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# Health Management by the People

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UNICEF is keen to promote efforts to move on from the rhetoric of the global goal of health for all to some down-to-earth means of attaining it.

It was four years ago that WHO first commended this target to the world community. Within about a year WHO and UNICEF agreed at Alma Ata that primary health care was the approach towards it. And primary health care was defined by common consent as involving the pre-requisites of a multi-sectoral approach, community involvement and appropriate technology.

## Socio-economic Development

What has clearly emerged from the discussions since then is that "health for all" is a matter as much of socio-economic development as of medicine and public health. This perception has been reinforced by the International Development Strategy for the 1980s which links fully, and for the first time, social goals with economic goals. Development is conceived as an integral process leading to freedom from hunger, universal primary education, and primary health care for all. The way to close the gaps in these directions is to close them together.

Clearly, this set of goals is not for the Ministries of Health alone to pursue. Indeed these call for resources even beyond what governments by themselves can summon—resources not only of a technical or financial nature but also of attitude and will, of social organisation and action. This is, in our view, the crux of the managerial challenge involved in development, including that of a national health programme.

Let us take as an example a typical health hazard that is easy to bring under control but is still vexing many developing countries and some developed ones too—the prevalence of endemic goitre and cretinism. WHO has been concerned and active in this field for a number of years. UNICEF has assisted in setting up several plants for making iodised salt and is continuing to do so. There are national goitre control programmes in this region. The endemic areas, the levels of the incidence, the causes of the illness and the cure for it are all fairly well-known. Yet we are unable, in this part of the world, to eliminate it.

Obviously, the health ministries have to gear themselves better to the task but the task itself involves not merely a technical specialism of the setting up of a 'goitre cell', but managerial vision, competence and confidence that bring together various government ministries and professional capabilities of many kinds—medical research and survey, manufacture and distribution of iodised salt, cost control and information campaigns, reviewing and improving the results and, not the least, finding the resources for all these. The cure however is simple and its cost negligible.

Indeed there are few diseases that stand so much in the way of national development of the full human potential and that can be eliminated for so little. If we do not muster the managerial capability to overcome goitre in the next 5 to 10 years' time, it is not clear how we can attain the far more difficult goal of health for all in 20 years.

We in UNICEF believe that it is a managerial function of health development to influence policy in favour of investment in health services—by pointing to its economic return. That is to say, social development and economic development need not be at each other's expense but can sustain and promote one another. To cite an example, where governments and WHO can take credit, the international investments in the eradication of small pox have paid off dramatically in terms of national expenses saved, by doing away with immunisation, quarantine and other facilities.

## Technological Innovation

If you look at the success story of this decade-long international campaign, you will see a technological innovation, in that freeze dried vaccine ended the need for costly and difficult refrigeration in remote tropical areas. There was also a managerial innovation in saturating outbreak areas with vaccinations rather than seeking vaccination of the entire population.

And this has its obvious lesson for the managers of health services. Beyond the commonly cited constraint of establishing a logistical system, there is the evident gap in the planning, organisation and management for extending immunisation services. And this is a matter by and large within the jurisdiction of health ministries.

Another dimension of the managerial challenge of health development in this part of the world is provided by infant deaths by diarrhoea and dehydration. The answer is within the capability of the mother, if only we could reach her the right kind of knowledge, enabling her to act within the resources of her home.

Put in the jargon of modern management, there needs to be country health programming, programme budgeting, programme evaluation and health information systems support. But I hope we do not make another esoteric discipline out of health management—more so as primary health care cannot succeed without its central component, namely the full involvement of the people, whose health status is our subject of discussion. Rather, the task awaited of those with specialised knowledge is to shape alternative approaches so relevant to the health problems of the poor that they themselves can take a hand in solving them. That way lies progress in 'human' terms in the 1980s and beyond.

I would suggest that we seek to understand the managerial process for national health development in the context of specific problems, rather than in terms of promoting the concept itself. Shared perceptions on similar problems must precede viable cooperation between countries.

### Commendations

I would commend a couple of points for consideration:

- First, the possibility of resorting to new forms of organising and delivering health-related services by people in low-income groups: for example, by upgrading the competence and role of the community worker, by concentrating on organising more health centres, by reorienting modern hospitals into referral centres, by keeping in check over-professionalism. There are, as you know, examples of this in several countries.
- Secondly, an emphasis on children (and mothers) as the most productive and cost-effective way to begin to work for health for all— by preventing ill-health, disease and disability where this is relatively the easiest to implement.

In both these respects, UNICEF is particularly keen to expand its collaboration with governments as well as with WHO.

# Marine Food Resources: Present Status and Problems

Dr. V.V.R. Varadachari, Dr. T.S.S. Rao and Z.A.Ansari
National Institute of Oceanography, Goa

The hunt for more food is constantly on because the population of the earth is growing all the time. The limited resources on land force man to look for other resources. It is said that the last frontier lies in the oceans of the world and that man, by judiciously managing this frontier may gain limitless food to feed generations.

### Resources and Requirements

Approximately 363,000 million tonnes of organic material are produced in the world oceans each year (Weihaupt, John G., 1979. Exploitation of the Oceans. Macmillan Publishing Co. Inc. New York, pp 458-460). Only a small fraction of this is recovered by way of fisheries for direct consumption. World fish catch has shown a phenomenal increase since the beginning of this century. The total world fish catch has gone up from 4.0 million tonnes in the year 1900 to 73.5 million tonnes in 1977 (Table 1). No other commodity has shown an increase comparable to that of fish.

The need for fish arises from the need for protein in man's diet. Traditionally fish has been cheaper than meat. Fish makes up about 12 percent of the world annual consumption of animal protein. The availability of fish in India is about 4.3 kg per capita per annum and the average consumption of fish protein is about 2.7 gm per capita per day. With increasing demand for fish, it is estimated that the fish eating population of India will require 11410.0 thousand tonnes of fish on a minimum basis by the year 2000 (Panikkar, N.K., 1967. Marine Food Resources of South East Asia. *Proc. Nutr. Soc. India,* 1: 61-69). By the end of the present century the world population is expected to grow by 6.27 thousand million whose annual animal protein demand will be 22.8 million tonnes (Weihaupt, John G., 1979. Exploitation of the Oceans. Macmillan Publishing Co. Inc. New York, pp 458-460). Much of this may come from the ocean.

Table 1

**Total Fish Production in Million Tonnes**

| YEAR | INDIA | WORLD |
|---|---|---|
| 1900 | — | 4.00 |
| 1951 | 0.75 | 25.90 |
| 1961 | 0.96 | 43.60 |
| 1971 | 1.84 | 70.89 |
| 1975 | 2.27 | 69.73 |
| 1976 | 2.26 | 74.71 |
| 1977 | 2.54 | 73.50 |

It is well known that India has achieved phenomenal growth in the fishing industry since its inception in the early post war period. As a result of planned efforts of development, the marine fish production of India has gone up from a meagre 0.55 million tonnes in 1951 to 1.4 million tonnes in 1978. This has been possible by introducing mechanised fishing and modern technology. Such rich harvest from our seas, besides providing employment and protein rich food to millions of the Indian population, has earned over Rs. 200 crores annually in foreign exchange. Now India ranks sixth among the fish producing countries of the world.

### Two Types of Fisheries

Basically two types of fishery operates on the Indian coast, namely pelagic and demersal. Pelagic fishery constitutes about 63 percent of the total marine catch in India. The fishery of oil sardine and mackerel which together constitute about 30-35 percent of the annual catch, forms the basis of pelagic fishery in India.

The most important feature of pelagic fishery is its fluctuating trend (Table 2). About 90 percent of the pelagic catch is caught from the west coast and exploited within the narrow coastal region of less than 50 m depth. Other important groups include seerfish, tuna and other clupeoids.

Demersal resources are those

which are found at or near the bottom of the sea. The fishery is highly mechanised. During the last ten years the average annual demersal catch from India is about 0.6 million tonnes. A very important demersal fishery is that of marine prawns in India.

The average prawn catch shows an overall increase of about 125 percent during the last ten years. Of the total marine prawn landing, more than 85 percent is from the west coast of India. Prawn is a major constituent of marine product export from India and accounts for 87 percent of foreign exchange earnings. With the steady increase in prawn landing, India has become one of the biggest prawn producing and exporting countries in the world.

The "Antarctic krill", *Euphausia superba*, is an important harvestable food source from the sea. It has, by its sheer abundance, attracted wide attention in recent years. In the Antarctic Ocean it is a key organism upon which all higher organisms feed. Krill stock, as estimated by various workers, varies between 125 million tonnes to 6 billion tonnes. (El-Sayed, Sayed Z. and McWhinnie, M.A., 1979. Antarctic Krill: Protein of the Last Frontier. *Oceanus*, 22:13-20.)

Krill fishery has the greatest potential in the future. However, some fundamental questions concerning krill biology, distribution, population dynamics, standing stock and production, which in the interest of most efficient management and exploitation are important, remain unanswered. At present Antarctic krill are being harvested at the rate of 80,000 to 90,000 tonnes annually. It is believed that 100-150 million tonnes of krill (double the world total fish catch) can be harvested annually.

Plankton, the minute floating organisms, which are found in abundance, are other source of food in the sea. Some of the areas of open ocean produce as much as 1.4 million kg of vegetable matter per square km per year which is roughly six times more than the best farmland production. Marine algae, commonly called seaweed, are another source and used as food in East Asia. From the Indian coast the estimated yield of marine algae is about 24,000 tonnes.

### Additional Production

In addition to harvesting the vast food resources of the ocean, sea farming is very promising. Shrimps, oysters, clams, mussels, finfish and marine algae are farmed in many countries of the world to increase food production. Where coastal conditions are suitable these organisms can be cultured and produced in large quantities by applying methods of aquaculture. There have been recent predictions of an annual world production of about 40 million tonnes of fish by the year 2000 through aquaculture.

Inspite of these, the present exploitation of marine resources is still fractional. In view of the large protein requirement of the human race, maximum possible yield from the ocean should be sought. Owing to the improvement in fishing techniques, the production potential of world fishery must be considered good.

It is believed that by careful management, discovery of fishable population and acceptance of other species not previously considered for food, upto 180 million tonnes might be recovered annually from world oceans by the end of this century (Weihaupt, John G., 1979. Exploitation of the Oceans. Macmillan Publishing Co. Inc. New York, pp 458-460.)

Table 2
**Total annual landing of oil sardine and mackerel in India**
(Value In Tonnes)

| YEAR | OIL SARDINE | MACKEREL |
|---|---|---|
| 1969 | 174,249 | 91,837 |
| 1970 | 226,997 | 139,206 |
| 1971 | 209,261 | 204,575 |
| 1972 | 127,568 | 108,971 |
| 1973 | 144,395 | 79,423 |
| 1974 | 126,676 | 37,462 |
| 1975 | 159,240 | 45,947 |
| 1976 | 169,262 | 65,497 |
| 1977 | 150,130 | 62,136 |
| 1978 | 168,078 | 85,233 |

Fisheries of the Indian ocean are capable of substantial increase both inshore and offshore areas. The continental shelf alone is estimated to support an yield of 7.5 million tonnes on an annual basis. The recent declaration of an Exclusive Economic Zone (EEZ) of 200 nautical miles has added new dimensions to the marine fisheries resources and their exploitation for our country.

The annual catch from the Indian ocean is estimated at 3 million tonnes out of which India's share is about 1.2 million tonnes. Recently, based on primary and secondary production rates, the potential exploitable yield at the tertiary level for the Indian ocean has been assessed at 15 to 17 million tonnes per year respectively. (Qasim, S.Z. 1977. Biological Productivity of the Indian Ocean. *Indian J. Mar. Sci.*, 6: 122-137.)

It is believed that with increasing efforts, utilising comparatively large size mechanised fishing vessels and by extending fishing operations to the edge of our EEZ, the fish catch could safely be doubled without seriously depleting the stock. Considering the average annual increase of 5.6 percent during the period 1969-78, prospects for further development and improvement of marine fishery are very bright in India.

There are, however, some serious problems for overall development of marine fisheries in India. They are related to catch fluctuation, overfishing, development of national fishing technology service, freezing and cold storage plants, processing, transpor-

The major emphasis in our efforts to increase food production during the last three decades, has been on cereals and other foodgrains. There have also been some notable efforts at dairy development. However, two important areas which have apparently received less emphasis are our marine food resources and horticulture.

The objective of a National Food Policy must be to achieve adequacy in a sufficiently wide range of food resources, which would be possible with our country's natural endowments. Such a policy will permit nutritious low-cost balanced diets for poor income groups which need not be almost entirely based on cereals and foodgrains as at present. The broadening of the "food resource base" will also contribute to a more durable and less fragile national food security system, by helping us to avoid precarious reliance on just one or two food items known to be subject to the vagaries of the monsoon and seasons.

**C.G**

tation and marketing channels.

Catch fluctuations constitute severe handicaps for the economic return of the fishing craft and the fish industry. Time and again, fishermen complain that the harvest on known fishing grounds are subject to strong fluctuations. Thus sometimes, for unknown reasons, a major part of a fish population like oil sardine and mackerel occurs in the coastal waters and disappears. The whereabouts of such fish remain a mystery.

The problem of overfishing at some places is serious. At present only the inshore waters within the depth zone of 20 mts are bearing the brunt of India's fishing. As a result these places are beginning to show signs of being fished out. This effort is aggravated by the fact that only certain kinds of fish are caught while others, equally good from the food point of view, are left.

This necessitates finding of new fishing grounds. It will not only solve the problem of overfishing but also add to the total marine catch. Similarly the midwater trawl which has hitherto been tried only on an experimental basis for fishing in the midwater, must find a place in our fishing technology to augment the fish catch by operating in the midwaters.

### Fishing Technology

As indicated, the establishment of a fishing technology service in a developing fishery should be based on a careful identification of present conditions and development opportunities. This implies a meaningful dialogue with the fishermen, fishing operators, fishery administrators, market vendors and marine scientists.

A great deal of attention is being devoted in recent years to the protection of our natural resources from pollution. The crude method of waste disposal into the sea has threatened marine life in many parts of the world and there have been cases of heavy fish mortality caused by pollution.

Our present knowledge and technology are still inadequate to predict accurately the degree to which the ocean can relieve world food problems or the degree to which man's activity would upset the marine environment. We have got to go farther in improving our knowledge of stock assessment, fish population dynamics and the fishery technology if we are to exploit to the full the benefits the bounteous ocean is waiting to shower upon us.

# Project for the Prevention of Blinding Malnutrition

Dr. K.A. Krishnamurthy, Dr. G. Venkataswamy,
Mr. O.K. Moorthy, Dr. Shanthi Arora and Miss Janet Pinto

The Royal Commonwealth Society for the Blind (RCSB), U.K., has initiated an all India Project for the prevention of blinding malnutrition. Its objective is to establish in each state of India where there is a high prevalence of xerophthalmia at least one community-based project, during the course of the five years commencing from July 1981. This project will be designed, within a limited area, but with effective management and evaluation, to reduce by the end of the five years the prevalence and incidence of blinding malnutrition to the point where control can be thenceforward maintained as a routine public health measure.

*National Framework*: The control of blinding malnutrition is a long-term objective of the Indian Government's National Programme for the prevention of blindness. It is the aim of our programme to reinforce and supplement the existing national programmes. The appropriate intervention will differ from one area to another according to the possibilities of resources, and it will be the task of the RCSB Project team to lay down guidelines and, by offering constant support in planning implementation and evaluation, to assist ongoing national projects to achieve their objectives, and to contribute its experience to the total programme.

*Areas*: The present assumption is that there is a high prevalence of xerophthalmia in all the Indian states except Punjab, Goa and Kerala. It is planned to establish projects in 40 Community Blocks each with a population of approximately 100,000, focussed on high risk children who will be identified by criteria which will be worked out for each area. Each project would seek, by health education in the community to achieve an improvement in the attitudes of the mothers towards children's diet.

*Project Criteria*: The initial survey to establish prevalence and to identify children and families at high risk will be done in the selected areas. This survey is expected to take more than three months.

An arrangement, requiring special staff, to keep under continuous surveillance, children and families at risk has been planned.

A centre, preferably a specific Nutrition Rehabilitation Centre—where all children at imminent risk of blindness can be promptly admitted for emergency treatment and special feeding to preserve their sight (and possibly their lives) through the critical period, has also been envisaged.

A system for providing comprehensive nutritional instruction to mothers, intensively during any period when their child is in the Nutrition

More than ten years ago, the National Institute of Nutrition, Hyderabad, had developed through its researches a programme for the control of nutritional blindness in the country through the periodic (at six-monthly intervals) administration of massive oral doses of Vitamin A (200,000 I.V. in one teaspoonful) to children at risk between one and three years. This programme was included in the Fourth Five Year Plan for implementation in nine states of the Indian Union. A subsequent evaluation of the programme carried out by the National Institute of Nutrition showed that while the Programme was being implemented fairly satisfactorily in some states e.g. Kerala and Karnataka and had produced significant impact therein, its implementation in other states, as for example Bihar, was far from satisfactory. It is hoped that the project described here will help to reinforce the on-going National Programme and ensure for it adequate focus as an integral and important part of the Primary Health Care package.

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Rehabilitation Centre and generally within the community to all families at risk, is also included.

### Policy for Change in Diet

A flexible policy including all the following interventions will be developed in order to achieve changes in the diet of the infant and preschool child:

- Nutrition education to village mothers.
- Strengthening the existing primary health care activities focussed on children under 3 years and pregnant and lactating mothers. The project will emphasise measles immunisation, treatment of diarrhoea in village homes by oral rehydration, antenatal immunisation and propagation of breast feeding.
- Ensuring adequate coverage with the massive Vitamin A prophylaxis programme.
- The key persons involved in the implementation of the programme will be Village Health Guides. The RCSB project will, aim to generate the necessary involvement of the whole community by developing suitable methods of communicaiton.

## NUTRITION NEWS

In our July 1981 issue we had carried an article on the subject of *Goitre Control*. The Foundation is happy to learn that the Government of India has now taken a major decision to intensify efforts in the field of goitre control.

The WHO Regional Committee which met in Bali, Indonesia, recently adopted a resolution emphasising the importance and urgency of the problem and the need to institute vigorous efforts to control it, in all the countries of the region.

UNICEF has, throughout, extended its support to this programme. It is hoped that the renewed efforts of the Government of India and the support of international agencies will help to totally eradicate the goitre problem within the next decade.

# Nutritional Consequences of Developmental Programmes

C. Gopalan

It is now widely recognised that sustained improvement in health and nutritional status of poor communities can only be achieved as part of their overall socio-economic development. It is also generally realised that good health and adequate nutrition are as much *instruments* of development as they are consequences thereof. Unfortunately, however, such recognition has not been, as yet, sufficiently reflected in the formulation and implementation of Rural Employment/Development Programmes and indeed of other National Development Programmes as well.

Health and Nutrition are still largely the isolated "departmental" operations of the Health and Social Welfare Ministries, mostly uncoordinated with local or regional developmental programmes. True integration of these important components of development into the developmental process in the operational sense in a manner which will maximise the benefits through mutual synergism, has yet to be achieved.

This is perhaps because precise information is lacking as to the practical and feasible ways by which an effective health and nutrition component can be built into developmental programmes, without unnecessary duplication of the existing health infrastructure, and within the current financial resources.

There are two major questions which arise in this connection:

1. Why is it important and necessary to build a Health and Nutrition Component as an *integral* part of the Rural Employment/Development Programmes? Can we not depend on the present Health System to cover the special needs of the beneficiaries of these Programmes as well?
2. A question of wider importance, not necessarily related to Rural Employment/Development Programmes and their beneficiaries alone is: How adequate is the nutrition component in the present Health System? Can we not put Nutrition entirely into the Primary Health Care basket of the Health System and rest assured that full justice will be done thereto?

We may now attempt to answer these questions briefly.

The assumption that increase in income of poor families from the current poverty levels to subsistence levels, will be automatically reflected in significant improvement in health and nutritional status of poor communities, and especially of the women and children thereof, is apparently not often borne out by actual experience.

### Development and Health

A programme designed to deliberately channel at least a small part of the increased income towards ensuring better health and nutrition of mothers and young children will go a long way towards augmenting the benefits of economic development.

Dr. Cowan (personal communication) observed that in villages in the Punjab where some "developmental" programmes (including irrigation and dairy development) had been initiated the health conditions of women had actually deteriorated and incidence of low birth weights and neo-natal mortality had actually increased. Dr. Cowan noted that this had happened because, as a result of the introduction of the developmental programmes, the women had to work much harder than before while their diets had not significantly improved. They had now to tend the buffalos and obtain fodder for them; they had to carry heavy loads on their heads as part of the construction work they were engaged in, even during the last trimester of their pregnancies.

The increased income resulting from the developmental programmes had apparently not benefitted the women-folk and children while the men-folk had more money to spend on drinks and other "amenities".

In the Zaheerabad Taluk of the Medak district of Andhra Pradesh Mr. K.S. Gopal (personal communication) gained the impression that the most immediate and tangible result of the introduction of a "developmental programme" which resulted in increased income was a nearly three-fold increase in alcoholic consumption.

Apart from such substantial increase in the quantity of alcoholic consumption, the poor labourers had now switched over from country toddy to more "sophisticated" alcoholic drinks! Here again the beneficiaries of development were not women and children or for that matter not even men, for the health and nutrition of no section of the family had really improved as a result of increased income.

These observations clearly portray the possible deleterious effects on health and nutrition of "unregulated" development, and underscore the need for special efforts to ensure that at least part of the increased income resulting from employment goes to meet the health and nutrition needs of mothers and young children of the families concerned. These observations are obviously not arguments *against* rural development but *for* maximising its benefits.

### Need for a Nutrition and Health Component

Rural Employment/Development Programmes (if they are really intensive and successful) will generate special problems requiring special attention and calling for appropriate solutions. Thus, these programmes may be expected to

- accelerate the pace of change even in poor traditional societies;
- increase income levels that may in turn, be reflected in changes in the pattern of expenditure which may not necessarily be beneficial to health;
- bring about changes in the work-pattern with consequential changes in lifestyle, in infant and child-feeding practices, and in nutrient and energy requirements of both adults and children;
- alter to varying degrees, value systems and attitudes and increase receptivity to new (but not necessarily more beneficial) ideas and mores.

The Village Health Guides in the present Health System are "literates" from the community, chosen by the community and work part-time. They are given a set pattern of training for ten weeks and are entrusted with wide-ranging responsibilities. They may be quite competent to deal with the general run of health problems of poor communities.

It may, however, be too much to expect that, in addition to discharging their assigned responsibilities they will also find time, and be sufficiently resourceful and innovative enough to respond adequately to the special problems of relatively rapidly changing societies involved in developmental programmes, especially when the nature of these special problems may vary from community to community and from one project to another.

It is *not* suggested that the village Health Guides should leave alone the communities covered by the Rural Employment/Development programmes. They will serve them in the same manner as the rest of the community. The point being made is that *in addition* to the regular service of the Village Health Guides, there is a need for special arrangement appropriate to each Rural Employment/Development Project that is envisaged to constitute the "health and nutrition component" of Rural Employment/Development Programmes.

The functionaries who will constitute this health and nutrition component will be expected to work in close cooperation with the Village Health Guides so that there is a true mutual reinforcement of efforts and an effective intensification of the "coverage" of the community as a whole. If the programme is worked in this spirit, there can be no conflict of interest but a healthy sharing of responsibilities for the benefit of the community.

Incidentally, this arrangement will also greatly augment the financial and manpower resources for health and nutrition programmes at the rural level. It is now generally agreed that the present financial allocation for Health is pitifully inadequate. Even if the full complement of staff provided for in the Primary Health Care System is in position, the 'coverage' at the rural level will be thin and inadequate.

### Mobilising Resources

Efforts to augment the financial and manpower resources for Health and Nutrition Programmes at the rural level must, therefore, be welcomed, whether these resources come from the budget-head "Health" or from "Rural Development" and "Primary Education". The ultimate beneficiaries will be the rural poor, no matter how the resources are mobilised.

There is another and a more compelling reason for the plea for including a health and nutrition component into the Rural Employment/Developmental Programmes. Many of the special problems likely to be generated by rural development will be nutritional or nutrition-related. It is, precisely, in this crucial area of Nutrition that the present Health System is particularly weak and highly inadequate, and, therefore, needs to be buttressed and reinforced through special arrangements. (See Reviews and Comments).

### A Broad Outline

The broad outline of the Health and Nutrition Component of Rural Employment/Development Programmes may be briefly set out as follows, with the proviso that no suggestion that follows should be construed as reflecting a rigid position.

The financial resources for the institution of a health and nutrition component of Rural Employment/Development Programmes could come out of the budget allocation for the Rural Employment Programmes, Rural Development Projects, and Food for Work Programmes. This is reasonable since what is envisaged is an integral component of these programmes, designed to maximise the benefits of these programmes.

About 5 to 10% of the budget allocated presently for these programmes may be specifically earmarked for health and nutrition programmes which will cover the beneficiaries of these Rural Employment/Development Programmes. Additional resources may also be raised through voluntary contributions from the families directly benefitting from the programmes.

Such voluntary contributions will enable the communities to view the programme as their own and not as a charity operation by the State. With such Community Contributions there will also be greater accountability on the part of functionaries involved in the programme.

It must be ensured that the full complement of the staff envisaged under the Primary Health Care Scheme by the Health System, and other Welfare Schemes, are in position in all the blocks where the programme is to be undertaken. It must be made clear that this programme is an *adjunct* to the regular health and welfare programme operated through the Health System and Social Welfare Ministry and *not a substitute* for them.

The closest possible functional linkage between the functionaries in these programmes must be ensured. The institution of a health and nutri-

tion programme as part of the Rural Employment/Development Scheme should not become the signal or excuse for depletion of manpower resources of the regular Health Sector in that area.

The functionaries engaged in this programme may be young men/women with education, at least upto the Secondary School level (not just "literates"), who have been given special training in preventive and promotive health care with special emphasis on Applied Nutrition. Their training must be specially tailored to suit the *local* conditions, which implies that the training programme must be decentralised and carried out at the district level.

### Training and Retraining

The very large number of presently unemployed B.Scs. and M.Scs. in Food & Nutrition—Home Science, and B.Scs. in Dietetics can, with some preliminary orientation, carry out this training and retraining of these workers and indeed can also help in overseeing and guiding them in their actual work in the field. The preliminary orientation for the trainees could be imparted by the schools of Home Science. Incidentally this arrangement will also indirectly contribute to a practical orientation of the teaching and training programmes of the schools of Home Science themselves, with an emphasis on action-oriented rather than theoretical training.

The health workers in the programme must be aware of the major nutritional problems of the area; of the foods grown there, and their nutritive value; of the deficiencies in the habitual dietaries and of the practical and inexpensive ways in which such deficiencies could be overcome through the use of local foods.

They must be aware of seasonal variations in the availability of different foods and of prevailing taboos and belief systems. They must know how to prepare, and how to demonstrate hygienic time-saving and fuel-saving methods of preparation of nutritious recipes for weaning diets for young children made out of locally available foods to complement breast-feeding.

They must be fully alive to the dangers of the diarrhoea problem and must be equipped to deal with it, and especially to prevent dehydration through timely oral fluid administration. They must be able to advise pregnant and nursing women on how to improve their dietaries within the constraints of the family budget and on rearing of their children using simple hygienic methods within their means. They have to ensure that the young children get their periodic doses of Vitamin A. and both mothers and children their daily tablets of iron and folic acid.

In the case of working mothers with infants and young children, satisfactory arrangements for ensuring their proper feeding while the mother is at work, and appropriate facilities for this purpose must be set up. It is easy to draw up codes of ethics for promotion of breast feeding from the armchair. What is, however, more important is to create conditions in the field by which: a) Working women can still continue to breast feed their infants and b) Nutrition of older children of working women is not impaired by lack of facilities for ensuring their proper feeding when mothers are at work.

### Health Workers in Planning

Though these health workers will *not* be directly involved in family planning programmes, immunisation and cure of minor ailments (which will be the responsibility of the village Health Guides and of the "regular" Health System), they will encourage and persuade the families through their regular contacts, to avail of these services and refer them to appropriate health authorities in case of sickness and major ailments. There could be frequent consultations between the health workers in this programme and the village Health Guides and other functionaries engaged in other welfare programmes in the area.

In order to carry out the above functions, the Health workers will visit each household registered in the Programme, at least once a month. They will maintain individual health cards for each mother and child covered in the programme. The infants and young children will be weighed at each visit.

Children who have failed to gain weight on three successive visits, or who have lost weight, or whose initial weight is below 60%, of the standard, will receive a ready-to-eat nutritious supplement (similar to the "Hyderabad mixture"), fabricated by the health workers themselves out of locally available ingredients, with clear instructions to the mother that what is being offered is a supplement and not a substitute for the home diet.

The supplements will be offered *only* for a restricted period till such time as the children tide over their state of undernutrition, during which period the mothers will be educated and persuaded to correct any prevailing faulty feeding practices. The food ingredients needed for such a selec-

## FOUNDATION NEWS

### Appointments

● Dr Suvira, M.Sc., Ph.D., has been appointed Scientific Programme Coordinator in the office of the Foundation at the National Heart Institute, Community Centre, East of Kailash, New Delhi 110039.

Dr Suvira obtained her M.Sc. in Foods & Nutrition from the University of Delhi and her Ph.D. in Biochemistry from the Indian Institute of Sciences, Bangalore. Later, she worked as Post-doctoral-fellow for a few years, in the departments of Food and Nutrition of a number of American universities. She returned to India in 1981 to join the Faculty of the Lady Irwin College.

● The following scientists have been appointed on the projects on nutritional consequences of developmental programmes:
Under Prof. J.C. Tiwari, Institute of Medical Sciences, Varanasi—Dr Keshav Singh, M.B.B.S.; under Prof Vijay Kumar, P.G. 1 Chandigarh—Dr. Manjit Singh, M.B.B.S., Mrs V. Kampulakshmi, M.Sc. in Home Science (Nutrition), Mrs Madhur Bala M.A. (Sociology)

### Task Force

A Task Force on the Study of Infant Feeding Practices met in Bombay on October 17, 1981 and again on November 22, 1981 at Delhi under the chairmanship of Prof. M.S. Gore to review the progress of the studies carried out so far.

tive and restricted, "therapeutic" supplementary feeding operation may be made available to the programme from the food stocks earmarked for the Food for Work or Food for Nutrition Programmes.

Though most of the suggestions contained in this paper pertain to Rural Employment Programmes, the same suggestions with appropriate modifications can also be applied to Public Sector Organisations employing large numbers of labourers and unskilled workers drawn from poor communities. They can also apply to major developmental programmes like irrigation, dam construction, etc. undertaken by the Government with national, bilateral or international resources.

Indeed, International Agencies funding such major developmental programmes could ensure that about 5 to 10% of the total outlay in such major programmes is earmarked for health and nutrition services for the workers and their families and for the management of the health problems which may be generated by the project.

### Comprehensive Concept

In an earlier issue of this Bulletin, we had entered a plea for a comprehensive School Health Service, which could be addressed not only to the children actually in school but to their parents and siblings in the village. We had, in effect, pleaded for a strategy of using rural schools as a means for Community Education for improving Community Health.

If we can use our Rural Employment/Development Programmes, not just for the narrow purpose of marginally increasing the income levels of the rural poor for some months in the year, but for the broader purpose of enabling them to lead a healthful and productive life and for uplifting the general standard of Community Health, in the village, we would have truly served the larger interests of our poor rural masses.

**Dr. M.S. Swaminathan**

The Nutrition Foundation of India congratulates Dr. M.S. Swaminathan on:

- His election as Chairman of the FAO Council;
- His appointment as Director General, International Rice Research Institute.

## REVIEWS AND COMMENTS

### Nutrition in the Health System

How adequate is the nutrition component in the present Health System? The suggestion that Nutrition, along with family planning, immunisation, and improvement in environmental sanitation should constitute the composite Primary Health Care Package has been generally welcomed, because, ideally these components operated as a package could prove mutually reinforcing, and synergistic in their effects.

However, the fear was always voiced that in actual practice, the Nutrition Component in the Primary Health Care package may get relegated to the background and may receive no more than mere lip-service. Family Planning, immunisation and even improvement in environmental sanitation are well-charted operations which can be carried out even in poverty-stricken communities and easily lend themselves to achievement-audit.

On the other hand, nutrition education, changing dietary habits and feeding practices, and improvement in nutritional status are relatively much more difficult and time-consuming tasks; in poverty-stricken communities, with very low income levels, the scope for nutritional improvement will also be small. Under such circumstances, the health worker could easily get frustrated and tend to concentrate her/his attention on jobs which can be more easily and successfully accomplished. This could happen, even if the training of the Village Health Guide in Nutrition is adequate.

In a recent analysis of the place of Nutrition in the Primary Health Care System, Y.N. Mathur (Nutrition News: National Institute of Nutrition, Vol. 2 No. 4) concludes that "in terms of primary health care, the nutrition component was found to be weak". He adds that in the training of the Village Health Guides "the proportion of time allocated to nutrition hardly exceeds 3% in contrast to the time (devoted) to other topics (e.g. treatment of minor ailments 22%; environmental sanitation 13%; communicable diseases 12% etc.). Also "most of the Village Health Guides lack the ability to identify (even) severe forms of malnutrition like kwashiorkor and marasmus... They tend to equate malnutrition to lack of vitamins.

"The practical skills of promotion, prevention and domiciliary management of nutritional disorders using available and inexpensive foods which are likely to be accepted by the people was found wanting. Most of the workers appear to lay emphasis on flesh foods for problems of malnutrition." Though Mathur concludes his analysis on the optimistic note that the Nutrition Component of the Primary Health Care package may be strengthened through better training, it will be difficult for experienced realists to share his optimism.

While, certainly, the current training of Village Health Guides offers considerable scope for improvement it may prove more profitable from the point of view of the cause of Nutrition, to build a health component *with a predominant nutrition bias* as an integral part of Rural Employment and other Developmental Programmes.

Such an arrangement will also help to correct the current imbalances, and deficiencies in the Primary Health Care System, and, therefore, could prove to be a most valuable adjunct, to the regular Health System.

In the training of Health Workers who will constitute the Health and Nutrition Component of Rural Employment/Development Programmes, Nutrition should receive the primary and predominant focus. Since these workers will be working with communities whose income levels and economic status are being raised, they will find better scope for effective nutrition programmes and have less cause for frustration and despair than health workers engaged in work among the poverty-stricken.

They may also be successful in ensuring that a reasonable proportion of the increased family income is channelled for the betterment of the nutritional status of mothers and children of the families and is not frittered away by the menfolk on alcoholic drinks and beverages, as is the case.

Should this happen, we may not have to worry too much over the present situation wherein Nutrition, as was always feared and expected, has turned out to be the Cinderella of the Health System.

**C. Gopalan**

Edited by Dr (Mrs) S. Malhan, Ph D. for Nutrition Foundation of India, B 37 Gulmohar Park, New Delhi, Designed and produced by Media Workshop and printed by Veerendra Printers.