), Geneva, WCC. 1975.

6. African Political Thought: A Reader (with S.W. Rohio) HEB. 1975.
7. Kenya: Politics, Policy and Society. EALB. 1975.
8. Weusi: Socio-Political Thought in African Literature Macmillan 1974.
9. The Executive in African Governments (with Bereket Sellassie), HEB. 1974.
10. Education, Society and Development: New Perspectives from Kenya. D. Ghai and D. Court (eds.). (Contributing author) Nairobi. OUP. 1974.
11. Creating the African University: Emerging Issues in the 1970s. T.N. Yusufu (Contributing author) Ibadan, OUP. 1973.
12. Black Aesthetics: A. Gurr and P. Zirimu (eds.) (Contributing author) Nairobi, EALB. 1973.
13. Report of the Seminar for Members of the Kenya Public Service Commission. James Nti, (Contributing author) 1975.
14. The Literature of Africa: Joint Editor with Hans Zell, Barbara Abrash and Helen Silver. Africana Publishing Corporation, New York, 1971. HEB. London. 1971.
15. Topics and Afro-American Studies, edited by Henry J. Richards (Contributing author) Black Academy Press Inc. Buffalo, New York. 1971.
16. Messages: An Annotated Bibliography of African Literature for Schools. Montclair State College, New Jersey, 1970.

Articles Published:

1. "Sketches of Pariah and Pervenu". Forum. Spring, 1969.
2. "Ushango: Uses of African Literature", Social Studies Vol. 35, No. 2. February 1970.
3. "Social Change and Pan Africanism", Black World, Vol. 19, No. 10. August 1970.
4. "Women in African Literature", East African Journal Vol. 8, No. 3. March 1971.
5. "Fanon, Kathue and the Failure of the African Revolution" Black World. Vol. 20, No. 7. May 1971.
6. "Kenya Technical Education and Change", East African Journal, Vol. 8 August, 1971. and Presence Vol. VI, No. 1, 1973.
7. "The Pariah Literati", Trans-Action, Summer, 1971.
8. "Zamani: Scholarship and the Uses of the Past". Social Studies, Summer 1971.

9. "Chicawa: The Politics of Education and Research Anglophonic African". African Scholar, Summer 1971.
10. "Perceptions of Social and Political Actors and Processes in African Literature", Journal of The New African and Literature and the Arts. Vols. 9 and 10. 1971.
11. "Notes on Spastic Montage of an Intellectual Broker". Busara. Vol. 4 No. 1, 1972.
12. "Tools are for People: Toward and Africanized Technology" The Ecumenical Review. Vol. XXIV, No. 3, July, 1972.
13. "Cleavage and the Organizational Bases of Politics in Kenya: A Theoretical Framework". Journal of East African Research and Development, Vol. 3, 1, 1973.
14. "Lara July", Busara, Vol. 4 No. 3, and 4, 1972.
15. "The Political Economy of Self-Help Harambee Institute of Technology" Canadian Journal of African Studies, Vol. 8, No. 1, 1974. (with E.M. Godfrey).
16. "Inter-tribal and Inter-ethnic Interaction". Journal of Literature and Society, Vol. 1, No. 2, 1973.
17. "Khamsin", Journal of Literature and Society, Vol. 11, No. 2, 1973.
18. "Planning High Level Manpower and the African University. Association of African Universities Magazine, 1973.
19. "A Note on Soyinka", Joe, September 1973.
20. "Economics, Politics and Education: Kenya's Harambee Institutes of Technology", Human Resources Research, Vol. 6, No. 3; February 1975. (with Martin Godfrey).
21. "The Irrational as a System Control", Thought and Practice. Vol. 11, No. 1, 1975.
22. "African Perceptions of the Idea of Freedom and Revolution". Thought and Practice, Vol. No. 2, 1976.
23. "Kitui: The Ecosystem, Integration and Change". African Environment. Occasional Paper, Series No. 1976.
24. "Individualists go because they have no Institutionalized Roles". ASA Bulletin. April, 1979.

Editorial  
Responsibilities:

1. Associate Editor for East Africa, Black Academy Review, Buffalo, New York.

2. Associate Editor for Africa, African Scholar, Washington D.C.
3. Deputy Editor, Journal of East African Research and Development, Nairobi Kenya.
4. Associate Editor, African Review, Dar es Salaam, Tanzania.

Papers Read:

1. Black Politics and the Crisis of Democratic Practice. Black Coalition of Scotch Plains, New Jersey, February 20, 1969.
2. The Politics of Black Education. New Jersey Association of Black Educators, Cleveland School. Newark, New Jersey, March, 11, 1969.
3. Blacks in African Literature, Seaton Hall, University Public Lectures, South Orange, New Jersey, March 19, 1969.
4. African Literature and the Black Revolution. Countee Cullen Library, Harlem, New York, March 25, 1969.
5. Racism and the Politics of Protest. Uppsala College Public Lectures, Orange, New Jersey, April 28, 1969.
6. The Political Role of the Black Educator. New Jersey State Social Studies Teachers Conference, Trenton, New Jersey, May 16, 1969.
7. Apartheid and Civil Liberties in an International Context. U.N. Association of New Jersey Conference, Seaton Hall University, South Orange, New Jersey, May 24, 1969.
8. Teaching African Politics: The Ideological Parameter. South African Heritage Studies Association Conference Federal City College, Washington D.C. June, 27, 1969.
9. The Politics of Studying African Politics. Lehman College Public Affairs Lecture Series, New York, July, 8, 1969.
10. Ousman Sembene's Commentary on Senegalese Politics. National Association of Black Artists Conference, New York, October 3, 1969.
11. Race as a Factor in International Politics. African Studies and Research Centre Public Lecture Series, Cornell University Ithaca, New York, October 14, 1969.
12. Political Uses of Africana. New Jersey Urban Educational Corps Black History Symposium, Camp Kilmer, Edison, New Jersey, November 3, 1969.
13. Mau Mauing as Politics of the Diaspora. Second Annual Conference of African and Afro-American Studies, Atlanta University, Atlanta, Georgia, December 4 - 6, 1969.

14. Radical Materials in African Politics. North Carolina, Greensboro, North Carolina, February 19, 1970.
15. The Politics of Education and Research in Anglophonic Africa. American Educational Research Association, Minneapolis, Minnesota, March 2-6 1970.
16. African and Black Studies, African Heritage Studies Association Conference, Washington D.C. May 1-2, 1970.
17. We Calibans: An Evaluation of the Diaspora on Returning, Africana Studies and Research Centre Public Lecture Series, Cornell University, Ithaca, New York, May 16, 1970.
18. The Karani Complex, Technological Education and Society. Proceedings of the East African Academy, Nairobi, Kenya September 13-15, 1970.
19. Ujadiliano: The Art of Political Commentary in Africa. United Kenya Club 1971.
20. Women in Rural Politics: A Report of the Machakos Pilot Study. Political Science Workshop, Molo Kenya, February 19, 1971.
21. Rural Women, Politics and Development. Institute of Adult Studies Conference on Rural Women and Development, Kikuyu Adults Centre, Kenya, March 3, 1971.
22. The Political Development of Kenya and Marginal Groups in Politics. Social Work Training Programme, Kenya Institute of Administration. Kabete, Kenya March 5, 1971.
23. Rural Politics in Kenya: The Organizational Structure. Danish Volunteer Programme, Arusha, Tanzania, March 19, 1971.
24. On Improving Rural Welfare: Notes Towards Matapolicy Conference on Improving Rural Welfare. Institute for Development Studies, Nairobi, Kenya. May 31 - June 3, 1971.
25. Technological change in Rural Development. Danish Volunteer Organization, Tengeru, Tanzania, June, 7, 1971.
26. African Politics in Literature, American Political Science Association, Chicago, Illinois, September 7 - 10, 1971.
27. Political Bases and Interpretation of Imaginative Literature. Nairobi Workshop and Colloquim on East African Literature, Nairobi, Kenya June 20 - 25, 1971.
28. Politics and Social Change in East Africa. Phelps Stokes Fund Seminar, Nairobi, Kenya, July 26, 1971.
29. Mwethya: The Socio-Historical Basis of Collective Action in Machakos District. The Historical Association of Kenya, Conference Nairobi, Kenya, August 1971.

30. Rural Politics: Impact on Planning. Conference on Planning Evaluation and Implementation, Nairobi University and York University, Nairobi Kenya, July 15 - 17, 1971.
31. Literature as Politics. Guest Seminar. Centre for Inter-Cultural Documentation, Cuernavaca: Mexico, August 20 - September 12, 1971.
32. Women and Harambee: Politics as the Quest for Status. Colloquium on the African Woman, Abidjan, Ivory Coast, December, 1971.
33. Towards a National Research Council: Policy and Composition. Workshop on the Co-ordination of Production, Dissemination and Utilization of Social Science Research Findings, University of Nairobi, January 20-22, 1972.
34. Science, Technology, Economic Growth and Social Justice: The African Perspective. Paper Prepared for the West African Conference on Science, Technology and the Future of Man and Society, World Council of Churches, March 24 - 20, 1972, Legon, Ghana.
35. The Politics of Land. Paper prepared for ILO/UNDP. Kenya Employment Mission, April/May, 1972.
36. Changing Roles of Women and Employment. Paper prepared for ILO/UNDP. Kenya Employment Mission, April/May, 1972.
37. Harambee and Employment. Paper prepared for the ILO/UNDP. Kenya Employment Mission, April/May, 1972.
38. Equity and Education (with P. Kinyanjui). Paper prepared for the ILO/UNDP. Kenya Employment Mission, April/May, 1972.
39. Tourism and Employment. Paper prepared for the ILO/UNDP Kenya Employment Mission, April/May, 1972.
40. The African University: Issues for the Seventies. Paper prepared for the Association of African Universities Conference on the African University in Seventies. Ghana, July, 1972.
41. The Political Sociology of the Kenya Bureaucracy. EAUSSC. December 19 - 13, 1972, Nairobi.
42. Machakos: Intraethnic Political Evolution. EAUSSC. December 18 - 23, 1972.
43. Intellectual Channels and Alternative Futures. Makerere Golden Jubilee Writers' Workshop. University of Nairobi, December 18 - 23, 1972.
44. Cleavage and the Organizational Base of Politics in Kenya: A theoretical framework. EAUSSC. December 19 - 23, 1972.
45. The Political Economy of Self-Help: Kenya Harambee Institute of Technology (with Martin Godfrey), EAUSSC. December, 19 - 23, 1972.

46. Bureacracy and the Developing Nation. Public Service Commission Seminar, Mombasa, November 25 - December 5, 1972.
47. Intertribal and Interethnic Interaction in Kenya. NCKK Conference on race and Society, Limuru, November 1972.
48. Civic Education: Content and System: National Seminar on Adult Education. July 23 - 25, 1973.
49. Politics and Social Change: The Recent East African Parameters. Presbyterian Church of East African Committee for the training of the Ministry. St. Paul's College, Limuru, July 30 - 31, 1973.
50. The Myth of Kericho: SRDP as an Experimental Approach. AASA/OLC Development from Below Seminar/Field Trip Addis Ababa, October 12 - 20, 1973.
51. Political Trends in East Africa Since Independence. A Comparative Study. University of Wisconsin Extension Seminar, Nairobi, August 8, 1973.
52. The Political Economy as a Constraint to Equitable Distribution. IDS Nairobi/IDS Sussex Seminar on Strategies for Increasing Productive Employment in African Countries. October - December, 1973.
53. The Myth of Kericho: Was SRDP Experimental ? IDS Nairobi/IDS Sussex Seminar on Strategies for Increasing Productive Employment in African Countries. October - December, 1974.
54. Education for Black Civilization. Society of the African Culture Seminar on Black Civilization. Paris July, 1973.
55. Food, Population and Rural Development in Kenya: Progress, Policies, Problems and Prospects. IAAE/UNFPA FAO Seminar on the Inter - relationship between population, Food and Agricultural Development, Rome, December, 1975.
56. Ecology and Society: The Role of the Ecodevelopment Approach, HAK, Nairobi, August 1975.
57. The Black Hermit. An Interpretation. Paper for a High School Reader, January, 1975.
58. Some Sins of Omission in Kenya Urban Writing. Exhibit chapter, Lagos Black Arts Festival, March, 1975.
59. Alternative in Planning Arid Zones. Centre for International Studies. M.I.T. Cabridge, March 11, 1975.
60. Development Alternatives in Arid Areas. PASTAM/Midwest, University Consortium for International Activities. Inc. Indiana University, November 17, 1976.
61. Development Research Theory and Methodologies: The Kenyan Case. Centre for Social Science Research, Howard University, December 7, 1975.
62. The Case against Detente. AACC Consultation on Liberation, Justice and Reconsiliation, March 1976.

63. Kitui: The Ecosystem, Intergration and Change. IDEP/UNEP/SIDA Seminar on Environment and Poorly Intergrated Societies in Afirca. Mauritiuis, April, 2 - 20, 1976.
64. African Perceptions of the Idea of Freedom and Revolution. African Regional American Studies Conference. University of Lagos, March 31 - April 3, 1976.
65. Educational Harambee: National Committee on Educational Objectives and Policies, May 1976.
66. Technical Training and Harambee Institute of Technology. National Committee on Educational Objectives and Policies, May 1976.
67. Kenya's Codified Ideology. National Committee on Educational Objectives and Policies, May 1976.
68. Creation of the Kitui Asomi. IDS Working Paper No. 304, October 1977.
69. Kitui Livestock. IDS Working Paper No. 305, October, 1977.
70. Kitui Trade. IDS Working Paper No. 306, October 1977.
71. Kanduti: A Case Study. IDS Working Paper No. 307, October, 1977.

MUTSEMBI MANUNDU

Date of Birth: November 29, 1949.

Place of Birth: Kinango, Kenya.

Marital Status: Married. One child.

Educational Experience: B.A. Department of Economics, 1973.  
M.A. Economics, University of Michigan, Ann Arbor 1976.

Areas of Specialization:

1. Economic Development.
2. International Economics.
3. Resource Economics.

Working Experience:

1. Graduate Research Assistant, Institute for Development Studies, University of Nairobi. 1973.
2. Lecturer in Economics, University of Nairobi. August 1977 to date.

Consultancies/ Major Research:

1. Economics of the Provision of Free Education in a Developing Country: The Case of Kenya. University of Michigan, Ann Arbor 1975.
2. Causes of Unemployment Among School Leavers in Kenya. University of Michigan, Ann Arbor 1976.
3. The Petroleum Industry and Energy Sector Study (with Maitha, J.K., and Senga, M.W.) consultancy for Kenya Pipeline Board by MASE Economic Services. Submitted to the Ministry of Finance and Planning of the Kenya Government for the Fourth Development Plan, 1979 - 1983. December, 1977.
4. Environment and development in Kenya (with Lee-Smith, D. and Maitha, J.K.) Consultancy Phase I of the UNDP/GoK/UNEP Environment and Development Project. April, 1978.
5. Energy demand and supply in Kenya. (with House, J.W. and Senga, W.M.) An econometric study on the energy situation in Kenya, by Institute for Development Studies, University of Nairobi, Consultancy for National Council for Science and Technology. Funded by UNDP. January, 1979.
6. Forestry and the environment in Kenya. Consultancy for UNDP/GoK/UNEP Environment and Development Project, Phase II. September, 1979.

7. The Role of Foreign Assistance in the Kenyan Economy. Consultancy for Swedish Embassy Nairobi. October, 1978.
8. Economic Development in Kenya. Consultancy for Technical Consultants International (TCI), March, 1979.
9. Production Techniques, Factor Proportions and Elasticities of substitution. (with Maitha, J.K.) Reading on the Kenyan Economy edited by Killick, T., Heinemann Educational Books. London. 1980.
10. Economic Growth Versus Development. Consultancy for Technical Consultants International (TCI). May, 1979.
11. Africa's Energy Challenge: Policy Options. Trend Publishers (in Press).
12. Forestry in Tharaka. (with Owino, F.) Consultancy for Ministry of Agriculture/Institute for Development Studies, University of Nairobi. November, 1981.
13. The Costs and Benefits of Foreign Aid in African Countries. Seminar Paper. Kikuyu, Institute of Adult Studies. March, 1979.
14. Consumption rates of wood fuel in Semi-arid areas of Kenya. Staff Seminar Paper Department of Economics, University of Nairobi. March, 1980.
15. The Balance of Payments and Stabilization Policy in Kenya. Consultancy for Central Bank of Kenya. June 1980.
16. The Unemployment Problem in Kenya and How to Alleviate it. Paper presented at a workshop. Nairobi, June, 1980.
17. The Matatu Public Transport Sector of Nairobi. (with Sunita, K. and Lamba, D.) Consultancy for Mazingira Institute, November, 1982.
18. International Trade: Past, Present and Future, International Trade Conference organized by the Institute for International Trade and Development and the Faculty of Law, University of Nairobi, April, 1983, Mombasa, Kenya.
19. Socio - economic survey, Nyanza Province. Lake Basin Development Authority, 1984.

JOSHUA AKONGA

- Address: Department of Sociology  
University of Nairobi,  
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Nairobi.  
Telephone: 334244
- Date of Birth: 25th April, 1949. Kakamega, Kenya.
- Education: B.A. Sociology - University of Nairobi. 1975.  
Thesis Topic: "Adoption of small scale business practices in Kakamega District." Thesis presented at the Department of Sociology, University of Nairobi in partial fulfilment of B.A. Hons degree". 1975.  
Ph.D. Anthropology - University of California. San Diego. 1979.  
Thesis Topic: "Social training: Perspectives on obedience and autonomy in boys among the Swahili of Mombasa and the Upper middle class of La Jolla, California." Ph.D. Thesis presented at the Department of Anthropology, University of California, San Diego. 1979.
- Teaching Experience:
1. Teaching Assistant. Department of Anthropology University of California. San Diego. 1976-79.
  2. Lecturer, Department of Sociology, University of Nairobi. 1979 - 1983.
- Subjects Taught:
1. Anthropology.
- Research Experience:
1. Self -help projects. A survey carried out for Prof. P.M. Mbithi and R. Rasmuson. 1974 - 75.
  2. Adoption of small scale business practices in Kakamega District. Research for B.A. Hons. Thesis 1974 - 75.
  3. Research assistant in a cross-cultural study of the nuclear family: The Swahili of Mombasa 1975 - 1976.
  4. Research assistant in a cross-cultural study of the nuclear family: The upper middle class of La Jolla, San Diego, U.S.A. 1976 - 1977.
  5. Drought, Population dynamics and public policy: A Socio-economic study of Kitui District. 1980 - 1982.
- Consultancies:
1. Ministry of Economic Planning and Development/University of Nairobi. Cultural Profiles of Busia District. 1982.
  2. GoK. "Report of the study committee on United States International University - Nairobi Campus." 1982.

Publications:

1. "Traditional processes of social control among the Kitui Kamba" African Journal of Sociology, Vol. 11 No. 1, May, 1982.
2. "Persistence and continuity in traditional pastoralism in Kitui District, Kenya." African Journal of Sociology, Vol. 11, No. 2, November, 1982.
3. "Mobilization of Local Resources". A paper presented at the In-service course of Child Welfare Society of Kenya Science Teachers' College Nairobi on August 2, 1979.
4. "Traditional and Modern Kinship Systems and Authority structures in African Societies."  
A paper presented at the Inter-regional Seminar of UNICEF at the Flying Doctor Service Headquarters in Nairobi, on August 7, 1979.
5. "Social training: The Swahili of Old Town Mombasa". Paper No. 132, Institute of African Studies, University of Nairobi. 1980.
6. "Institution of Marriage". A paper presented at the Marriage counselling course held at Brackenhurst, Limuru on April 11, 1980. The course was sponsored by the National Christian Council of Kenya. 1980.
7. "Prostitution and its effects on society". Paper presented at the University of Nairobi Extra-mural workshop at Kajiado, Kenya, on May 28, 1980.
8. "The African family structure". Paper presented at the orientation seminar for TUI - tourist guides at the Hotel Oceanic, Mombasa. On November 16, 1980.
9. "Famine, Population pressure and the search for water in Kanziko Location of Kitui District." Paper No. 150, Institute of African Studies, University of Nairobi, March 10, 1981.
10. "The role of the man in the family." Paper presented at the National Christian Council of Kenya sponsored marriage counselling course at Limuru, near Nairobi on May 11, 1981.
11. "Famine, famine relief and public policy in Kitui District." Institute of Development Studies, Working paper No. 388, February, 1982.
12. "The rural world". Paper presented at the International seminar on Rural Scouting Africa Region-for English speaking countries, at the Kenya Science Teachers' College, Nairobi, Kenya, on May 15, 1983.

ROBERTA M. MUTISO

- Address: Department of Sociology,  
University of Nairobi.  
P.O. Box 30197,  
Nairobi.
- Date of Birth: July 7, 1941 New York.
- Marital Status: Married. Three Children.
- Education:
1. Ph.D. Sociology, University of Nairobi 1974.  
Thesis topic: "The Evolution of Social Welfare and  
Community Development Policy in Kenya".
  2. Master's Degree. Social Work. Syracuse University,  
1967.  
  
Thesis topic: "The Social Problem of Abortion in the  
United States".
  3. Certificate. Community Development. Syracuse Community  
Development Association. 1966.
  4. B.A. International Relations. Pembroke College  
Brown University, Providence, Rhode Island. 1963.
- Teaching:
1. Senior Lecturer, Department of Sociology, University  
of Nairobi. June 1979 to date.
  2. Lecturer, Department of Sociology. University of Nairobi.  
October 1975 to June 1979.
  3. Assistant Lecturer, Department of Sociology.  
University of Nairobi. 1970 - 71.
- Casework:
1. Child and Family Welfare Worker. Child Service Association,  
Inc. Newark, New Jersey. 1968 - 1969.
  2. Social Group Worker and Case Worker Dunbar Associates,  
Inc. (Community Centre), Syracuse, New York. 1967 -  
1968.
- Subjects Taught:
1. Social Psychology.
  2. Principles and methods of social work.
  3. Social policy and Administration.
- Administrative  
Experience:
1. Co-ordinator of the Social Work Programme - Department  
of Sociology, University of Nairobi, 1977 - 82.
  2. Administrative Assistant. Asia Programme. Ford  
Foundation Foreign Area Fellowship Programme,  
Inc. 1964 - 65.
- Consultancies:
1. International University Exchange Fund/All  
Africa Conference of Churches. Special consultant on  
counselling and the organization of refugee services.  
January 1980 to December 1981.

2. UNICEF Eastern Africa Regional Office. Expert meeting on research and data collection, December 1978, Nairobi.
3. Scandinavian Institute of African Studies. Seminar on Women in Africa and Development Assistance, Uppsala, Sweden. August 1978.
4. Factors Affecting job Tenure and Performance among Women Agricultural Extension Officers. GoK. Ministry of Agriculture 1978.
5. Joint Refugee Services of Kenya. In-Service training course for social work counselling staff, Nairobi, February 1977 to January 1978.
6. International Association of Schools of Social Work. Second Sub-regional Seminar on Family Welfare as a Development Strategy, Kenya Institute of Administration, Nairobi, February 1977.
7. Kenya Red Cross Society. National Leadership Seminar, Limuru Conference and Training Centre (NCCCK), July 1976.

Publications:

1. Social Worker's Tasks, Needs and Responsibilities in relation to Children and Women in Rural and Urban Families in Kenya, Nairobi, UNICEF, 1981.
2. "Development Social Work". Journal of Social Work Education in Africa. Vol. 3, December, 1979.
3. "Career-role/family-role conflict among women agricultural officers in Kenya". Journal of Eastern African Research and Development. Vol. 9, No. 1, 1979, pp 67 - 77.
4. Factors affecting job Tenure and Performance among Women Agricultural Extension Officers. (with Thelm Awori) Agricultural Information Centre, Nairobi. 1978.
5. "The Development of a Training Curriculum in Family Welfare." ASWEA Document 13, Guidelines for the Development of a Training Curriculum in family Welfare, 1978.
6. "Intergrated Rural Development and Popular Participation: Implications for Social Work." (with Phillip M. Mbithi). International Association of Schools of Social Work, Education for Social Change, 1974.

Conference/  
Seminar Papers:

1. "The Concept of the Welfare State as applied to Kenya" Paper presented at the International Sociological Association's Xth World Congress of Sociology, Mexico City, August 1982.

2. "The Teaching role of the supervisor in social work training." Paper presented at a Supervisor's Workshop, Social Development, Department, Kenya Institute of Administration, Lower Kabete, January 9, 1982.
3. "Identification of needs as a basis for project development." Paper presented at a two week course for Social Development Officers organised by the Women's Bureau, Ministry of Culture and Social Services and held at the Kenya Institute of Administration, Lower Kabete, August 29, 1981.
4. "Sociology, Social Structure and Behaviour." Paper presented at the Motor Transport Officers Seminar, Kahawa Garrison, June 5, 1980.
5. "Working with Groups." Paper presented at the Centre for African Family Studies, Nairobi, Adolescent Fertility Management Course, November 29, 1979.
6. "Counselling of Refugees in Africa." Paper presented at the OAU/AACC/ UNHCR Conference on the situation of Refugees in Africa, Arusha, January 1979.
7. "Social Constraints affecting the Progress of the Home Economics Extension Programme." Paper presented at the Ministry of Agriculture's Rural Home Economics Symposium Management Training and Advisory Centre Nairobi, June 1978.
8. "New Developments in Social Work Practice." Paper presented at the National Christian Council of Kenya's Urban Community Improvement Programme Conference, NCKK Conference and Training Centre, Limuru, May 1978.
9. "Social and Economic Aspects of Rehabilitation and Resettlement of Disabled Persons in Kenya." Paper presented at the Department of Social Services' Vocational Rehabilitation Seminar, Kenya Science Teachers' College, Nairobi April 1978.
10. "Professional Supervision as a part of Staff Development." Paper presented at the Social Development Officers' course, Kenya Institute of Administration, May, 1977.
11. "The Relevance and Importance of In-Service Training in Social Work." Paper presented at the closing ceremony of the Catholic Parish's one-year in-service course for practising social workers in the Nakuru area, Mwangaza Community Centre, Nakuru, February 1977.
12. "A Social Work Code of Ethics for Kenya." Paper presented at a Seminar of Social Welfare Officers, Department of Social services, Ministry of Housing and Social Services. Kenya Institute of Administration, January, 1976.

PATRICIA RICHARD BIFANIAddress:

P.O. Box 47074.

Nairobi - Kenya.

Tel: Office: 334244.

Home: 882441.

Place of Birth: Santiago - Chile.Nationality: Italian.Profession: Psychologist - Sociologist.Educational  
Experience:

1. Bachelor of Science Degree, University of Chile, Faculty of Philosophy, Department of Psychology. 1962.

Thesis Topic. Phenomenological Study of Conscience.  
Alteration through Rorschach Test.

2. Post Graduate Sociology Studies. Latin American School of Sociology - ELAS - FLASCO - UNESCO.  
Post Graduated Studies in the Latin American Faculty of Sociology, 1969.

Thesis Topic. "Algunas Consideraciones Sobre Nomadismo  
v Ecodesarrollo".

3. Post Graduate Diploma. Environmental Management and Development Planning. CIFCA (International Centre for Training in Environmental Sciences) 1977.

Languages:

Mother tongue: Spanish.  
English - French - Italian.  
Portuguese (working knowledge)

Teaching  
Experience:

1. Tutor. Department of Psychology. Faculty of Philosophy. Universidad de Chile. 1962 - 1963.
2. Lecturer. Faculty of Law and Social Sciences. Centre of Criminological Studies, Universidad de Chile. 1963 - 1968.
3. Senior Lecturer. Institute of Sociology. Universidad Catolica de Chile. 1970 - 1972.
4. Lecturer. Department of Literature. Faculty of Arts. University of Nairobi. 1980 - date.

Subjects  
Taught:

1. Psychology of Personality.
2. Psychodiagnosis.
3. Psychopathology.
4. Social Problems.
5. Social Psychology.
6. Research Methodology in Social Sciences.
7. Qualitative Research Methods.

Professional Experience:

1. Hospital Salvador. Department of Neurosurgery. Psychology: diagnosis of personality and research activity. 1963.
2. Universidad de Chile. Department of Psychology. Member of the examining commission. 1963.
3. Hospital Psiquiatrico. Santiago - Chile. Diagnosis of personality and research activity. 1962.
4. Universidad de Chile. Faculty of Law and Social Sciences. Centre of Criminological Studies. 1963 - 1968.  
  
Acting Director of the Centre of Criminological Studies. Coordinator of the inter disciplinary team conducting research work, planning research activities, preparation of reports. 1967 - 1968.
5. Assistant Director of the Centre. Interdisciplinary research and field work on: prison life of male delinquents and rehabilitation of male delinquents. 1964 - 1966.
6. Research on "personality traits of habitual delinquents", Using a life - span approach, preparation of monographic documentation on the subject.
7. Research in Collaboration (with L. Friedman) on "Effects of prison life and rehabilitation of delinquents".
8. Research on "delinquents" and non - delinquent" groups through projective techniques. 1963.
9. Comparative study of habitual delinquents and control groups (case duty) 1963.
10. Senior Lecturer and full time research at the Universidad Catolica de Chile. Responsible of the research activity in the field of social problems. 1970 - 1972.
11. Project coordinator of the project "Drug Consumption among secondary school students".
12. Research, direction and production of a book on social problems related to drug consumption by adolescents.
13. Interdisciplinary research activity in collaboration with the Psychiatric Hospital, National Health Service and Secondary Schools, Santiago, Chile, on drugs and other social problems.
14. Project elaboration on "teenagers employment of free time" for public Health Department (Zona las Condés). Chile, (Patricia Bifani - L. Ortiz).
15. Interdisciplinary research in collaboration with the public Health Department (Zona Sta. Rosa), Chile.
16. Contributor to experimental children's magazine "Cabro Chico", Chile.

17. Design and production of a set of selection tests for admittance at "Escuela de Arte de la Comunicacion" (in collaboration with sociologists: G. Minizaga and D. Benavente) Universidad Catolica,
18. Project design of "The Feminine role in a transitional society" (in collaboration with sociologist B. Reustsch).
19. Interdisciplinary research on schizophrenic cases treated within its own social group.
20. Team research work on "methodology aspects of techniques for qualitative evaluation" with special emphasis on projective techniques (in collaboration with R. Zuniga).
21. Representative of the department of Social Institutions, participated on the elaboration of study programmes, coordination among different Departments of the Sociology Faculty, guidance of thesis, admission examinations, etc.
22. Research on "Pastoralistic Way of Life", with special emphasis on the Turkana Tribe. 1976.
23. Report for the meeting "Environmental Management of Minority Group", Port Louis, Mauritius, April 1976, organized by IDEP, ENDA, Dakar, Senegal. (see publications) 1976.
24. Project Design on "Education Pour L'Environnement a Niveaux d'Ecoles Primaires et Secondaires" 1976.
25. Research on "Dependence in Latin America through Latin American Literature". (Preparation of background paper).
26. Research activity on Latin American socio-economic process through its Literature" (Working papers on the subject for the use of the students).
27. Elaboration of a project Proposal on the "Impact of Development on Women in Kenya", (Patricia Bifani - Roberta Mutiso).
28. Design of a project proposal for the Kenyan participation in the "Household, Gender and Age" Third World Project (Patricia Bifani, Kavetsa Adagala, Roberta Mutiso, Eddah Gachukia).

Administrative  
Experience:

1. Project Coordinator on the project of development on women in Kenya UNICEF. 1982 - 1983.
2. Project Coordinator on the project Drug Consumption among Secondary School Students, Universidad Catolica de Chile. 1970 - 1972.
3. Acting Director of Centre of Criminological Studies. Universidad de Chile. 1967 - 1968.

Consultancies:

1. Economic Commission for Africa (Addis Ababa)  
Consultancy with ECA/ATNCW preparation of a study related to the situation of women in Africa in year 2000.

The methodology includes projections and alternative scenarios oriented to provide elements for forward looking development strategies. The purpose of study is to stress the role of women, both as agents and beneficiaries of change, following the recommendations to the Lagos Plan of Action. The study was presented to the regional Preparatory Meeting for the World Conference on the U.N. Decade for Women. 1983.

2. Economic Commission for Africa/United Nations University.  
Consultancy assignment to collaborate in the methodology workshop on "Household Gender and Age". The objective of the workshop was to discuss the state of the art of "Life - Span" and "Time Budgetting" approaches and to design a common methodology for three field research projects to be undertaken in Latin America, Africa and Asia. 1983.
3. UNICEF - East Africa Regional Office (Nairobi).  
Project Co-ordinator of the Project "The Impact of Development on Women in Kenya", Field Work Research on pastoralist small agriculturalist and peri-urban women in a number of areas in Kenya. Design on methodological approach oriented to research on women in Third World Countries (see publications). 1982.
4. ENDA - Senegal. Consultancy assignment for field research and preparation of a paper on "Turkana, Dogs and Diseases" (in Print) 1980.
5. Environmental Liason Centre - Nairobi.  
Research and preparation of the final report on NGO's activities in areas selected for in-depth review for UNEP Governing Council VIII on Marine Resources and Marine Pollution, Natural Ecosystems and Genetic Resources.
6. UNEP - Nairobi.  
Preparations of part of a level one overview on Environmental Management, overview containing case studies, illustration materials and bibliographic references. 1979.
7. Environmental Liaison Centre, Nairobi.  
Research and preparation of the final report on NGO's activities in areas selected in-depth review for UNEP Government Council VII on Human Settlements, Appropriate Technology and Energy. 1978.
8. Consultancy on the project "Ecodevelopment approach to the Study of Parasitic Zoonosis". Research on Social Aspects of Hydatidosis on Turkana Region Pastoralistic way of life and importance of such behaviour on the prevalence of Hydatid Diseases. Field Work on North Turkana Region. Elaboration of methodological model for the study of the Parasitic Zoonosis taking into account environmental, social, economic and cultural elements. (Presented to the joint FAO/UNEP/WHO Consultations on "Field Control of Taeniasis and Echnococcosis, Nairobi - June 1976).

Publications:

1. "The Impact of Development on Women in Kenya". A methodological approach. P. Bifani - K. Adagala - Kariuki - UNICEF - Published with the assistance of the UNICEF Social Statistics Programme. Eastern Africa Regional Office. Nairobi - 1982.
2. "The Impact of Development on Women in Kenya". Annotated Bibliography P. Bifani, UNICEF. Published with the assistance of the UNICEF Social Statistics Programme, Eastern Africa Regional Office, Nairobi, 1982.
3. "The Impact of Development on Women in Kenya Life histories, Projective Techniques and Open - Ended Questionnaires as participating research tools." Presented to the "International Conference on research and teaching related to women" Simone de Beauvoir Institute, Concordia University, Montreal - Canada. 1982.
4. "The problem of Dependence in Latin America through Latin Literature".

- Seminar paper - University of Nairobi. 1980.
5. "Latin America Socio-Economic Process through its Literature". Working papers - University of Nairobi. 1981.
  6. "Turkanas, Dogs and Diseases" - ENDA Dakar - Senegal. (in print) 1979 - 1980.
  7. Report on Non-Government Organizations activities on Environmental issues related to UNEP Programs for UNEP Governing Council VIII. S. Zwangobani - P. Bifani. Environment Liaison Centre. Nairobi - Kenya 1978.
  8. "Environmental Education in Relation to the Community". Paper presented to the Workshop on Environmental Education and Training in African Universities. Environmental Liaison Centre. Nairobi - Kenya. 1978.
  9. "Algunas Consideraciones Sobre Namadismo y Ecpdesarp; p". FLASCO. Santiago - Chile 1976.
  10. "Ecodevelopment Approach to the Study of Parasitic Zoonosis" UNEP Project FP/C405 - 75 - 03 (815). 1976.
  11. Suggestion for a Model Methodology for the Study of Parasitic Zoonosis" UNEP, same project, March 1976.
  12. "Le Dileme Turkans: Guerir ou Subsister". TAMI - SIDA - ENDA. Dakar April 1976.
  13. "Fuma Marihuana el Estudiante Chileno ?": Ediciones Nueva Universidad. Universidad Catolica de Chile (PP. 169). Santiago - Chile. P. Bifani - A.M. Viveros - L. Ortiz 1972.
  14. Mass Media Informacion Pamphet on Drug Consumptione Servicio Nacional de Salud (published and widely distributed to all high schools in Santiago - Chile.) 1972.
  15. "Personalidad de un Delincuente Habitual de Hurto y Robo" Facultad de Ciencias Juridicales y Sociales. Universidad de Chile, Vol. v. No.5 pp. 201 - 277. 1966.
  16. "Phenomenological Study of Concience Alteration through Rorschach Test", Universidad de Chile, Facultad de filosofia v letras. 1962.

Other Papers:

1. "Existential Analysis and Phenomenogy: A Psychiatric Approach". Universidad de Chile. 1965.
2. "Towards a New Conception of Man in Transitional Society". Servicio Nacional de Salud, Santiago - Chile. 1972.
3. "Methodological Aspects of Techniques for Qualitative Evaluation" Pontificia Universidad Catolica de Chile. 1972.
4. "Environmental Management of Minority Groups", Port Louis, Mauritius April 1976. Organized by ENDA (Dakar). 1976.
5. Joint FAO/UNEP/WHO Consultation on "Field Control of Taeniasis and Echinococosos". As UNEP Consultant, Nairobi. 1976.
6. Expert Meeting on "Research and Data Collection" UNICEF Eastern Africa Regional Office, Nairobi. 1978.
7. The International Conference on "Research and Teaching related to women" Simone de Bauvoir Institute, Concordia University - Montreal - Canada. 1982.
8. Symposium on Development Options for African in the 1980's and beyond Society for International Development - Kenya Chapter - Nairobi, February 1983.
9. Methodology Workshop on "Household, Gender and Age". Addis Ababa May 1983.

JOSEPH M. MBINDYO

- Address: School of Journalism.  
University of Nairobi,  
P.O. Box 30197,  
NAIROBI.
- Date of Birth: 28th March 1947. Machakos.
- Marital Status: Married, Four children.
- Educational Experience: B.A. Department of Sociology, University of Nairobi.  
1972.
- Thesis Topic: "Socio-Economic Characteristics and Educational Aspirations of Harambee Secondary School Students in Machakos District".
- M.A. Department of Sociology, University of Nairobi,  
1974.
- Thesis Topic: "The effects of Extension Workers Role Orientation on Rural Development in Kenya".
- M.A. Department of Communications, Stanford University.  
1978.
- Thesis Topic: "The Impact of Communication Channels Among Small and Large Farmers in Eastern Nigeria".
- Ph.D. Department of Communications, Stanford University.  
1981.
- Thesis Topic: "Socio-economic and Communication Factors Influencing the Diffusion of Solar Energy Equipment among California Homeowners."
- Teaching Experience:
1. Teaching Assistant, Department of Communications, Stanford University, 1979.
  2. Lecturer. School of Journalism, University of Nairobi. 1982 to date.
- Research Experience:
1. Research Fellow. Institute for Developing Studies, University of Nairobi, 1981.
  2. Research Assistant, Department of Sociology, University of Nairobi. 1973.
  3. Research Assistant, Department of Government, University of Nairobi. 1971.
- Subjects Taught:
1. Communication and Development.
  2. Research Methods in Communication.

- Consultancies:
1. Consultant. UNESCO/Friedrich - Ebert - Stiftung., Mass Media Information Flow Between Kenya and West Germany. 1983.
  2. Consultant. UNESCO. Survey of Rural Newspapers in Kenya. 1983.
  3. Consultant. W.H.O. Socio-cultural Aspects of Leprosy in Kenya. 1983.
  4. Consultant. Swiss Government/I.D.S. Study of Tourism in Kenya. 1982.
  5. Consultant. Ministry of Culture and Social Services. Conditions of the Disabled in Kenya. 1982.
  6. Consultant. Institute of Cultural Affairs. Evaluation of Health and Agricultural Changes in Kenya. 1982.
  7. Consultant. World Bank. Social Cultural Influence on Human Development. 1980.
  8. Consultant. UNESCO/I.D.S. Communication Strategies for Family Planning. 1980.

- Publications:
1. "Social Cultural Influencies on Human Development" Chapter in Implimenting Programmes for Human Development. IBRD Staff Working Paper No. 403, 1980.
  2. "Planning for Effective Rural Communication and Development in Kenya." Institute for Communications Research. Stanford University. 1978.

JOHNSTONE MUTISYA KIAMBA.

Address: P.O. Box 61089,  
Nairobi.

Date of Birth: July, 1952.

Place of Birth: Machakos, Kenya.

Marital Status: Married. Two children.

Education: B.A. (Sociology) - University of Nairobi, 1977.  
M.A. (Planning) - University of Nairobi, 1979.

Employment: 1. A Physical Planning officer, Government of Kenya,  
1979 - 1983.  
2. Lecturer, Department of Urban and Regional Planning,  
Faculty of Architecture, Design and Development. University  
of Nairobi, 1983 - to date.

Subjects Covered:

1. Planning Principles and Techniques.
2. Resource Management.
3. Management Techniques.
4. Land use Determinants.
5. Socio - Economic Indicators.
6. Infrastructural Planning.
7. Environmental Planning.
8. Housing and Community Facilities.
9. Planning for Engineering Services.

Professional: Member of the Architectural Association of Kenya  
(MAAK).

NICHOLAS MUNYAKA NZIOKI.Date of Birth: 3rd August, 1954.Nationality: Kenyan.Qualifications: B.A. in Land Economics, Nairobi, 1977.M.Sc in Construction Management (Maintenance Option)  
Reading, 1981.Thesis Topic: A Study on Budgetary Control Systems for  
Building Maintenance Management.WorkExperience:

1. Surveyor for Kenya Government. MOW. 1977 - 1983.  
Duties included Estimating, Preparation of Claims,  
Preparation of contract documents, and overall financial  
Administration of Building Maintenance Contracts.
2. Lecturer in the Dept. of Land - Development, Faculty  
of Architecture, Design and Development in Building  
Management, and Construction Technology, 1983 - to date.

Subjects Taught:

1. Management Theory.
2. Management Systems.
3. Organizational Behaviour.
4. Human and Industrial Relations in Construction.
5. Construction Engineering and Management.
6. Construction Economics.
7. Techniques of Project Planning and Control.
8. Operations Analysis for Work Improvement in  
Construction.
9. Computer Applications in Construction.
10. Construction Financing in Real Estate and Land  
Development.

Professional  
Institution:

A full member of the Institution of Surveyors of Kenya,  
(MISK).  
Associator of the Institute of Construction Management  
in England (AICM).

Papers:

1. An Overview of the Management Organizational Structure  
of the Ministry of Works, Kenya Government.  
R.I.C.S. Seminar, Reading, July 1981.
2. Budgeting and Budgetary Control in Construction  
Project Management:  
ILO/NCC. Seminar on Construction Management,  
Oct. 24 - 28, 1983. Serena Hotel, Nairobi.
3. An Introduction to Human and Industrial Relations  
in Construction, Project Management.  
ISK Seminar, Professional Centre, Nairobi, Oct. 22, 1983.
4. Project Cost Control in Construction Management.  
International Conference on Low Cost Housing for  
Developing Countries, Roorkee, India. Nov. 12 -  
17, 1984.

AGNES M. KITHIMBA.

Address: Kilimambogo Teachers' College,  
Box 8,  
THIKA.

Phone: Office - Donyo Sabuk 8.  
House - 566914 Nairobi.

Date of Birth: 28th November, 1942.

Marital Status: Married. Four children.

Educational  
Experience:

1. Home Science Teacher's Certificate, University College  
Nairobi/Manchester, 1967.  
Thesis Topic. "Settlement in Mua Hills".
2. Ed. Home Science, Bath College of Education/Bristol. 1975.  
Thesis Topic. "Effects of Omission of a Meal in Energy  
Expenditure".

Specialist

Short term Courses:

1. Organisation of In-service Courses - Leeds University  
March - April 1974.
2. Adult Education - Edinburgh University March April 1975.
3. Broadcasting as an Educational Tool - London University -  
December 1973 - January 1974.

Work

Experience:

1. Teacher - Machakos Teachers' College - 1967 - 1969.
2. Teacher - Alliance Girls' High School - 1969.
3. Teacher - Thogoto Teachers' College - 1970.
4. Teacher - Kenyatta College - 1971 - 1973.
5. Teacher - Highridge Teachers' College - 1975 - May, 1984.
6. Teacher - Kilimambogo Teachers' College - June 1984 - Date.

Administration  
Experience:

1. Head. Home Science and Health Education, Machakos Teachers  
College, 1967 - 1969.
2. Head. Home Science and Health Education, Thogoto Teachers'  
Colleges, 1969 - 1970.
3. Head. Home Science, Highridge Teachers' College - 1975 -  
1980.
4. Head. Creative Arts (Music Physical Education, Art and  
Home Science Subjects), Highridge Teachers' College, 1981 -  
1984.

- Consultancies:
1. A member of Home Science Panel in the Kenya Institute of Education (K.I.E.)
  2. A member of Home Science Examination Panel in the Kenya National Examinations Council.
  3. Home Science Script Writer for Unqualified Teachers. Educational Media Services.

Research: Currently writing a Home Science Book for Primary Schools Teacher Trainees.

BENJAMIN MWALA MAKAU

Date of Birth: 8th January, 1938, Machakos - Kenya.

Marital Status: Married. 3 children.

Educational  
Experience:

1. B.A. Makerere University College, Honours in History. 1964.
2. Post Graduate Diploma, Makerere College Education. 1965.
3. Supervision and Inspection of Schools Course in Western Australia University 1966.
4. Training course. O. Level history xaminer - University of Cambridge Examinations Syndicate at Makerere College. 1970..
5. Educational tour of British Examining Boards techniques and Procedures of examining at O and A level 1975.
6. Attended a month's course in psychometrics at Educational Testing Service, Princetown New Jersey. 1975.
7. Attended a month's course in Australia. The course cosited in visiting Education Departments, Universities and Schools in Canberra, Victoria, South Australia and Western Australia. I also spent a week at the Australian Foundation for Education for Educational Research Hawthorn, Victoria.

Membership of  
Professional  
Bodies:

1. Member of the Kenya Secondary Heads' Association 1968 - 1973.  
Chairman of the Central Province Branch. 1970 - 1973.
2. Member of the Kenya Institute of Education History Panel - Took leading role in developing the current O and A level history syllabuses. 1969 - 1980.
3. Member of the International History Panel of the East African Examinations Council. 1971 - 1980.
4. One of 4 representatives of the Kenya Government in the governing body of the East African Examinations Council. 1973 - 1980.
5. Representative of East African Examinations Council in the annual conference of the International Association for Educational Assessment 1977 - 1983.

Work  
Experience:

1. Trained Graduate teacher at Machakos High School 1965 - 1967. Subjects taught: Geography and English.
2. Deputy Headmaster, Machakos High School 1965 - 1967
3. Acting Headmaster, January to July, 1967.
4. Headmaster, Njoro High School 1968 - 1969.
5. Headmaster, Kagumo High School. 1969 - 1973.
6. Chief Examinations Officer, Ministry of Education. 1973 - 1980. Responsibility included conducting the primary examination (C.P.E.), the Primary Teachers Examination (P.T.E.) and the Kenya Junior Secondary Examination (K.J.S.E.) as well as undertaking the field administration of examinations set by the East African Examinations Council and Overseas examining boards. Played a leading role in initiating the idea of research as the proper basis of which public exams in Kenya should be conducted.

24

Research Unit became part of the Examinations Section in 1977 - major concerns: to establish reliability, relevance and equity in C.P.E. and P.T.E. and prepare feedback information for primary schools and colleges. Personally undertook the preparation of the test items in history for the C.P.E. and P.T.E.

7. Secretary (Chief Executive) to the Kenya National Examinations Council 1980-1983. The Council was established to take over from the East African Examinations Council and the examinations section of the Ministry of Education, responsibility for conditing all school examinations as well as post secondary business and technical examinations. Key tasks where personally involved were :-
  - a. expand the idea that Psychometrics must be research based and should serve both the summative and formative needs.
  - b. probe into the post-primary examinations so as to put them on the same footing as the C.P.E. and P.T.E. (At the time of termination of tenure, I was involved in a project aimed at looking into issues related to quantitative growth, quality and relevance of secondary education)
  - c. improve techniques of processing examination results. (The Council was able, through well programmed registration procedures and improved data capture methods, to cut the time taken to process the O and A level exam results by more than a month).
  - d. train personnel, both in the Council's Secretariat and in other institutions, to be able to carry out the responsibilities entrusted to the Council.
8. Consultant. Mutiso Consultants Ltd. November, 1983 - date. Major Education Consultancy in Indonesia for World Bank and UNESCO.

Publications:

1. Examinations Development in Indonesian School Education, World Bank Secondary Education Project Appraisal Mission November 28, - December 20, 1983.
2. Examinations and Certification. Presented to National Committee on Educational Objectives and Policies. January, 1976.
3. National Examinations. Presented to a seminar of senior officers of the Ministry of Education at Mombasa September, 1978.
4. Operations Involved in Conducting Public Examinations in Kenya. A paper prepared for information of members of the Council and Senior Government Officers. May 1982.
5. Towards Operational Guidelines for the Kenya National Examinations Council, prepared for an Inter-ministerial Committee set up by the Office of the President to work out relationships between the Council and government ministries. September, 1982.
6. Notes for Guidance of KCE and KACE Examiners - Together with Chief Examiner's/Examiner-in-Charge's Report form, September 1981 - revised. September, 1982.
7. Examinations in the Kenyan Education System, prepared for a Seminar of Secondary Heads. April, 1982.
8. Marking scheme, The 1982 O Level history. 1982.
9. The Technicalities of Item Writing. Prepared for an Examinations Section Staff Seminar. 1978.
10. The place of the K.C.E.C. Secretariat Seminar. 1982.
11. The Humanities: Why study and Examine? Prepared for a K.N.E.C. Secretariat Seminar. 1982.