## THE VILLAGE TECHNOLOGY PROJECT

**The objectives of this project are:**

**(a) Extension**

**(b) Research and development**

**(c) Demonstration**

**They are not (in my mind) mutually exclusive.**

**The project organizers do not seem to be experiencing any difficulty in reaching their target population. UNICEF being a regional organization reaches various countries in the continent through its sub-offices. In Kenya, the Ministry of Housnig and Social Welfare is effective in selecting people to be trained in the polytechnic.**

**The contents of the programme is what Mr. Jim Macdoweel has described to the participants. However, when people are recruited to be trained in this unit (usually for a week), there is a follow-up. The extension officer goes to the villages to see whether practical use is being made of what has been learnt. (Before this follow-up method started, letters were written and sent with stamped envelopes to those who have undergone training to indicate their problems.) But the unit has only one Wolkswagen van for this purpose up to now. Simple how-to-do-it literature**

is also printed in the workshop - in English though attempt is being made to produce these materials in Swahili as well.

An important issue in the operation is this: the organizers train, teach etc. the trainees and hope that if things are o.k., things will speak for themselves and the people will internalize the innovative ideas they have learnt.

However they have had at least one negative experience; the solar drier not accepted by the villagers. The latter say it looks like a grave and they are not prepared to have graves in their compounds.

How can they overcome this problem? I rather suspect that the use of audio-visual aids could play a role here. A solar drier is an improvement on some kind of traditional method of drying produce. Slides could be taken of the whole process of traditional methods of drying produce and the present solar method. Both process should be constantly flashed in front of the villages. If after seeing the result, they still insist that the present solar drier is unacceptable then the traditional method could be modified. But the villagers must actively participate in the modification process.

Here there is a problem of "Resistance to change". But the question is from whom? And because of the importance of food preservation in the rural areas attention may have to be given to this aspect of the unit. It could be hypothesized that the more the people are made to see

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(by audio-visual methods) the positive result - through active participation of an improved version of food preservation, the likelier the chances that they may adopt it.

The materials printed in English and eventually in Swahili could be simplified by easy to understand prints. The participants in this course with the aid of the leaders of 5 and 6 could help.

There are two pictures of the same kind $A^{I}$ is a Cassava Family $B^{I}$ is a human family. But $A^{I}$ has too many kids at the same time and $B^{I}$ has too many children at the same time. But $A^{II}$ and $B^{II}$ take the opposite view - just two casava roots and just one child. The result is that $A^{II}$ and $B^{II}$ are healtheir than $A^{I}$ and $B^{I}$. This kind of poster could be developed and the villagers (illiterate) could get the massage almost immediately.

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The Unit has developed a remarkable mechanism of protecting foodstuffs from being eaten up by termites, bugs etc. It has also developed other apparatuses which are a definitive improvement on 'traditional' methods. But of course material cultural as well as non-material cultural patterns hardly ever change or become modified except a better substitute ~~is substitutes~~ is successfully introduced. To minimize this problem, foodstuffs spoiled by termites and other insects should be exposed to the villagers (through audio-visual means) and then food stuffs which have been successfully preserved without being damaged by termites should also be exposed to the villagers (also by audio-visual aids) and let the people see the results.

It could thus be hypothesized that the more people are exposed to successful results of innovative situations that affect their daily activities and survival, the more likely it is that the adoption process may be successful.

Note: The organizer of this project is very willing to accept participants but they should make recommendations in a report from which the unit could benefit. That is why I have chosen these problem areas.

By Nelson-Richards

COMMUNICATION WORKSHOP FOR

SOCIAL DEVELOPMENT

VILLAGE TECHNOLOGY UNIT

Dear friend,

We are fron Nairobi currently attending a Communication Course at the University of Nairobi. We are interested in finding out what the needs of people in this area are, so that we can devise a means of helping them in the best possible way to overcome some of their problems. Your answers to the few questions we are going to ask you will help us a lot in our efforts to contribute toward the improvement of the social conditions presently existing in this area.

Any answers you give will be kept confidential.

(IF RESPONDENT AGREES TO BE INTERVIEWED, THANK HIM/HER AND CONTINUE THE INTERVIEW)

NAME OF INTERVIEWER _____

DATE : _____

DO NOT WRITE IN THIS COLUMN

1. How long have you lived in this area?

_____Months

2. How interesting do you find life here?

(RECORD VERBATIM)

_____

_____

_____

3. What kind(s) of fuel do you use for cooking and heating purposes?

(a) Firewood.....1

(b) Charcoal .....2

(c) Maize cobs .....3

(d) Cow dung .....4

(e) Kerosene .....5

(f) Other (Specify) _____

4. Do you buy fuel?

YES ..... NO .....

(IF NO SKIP TO QUESTION 6)

5. How much on the average do you spend on fuel in a week?

_____Shillings

6. How much time in a week do you spend in collecting fuel?

Shillings.

7. How often does the Agricultural Officer in this area visit you?

Once a year .....1

Twice a year .....2

Three times a year .....3

Four times or more a year .....4

(IF AGRIC. OFFICER DOESN'T VISIT RESPONDENT, SKIP TO QUESTION 9)

8. What services does he render to you?

(PROBE) e.g. a) Advice on the use of fertiliser

b) Provision of seeds

c) etc.

9. Do you have a plot on which you can grow food crops?

YES ..... NO .....

(IF NO SKIP TO QUESTION 14)

10. What are the types of food you grow?

(PROBE AND RECORD ALL TYPES OF FOOD CROPS THE RESPONDENT MAY MENTION. COLLECT THE FOLLOWING INFORMATION ON EACH OF THEM:)

| FOOD TYPE | QNT. PER YEAR | FOOD CONSUMED PER YR. | FOOD STORED PER YR. | STORAGE FACILITY | PERIOD STORED |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

11. Do you use any fertiliser on your farm?

YES .....1

NO .....2

12. Do you sell some of the food crops that you produce?

YES .....1

NO .....2

(IF NO SKIP TO QUESTION 14)

13. Why do you sell some of the food crops that you produce?

(RECORD VERBATIM)

_____

_____

_____

14. Do you buy food in this village?

YES .....1

NO .....2

15. Do you buy food outside this village?

YES .....1

NO .....2

(IF YES TO EITHER QUESTION 13 OR 14 OR BOTH, PROBE FOR THE REASONS. ASK WHY?)

_____

_____

_____

Now we would like you to answer a few personal questions the answers of which would also be kept confidential.

1. How old are you on your last birth day?

_____Years.

2. What is your occupation? In other words, what kind of job do you do?

(PROBE FOR THE NATURE OF THE JOB AND RECORD VERBATIM)

_____

_____

_____

3. Are you a head of household?

YES .....1

NO .....2

4. Are you single, married, divorced, or separated?

_____

5. What was your total income last year (1977)?

(ASK THIS QUESTION IF RESPONDESNT REPORT OCCUPATION)

Total income _____

6. How many children do you have?

None .....1

One .....2

Two .....3

(QUESTION 6 cont.)

Three .....4

Four.....5

Five or more .....6

7. Sex: Male.....1

Female.....2

(RECORD SEX BY OBSERVATION)

THIS IS THE END OF THE INTERVIEW. I HOPE THE INFORMATION YOU HAVE GIVEN US WILL HELP A LOT IN THE SOCIAL DEVELOPMENT OF THIS AREA. THANK YOU.

## APPENDIX

The purpose of this Appendix is to list, names of the participants and other people involved in the village technology project. It also denotes certain abbreviations.

### PARTICIPANTS - VILLAGE TECHNOLOGY PROJECT

| NAME | | COUNTRY |
|---|---|---|
| Mr. R.R.N. Tuluhungwa | (Resource person) | Tanzania |
| Mr. Sylvester Kwakye | " " | Ghana |
| Mr. Robert Mburugu Kei | (Group chairman) | Kenya |
| Mrs. Bernadette Cole | (Group secretary) | Sierra Leone |
| Mr. Saul Njie | (Report Editor) | The Gambia |
| Mr. Francis Makoza | " " | Malawi |
| Mr. A.R.M.S. Rajabu | " " | Tanzania |
| Mrs. Dina Barr | | Liberia |
| Mr. Roy Sharpe | | Zambia |
| Mr. Okukile Masolotate | | Botswana |
| Mr. Teshoma Negash | | Ethiopia |
| Mr. Faris Disasa | | Ethiopia |
| Mr. Samuel Aidoo-Annan | | Ghana |
| Mr. Julius Maraisane | | Lesotho |
| Mr. Dele Awokoya | | Nigeria |
| Mr. Malick Rahman | | Bangladesh |
| Mr. Ahmed Geedi | | Somalia |
| Mr. Henry Ngoza | | Swaziland |

### OFFICIALS OF KARAI LOCATION

| | | |
|---|---|---|
| Councillor | - | J.M. Rutungu |
| Chief | - | James Kiongo |
| Assistant Chief | - | James Kamau |
| Women's Leader | - | Elizabeth Wàiganjo |

### ABBREVIATIONS

| | | |
|---|---|---|
| V.T.U. | - | Village Technology Unit |
| Sub-locations | - | Russiget, Pengut, Mustim, Gitkambwa |
| KANU | - | Kenya African National Union |

## OPINION LEADERS

| NAME | DESIGNATION |
|---|---|
| James Kiongo | Chief |
| David Maina | Sub-chief, Nashu sub-location |
| Grace Wangika | Leader, Women's group, Nashu |
| Margaret Wariara | Leader, Women's Group, Rusigutu |
| Samuel Waiganjo | Local Kanu Chairman |
| John Mbougua | Councillor |
| Maturi Nganga | Cattle dips leader |
| Ngugi Thuo | Businessman |
| James Kamau | Sub-chief, Rusigetu |

## SUB-LOCATION COMMITTEES

| RUSIGETU | FUNDIS |
|---|---|
| Michel K. Mathini | G. Ndiranjo |
| Muturi Nganga | D. Karanju |
| Margaret Watiara | W. Muhe |
| Rachel Muthoni | W. Karomo |
| Ngugi Thuo | M. Ngonga |
| Mwai Njoroge | |

**FENGUT**

Tom Njihia Ngugi
Hezekiah Kuria
Mwaura Himdu
Mweru Karanja
Hiram Mukura
Crispu Thuo

**NASHU**

Hammed Nganga
Adinadi Mustaba
John Kamau
Wambui Chege
Kuria Mburu
Riginah Wairimu

# TRAINING PROGRAMME IN COMMUNICATIONS FOR SOCIAL DEVELOPMENT

## VILLAGE TECHNOLOGY PROJECT AT KARAI REPORT

INTRODUCTION: This is a report on a specific project, undertaken by participants of an international training programme, on communication for social development, held at the University of Nairobi from 6th February to 7th April 1978 - sponsored by UNESCO/UNICEF/IPPF/University of Chicago.

The course was attended by about fifty participants from eighteen African and other countries plus several resource persons drawn from several universities and sponsoring agencies. The objective was to bring together, people active in development communications in different sectors, to learn and share experiences and explore communication strategies for social development. The participants were divided into three groups, each to be involved in a project for community development.

The projects were the Dandora Housing Scheme, Kar i Reference Health Centre, and Karen Village Technology Unit. The following report is on the activities of the group assigned to Karen Village Technology.

VILLAGE TECHNOLOGY UNIT: Before undertaking the project procedure, the participants decided to visit the village technology unit.

In 1976 a village technology demonstratiom and development unit was established with the assistance of UNICEF, by the Youth Development division of the Kenya Ministry of Housing and Social Service, at their centre for research and training at Karen, 12 miles west of Nairobi.

The unit embodies a wide range of full scale exhibits, conservation and processing of food, home improvements, building techniques, use of solar and wind energy, and the procurement, conservation and protection of water supplies. This appropriate technology is community based to use materials locally available at low cost, and to promote self sufficiency and self reliance, rather than continuing dependence on external sources of materials and skills. Thus it can reduce the time and labour content of women's work which can provide better nutrition, allow more time for child care, social, educational and income producing activities and thus has a role of inclaculable value in the improvement of family life, living standards and child care.

...2....

PROJECT AREA: Karai location was chosen because it provides a reasonable rural situation and it is not far from Nairobi City Centre. It is a 1952 emergency village; some of the families are being resettled in a new settlement scheme nearby.

The area of our project was confined to the people of Karai location which is in Kikuyu division, of Kiambu district, in the Central province of the Republic of Kenya. It has a population of about 7,500 people who are chiefly subsistence farmers.

## METHODOLOGY

PROJECT IDENTIFICATION/IMPLEMENTATION : The group of participants toured the Karai area, and together with the people identified the following probelms which could be solved or minimised through education and introduction of village technology:

(a) Lack of water
(b) Soil erosion
(c) Poor town planning and housing
(d) Fuel shortage
(e) Lack of food storage facilities

(a) LACK OF WATER: There is no piped water system in Karai. The inhabitants fetch water from three distant boreholes. In the homes there is no means of filtering the water before use. After further investigation and discussion by the group with various people in the village, it was found that rainfall shortage and irregularity and unavailability of safe water storage tanks were the main cause of water shortage.

(b) SOIL EROSION: The group observed that the quality of the land was very poor as a result of soil erosion. Erosion was visible in several areas, and land for farming was scarce. The problems associated with the soil erosion were aridity and non fertile land.

(c) POOR TOWN PLANNING AND HOUSING: It was noticed during the visit to Karai that the old settlement was overpopulated, as a result of which a new settlement had been acquired for the resettlement of the villagers. A few of the villagers had been allocated plots, at the resettlement area, but it appeared that no proper town planning had beam done by the local authorities, nor is there any supervision for the houses being built.

(d) FUEL SHORTAGE: Fuel shortage is another problem in Karai. The main source of fuel is firewood, but this has to be obtained from long distances, since there are no forest trees in the area.

(e) FOOD STORAGE: The group also observed, that the village households were in dire need of food storage facilities. Maize, beans, peas and vegetables are the staple foods, It was noticed that foods and vegetables were mostly kept on the floor of a house or outside in barns that were not rat or insect proofed.

PART II

KARAI WATER STORAGE PROJECT: Having identified "Lack of Water" as the most serious problem of the project area, the group decided on the following line of action:

1. MAIN OBJECTIVE: To motivate the villagers, to be interested in the provision and utilization of safe water storage containers to ease the burden of travelling long distances too often.

2. SPECIFIC OBJECTIVES:

(a) To introduce cement water containers to individual households in the village as a more suitable and hygienic method for water storage.

(b) To introduce household water filters to individual families as a means of protecting them from drinking polluted water.

(c) To identify and train fundis and other interested persons to make cement water containers and filters.

PHASE I - WEDNESDAY, 8th MARCH

MOTIVATION OF VILLAGE OPINION LEADERS:

The group arranged a conducted tour of the village technology unit at Karen, for village opinion leaders among whome were the chief, assistant chief, leaders of women's group, the local chairman of Kenya African National Union (KANU), teachers and businessmen. This was followed by a group discussion with the opinion leaders, to find out what the role of the opinion leaders in the motivational and adoption process will be. And finally the group discussed with officials of the village technology unit to find out the extent of their involvement in the project.

On behalf of the opinion leader's group, the councillor thanked the group for its interest in the village, and expressed appreciation both to the V.T.U. officials and community group. He said his group were overwhelmed at the various technooogies they had seen, especially since most of them could be made from local materials. He enumerated the problems

of the village, emphasising the burden duty of trekking long distances to the boreholes each day in search of water, and asked whether it was possible for a technology unit such as the one at Karen to be established at Karai location to ease workload in the areas. He said that about 3,000 boys and girls in the village were without jobs and believed the establishment of such a unit would open up training opportunities and jobs for them. The opinion leaders group expressed profound interest in the exhibition at the V.T.U. and asked for quotations of prices for the cement water jars, which the V.T.U. officials gave as follows:-

| | | | | | |
|---|---|---|---|---|---|
| 50 | gall. | cement | water | jar | 20/- |
| 100 | " | " | " | " | 50/- |
| 200 | " | " | " | " | 90/- |
| 400 | " | " | " | " | 180/- |
| 500 | " | " | " | " | 250/- |

In his brief remarks, the head of the Village Technology Unit, Mr. Peter Scrivener, emphasised that the idea was not to build cement water containers and filters for the villagers, but to teach the fundis and other interested persons how to make them. He said once the knowledge and skills had been obtained by a few fundis, this would open up employment in the village and each household would be able to have a c ontainer constructed for them. He reiterated his Unit's preparedness to work hand-in-hand with the group and the villagers on the project, and any other specific project the opinion leaders may themselves want to embark on, for which they would require expert knowledge, advice or co-operation from the Village Technology Unit.

PHASE II WEDNESDAY 15th MARCH

MOTIVATION OF VILLAGERS (KARAI)

The second stage in the plan of implementation was the mass rally which was held in the village shopping centre of Karai location. The meeting was attended by over 1,000 people.

Specimens of cement water containers and filters from the village technology unit were displayed, also blown up photographs of other types of cement water jars at the unit were shown to villagers. There were many speakers, the Chief, Councillor and our group chairman amongst them.

Mr. Manyindo of the V.T.U. explained to the gathering how such technology can benefit them. Enumerating the materials involved in the

construction of the water container, he said that for a 500 gallon container one would require 3-4 bags of cement, 6 metres of cloth and sawdust, The smaller size, 100 gallons, would require up to 1 bag of cement.

Before the end of the rally, there was a feedback session. Many villagers expressed interest and the desire to own a water jar. They also pledged their co-operation through the spirit of "HARAMBEE" for the social development of their area. It was decided that a committee be set up in each of the four sub-locations to generate and sustain the interest of villagers in adopting the new technologies.

TRAINING OF FUNDIS: 15th MARCH: Twelve fundis were recruited the same day, and training started immediately with the construction of the base of a 100 gallon water container at the Health centre.

WEDNESDAY, 29th MARCH: By this time the project had attained a considerable success.

(a) Villagers in Karai Location had formed a committee in each of the two sub-locations.

(b) Fundis in every sub-location had been identified and trained by the VTU staff.

(c) The village fundis have completed construction of three jars of the following sizes - 100 gallons, 200 gallons, 500 gallons and a filter.

The 1,000 gala type jar was already under construction. The village group are now aspiring to large scale production. They have also appointed office bearers who will look after production and prices. This committee will also look into the possibility of the adoption of the appropriate village technologies such as food storage, cooking facilities eg. village ovens.

MONITORING: While training of the fundis was underway participants were divided into groups of three, and given the task of visiting Karai everyday, for the duration of the training and implementation.

RECOMMENDATIONS: The people of Karai have expressed the desire to adopt other technologies at the V.T.U. appropriate to their area. We therefore suggest that the V.T.U. should sustain the existing tempo of enthusiasm and maintain the two step flow of information already established.

(2) We again suggest that discussions should be held with the various committees to find out which appropriate technologies could be introduced in that particular sub-location.

(3) It is further suggested that the chief should use his good offices to obtain cement in greater quantities for the fundis to use on loan, so that containers can be mass produced and sold direct to customers. This would keep the fundis in business.

(4) We suggest that a tree planting campaign be launched and the Ministry of Agriculture and the V.T.U. should explore the feasibility of such a project. It is expected that this can check soil erosion which is one of the problems of the area.

(5) The local authority of Karai Location with funds available should drill boreholes within easy reach of the people. They should construct large community tanks or reservoirs as another source of water supply.

(6) On housing and town planning it is suggested that the local authority in consultation with other relevant departments should draw up a plan for the new settlement area, taking into account the needs of the community.

SUMMARY: From what was observed the group believes that if given the right leadership, and motivation the people of Karai would co-operate with other officials for the improvement of their living conditions. Discussions showed that the people are aware of their present poor state, and are ready with the right guidance to ameliorate the situation.

Nairobi
4/4/1978

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*Notes*

**The report outlines the village technology unit at Karen Village, Karai area outside Nairobi, its history and functioning; and then details the day-by-day activities of the participants in the University of Nairobi training programme; a list of participants is also included, and sample questionnaires designed to collect information from villagers.**

| *Print Name of Person Submit Image* | *Signature of Person Submit* | *Number of images without cover* |
|---|---|---|
| SAROJA DOUGLAS | Saroja Douglas | 36 |