MARGA INSTITUTE
(Sri Lanka Centre for Development Studies)

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HEALTH AND NUTRITION DEVELOPMENT
IN RURAL COMMUNITIES

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PROJECT PROPOSAL FOR HEALTH AND NUTRITION
DEVELOPMENT IN RURAL COMMUNITIES

Background

The village studies on Health and Nutrition which are proposed in this project outline will be conducted in the villages which have been studied under the programme of research on Modernisation of Peasant Communities. The first phase of this programme was sponsored by the International Development Research Centre, Canada. Ten villages were selected for the study. These are listed in the annex. The rural communities which were selected for the study were distributed in the different ethno-cultural and agro-climatic regions of the country. While no attempt was made to get a fully representative sample of the regional variations, the villages that were selected were expected to provide a range of typical rural and other non-urban situations such as the plantations, covering the main regional variations in the country. The first phase of the programme was confined to a set of socio-anthropological studies which attempted to provide an analysis of the socio-economic structures of the communities that were studied, with particular reference to the structure of ownership of the village resources, the social stratification, the status hierarchy, the caste system and the way in which different groups within the community had access to resources, both internal and external, and exercised power in the village.

These studies were followed by a more intensive survey and investigation of a cross-section of village households, stratified into approximately 8 income groups. This study covered approximately 25% of the households in the villages. This cross-section was to form the sample on which the Institute would be monitoring socio-economic changes in the rural
sector within a longitudinal time-frame extending over a period of about 10 years. Data for the sample has been collected and tabulated in the forms which are annexed. After the initial set of village studies which analysed the socio-economic structures, approximately 1 year to 18 months had to be spent in collecting and firming up the data for the monitoring sample. Work is still in progress in some of the villages to further verify the information that has been collected and ensure that the data-base on which the monitoring exercise was undertaken is accurate and reliable.

The sample of villages that has been selected for the programme of studies on modernisation of peasant communities, will be used by the Institute on a continuing basis as the research laboratories for its rural studies. During the past few years the rural component of a number of projects was organised and undertaken in these villages. The studies include the Analysis of Poverty in Sri Lanka and the Needs of Children. The studies that are planned in the Institute's future programme of work which will use the village sample include studies on the application of science and technology at the village level and a programme of health and nutritional research and planning at the village level. This note deals with the second duty.

Scope of the Study

The programme of research and planning on village health and nutrition will include three components. The first component will consist of the survey and the research in the 10 villages which comprise the village sample. The sample that will be selected for the studies from within the villages will be the monitoring sample of households. The monitoring sample is selected as it is this sample which provides a cross-section of the village and for which a detailed profile of information on various aspects of each household ranging from
ownership of property, income and educational levels, to patterns of expenditure and level of housing are available. Also, it would be possible to relate the health and nutrition studies to the general monitoring and evaluation exercise that is being undertaken annually for each of these villages. The survey and research component will be completed in 12 months. The second component of the study will consist of the formulation of health and nutritional plans for the villages and their selective implementation. The third component will be an evaluation of the capacity of the village to implement the health and nutritional plan and reach some of the goals and targets that have been set. These two exercises will be carried out in the second and third year with approximately a 12-month period for each exercise. The evaluation exercise will of course be confined to a study of the results achieved in the first year and would have to be limited mainly to the response of the village to the programme and its capacity to absorb the inputs that have been planned. The time-interval between the implementation and the first evaluation will not be sufficient to make an assessment of the impact that the programme would have on health and nutritional conditions in the village. It might be possible to obtain some initial impressions in this first evaluation exercise. The changes in health and nutritional conditions and the success or failure of the village programme would have to be monitored over a longer period.

(i) The research and survey component will include the following items:

(a) Anthropometric surveys and health investigations to determine the health and nutritional levels of the children;

(b) The food budgets of the households and the patterns of expenditure on food and nutrition-related items. Investigations
on this item would need to take into account variations in food intake due to such factors as the pattern of cultivation and harvesting and the fluctuations in incomes and availability of food during the year. The computations of the nutritional value of food taken would have to be based on reliable quantitative data taken over a selected period of time in several rounds.

(ii) Study of the socio-economic and cultural factors related to health and nutrition: Among other things, this study would need to elicit the values and the ideology relating to health care and food. It would include investigation into dietary habits, food preference and avoidance, intra-family distribution of food, methods of food preparation and their impact on health and nutrition, attitudes to health care and household behaviour regarding sanitation, concepts and beliefs relating to the causation of disease and norms of physical well-being, preferences regarding systems of medical treatment;

(iii) A survey of morbidity and mortality in the sample studied: This will include the incidence of ill health and pattern of morbidity, the deaths and the causes of deaths;

(iv) Access to health services: This would include a survey of all the services available under different methods of treatment - the Western system, the Ayurveda system as well as other systems. The access to health services will have to be evaluated in terms of the distance...
and means of transport available to the different types of health institutions - the branch dispensary, the central dispensary - and in cases where specialised medical care is required, the better-equipped institutions such as maternity homes, district hospitals, base hospitals and so on. Part of the study will examine the quality of the services available in the family health services which will cover among other things child and maternal health care, health education, family planning and immunisation. The study would have to provide the information regarding the health care and medical treatment that had been availed of by the household in the sample.

(v) Environmental sanitation: This item will cover the conditions in the village relating to environmental sanitation, the availability of toilets, the sources of water supply, the facilities available for disposal of waste and other specific environmental conditions such as drainage which may contribute to the spread of disease.

**Phase II**

On the basis of the surveys and the analysis of survey data, the second phase of the project will attempt to formulate comprehensive village plans for improving the health and nutritional conditions in the village. This part of the study will include an analysis of the food economy of the village, its dependence on supplies from outside the village, the extent to which food requirements are met with production from within the village and the potential for increasing its capacity to meet its nutritional needs. The plan for both health as well
as nutrition will attempt to combine two complementary approaches. One approach would be to examine the extent to which the village could rely on its own resources and enhance its capacity to deal with its nutritional and health problems on a self-reliant basis. This would include action both at the household and village level and encompass a wide range of measures such as increasing food production in home gardens, establishing small-scale livestock units with a view to increasing the supply of protein-rich food, a programme for improving the environmental sanitation in the village, provision of protected water supply, and intensive nutritional and health education programmes. These are only an illustrative list of actions which would be within the capacity of the village to initiate on the basis of its own resources. The second would be to examine the supplies and services reaching the village from outside and in regard to the services and commodities for which the village is unavoidably dependent on external institutions and sources of supply. The plan will identify how the delivery system could be improved and how the village could have better access to these services and goods.

The implementation of the programme at the village level would require the support and participation of the village community. For this part of the programme, the Institute will select a group of households which from the information available appear to be capable of playing a role of leadership in implementing the village plan. These households will be expected to function as a demonstration group in carrying out and disseminating the household component of the programme and also in motivating the rest of the village to carry out those measures which require collective implementation. The implementation of the programme will include small-scale investments by the Institute to upgrade the conditions in the village. This would have to be done on a selective basis and concentrated on a few projects which could have a significant impact on health and nutrition.
Phase III

In this third phase of the programme, the Institute will undertake an evaluation of the implementation of the programme. This will include an assessment of the village response to the plan, its capacity for implementing the plan, the main problems of implementation that have been encountered and the initial impact which the plan is having on the conditions pertaining to health and nutrition of the village. This evaluation will be undertaken when some time has elapsed after the implementation of the plan. Preferably, it will be timed for the second half of the third year of the programme.
Phase I (12 months) – Research and Survey of Health and Nutrition Problems in the 10 Villages

1. 1 Director half-time at ₤ 200 p.m.  
   - 100 x 12  
   = ₤ 1200

2. 2 Senior Research Officers (1 for Health and Nutrition Sciences and 1 for Sociology)  
   at ₤ 150 p.m.  
   - 2 x 150 x 12  
   = ₤ 3600

3. 10 Research Assistants to assist the Research Officers in charge of each of the 10 villages  
   at ₤ 75 p.m.  
   - 10 x 75 x 12  
   = ₤ 9000

4. Health and Nutritional Status Survey of  
   (i) children (0 - 14 yrs) (ii) expectant and lactating mothers and (iii) others in the 25% sample of households (about 80) in each of the 10 villages to be undertaken by medical and para medical personnel. This is to provide material for a benchmark survey and also serve a diagnostic purpose. Assuming an average household size of 7 and that 2 households can be covered by a medical officer and a nurse in 1 day at ₤ 25 p.d. for the two inclusive of travelling expenses  
   - $ \frac{80}{2} \times 25 \times 10$ (villages)  
   = ₤ 10000

5. Records of Food Budgets of households – to be carried out in 4 rounds of 1 week each in different seasons of the year – it is estimated that in half the number of households there would be school going children in the upper grades who could be trained to do this on payment of an honorarium – for the other half special investigators have to be employed on the basis of 1 investigator for 8 households i.e. 5 investigators per village. These investigators as well as the household children will have to be given a short training by the Marga Research Officers who in turn will receive instructions and guidelines on this operation from experienced hands at the Medical Research Institute in Colombo.
Casual investigators at Rs. 30 p.d.  
30 x 5 x 7 = 1050

Honorarium for school children at  
Rs. 12.50 per round  
12.50 x 40 = \frac{500}{1550} = \$ 100

Training and other expenses  
= \$ 100

\$ 200

4 rounds 4 x 200 = \$ 800

10 villages 10 x 800 = \$ 8000

6. In the collection and analysis of the following data the Research Officer in charge of each village and the Research Assistant recruited for this project will be assisted from time to time by investigators employed on a casual basis. An attempt will be made to use local personnel e.g. teachers in the village school and even more, in households where educated young men and women are found, to involve them in the maintenance of records that would depict what goes on in the household in regard to health and nutrition. The following areas are identified for the present:

6.1 (i) past histories of mortality - age and cause of death - for the last 5 yrs.  
(ii) child birth history of all married women for the last 5 yrs.  
(iii) morbidity - incidence of disease for the last 3 mths.

6.2 Environmental sanitation - availability of toilets, sources of water supply, disposal of refuse etc.  
(Some of this may be already available in the statistical profile of the village)

6.3 Practices relating to  
(i) food and nutrition  
(ii) health care for the sick  
(iii) use of curative and preventive medical services  
(iv) sleep, rest and recreation  
(v) personal hygiene - washing, bathing, use of toilet, etc.
This information is to be collected through questionnaires and interviews conducted by the Research Assistant and other investigators and also from records maintained on a given format preferably by an inmate of the house.

It is estimated that it would cost about Rs. 20 per household to maintain these records over a period of 1 month. On this basis the total cost for the year per village would be

$$\text{Rs.} 20 \times 12 \times 12 = \text{Rs.} 19,200$$

for 10 villages $19,200 \times 10 = \text{Rs.} 192,000 = \text{S.} 12500$

In addition to this, provision is being made for 15 man days per month, per village to engage investigators on a casual basis - at Rs. 30 p.d.

$$\text{Rs.} 30 \times 15 \times 12 \times 10 = \text{Rs.} 54000 = \text{S.} 3700$$

7. 4 group meetings during the course of the year between research staff and representatives from the sample = S 1000

8. Establishment, secretarial, travelling, etc. = S 6000

Total Phase I = S 55000
Phase II (12 months) - Implementation of Health and Nutrition Development Plan in the 10 Villages

As indicated earlier, based on the findings of Phase I, plans will be formulated for the development of health and nutrition in each of the ten villages. Importance will be attached to community participation during both the formulation as well as the implementation of these plans. Villagers themselves will prepare these plans with the researchers functioning as promoters and resource personnel. Existing village organizations such as Rural Development Societies, Parent Teacher Associations of schools etc. wherever they are active will be harnessed for the purpose. In view of this methodology for Phase II preparation of detailed estimates for this stage would be difficult. Priorities as well as procedures to be adopted would depend firstly on the findings of Phase I and secondly on the outlook and attitudes of the villagers, though the latter would be substantially influenced by the researchers.

The plan itself will have two main components for health and nutrition. The health component would include the provision of water for drinking and other domestic purposes, latrine facilities, other environmental sanitation measures wherever relevant, amenities for sleep, rest and recreation, inculcation of personal cleanliness. Making the preventive and curative health services of the Department of Health regularly accessible to every single household in the village would be an important objective of the health development plan. These have to be catered for mindful of the differences between various socio-economic and cultural features in the households. Another essential perspective will be the needs of different groups such as infants and children, expectant and lactating mothers, the aged, the disabled, etc. In regard to nutrition too a similar pattern has to be adopted. Special attention will be paid to augmenting the food resources within the village both quantitatively as well as qualitatively through extension of home gardens, small scale poultry and other livestock units, etc. Nutrition education including food preparation and preservation in the households, breast-feeding and weaning foods for infants, etc. will be taken in hand.

Both in the design and implementation of these plans there would be a certain amount of unavoidable spill over into sectors other than health and nutrition. Activities in the areas of agriculture, education and housing are bound to come in. Therefore, the infrastructure of services provided through other Government Departments such as Agriculture, Education and Local Government would need to be availed of wherever appropriate.
In the light of the above facts it would be seen that for Phase II of this Project what would be possible is only a highly tentative estimate of costs. For the country as a whole 40% of housing units in the rural sector are without latrine facilities. On this basis in each of the ten villages about 150 households would be in need of latrines. Assuming that during Phase II 50 of these can be provided with latrines and the subsidy needed for each latrine is Rs. 300 the total needed for the ten villages would be:

\[ 50 \times 300 \times 10 = \text{Rs. } 150,000 \]

Similarly 20% of the housing units in the rural sector are without wells. Assuming that during these 12 months that 25 households in each of the 10 villages can be provided with wells and that the subsidy needed per well is Rs. 400 the total needed for the ten villages would be:

\[ 25 \times 400 \times 10 = \text{Rs. } 100,000 \]

On the basis of allocating Rs. 100 per household for all other activities and with an average of 350 households per village the total for the ten villages would be:

\[ 350 \times 100 \times 10 = \text{Rs. } 350,000 \]

Total = Rs. 600,000 = $40,000

Salaries of personnel listed as items 1, 2 & 3 for Phase I -

\[ 1200 + 3600 + 9000 = $13,800 \]

Establishment, secretarial, travelling, etc.

\[ = $6,200 \]

Total Phase II = $60,000
Phase III (12 months) - Evaluation of the Health and Nutrition Development Plan and its Implementation in the 10 Villages

As already stated what will be attempted here is an evaluation of the extent to which the plan is being successfully implemented in each of the 10 villages. By implication it will be an evaluation of the plan itself. There are bound to be differences as between the villages both in the plans as well as in the experiences of implementation. A comparative study of this would be one component of the total evaluation.

1. 1 Director half-time at £ 200 p.m.
   \[ 100 \times 12 = £ 1,200 \]

2. 2 Senior Research Officers half-time at £ 150 p.m.
   \[ 2 \times \frac{150}{2} \times 12 = £ 1,800 \]

3. 2 Research Assistants at £ 75 p.m.
   \[ 2 \times 75 \times 12 = £ 1,800 \]

4. Establishment, secretarial, travelling etc. = £ 1,200

Total Phase III = £ 6,000