BANGLADESH
NATIONAL PLAN OF ACTION FOR NUTRITION (NPAN)

Ministry of Health and Family Welfare
Government of the People's Republic of Bangladesh
in Collaboration with
Bangladesh National Nutrition Council
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PREFACE

The follow-up activities of the International Conference on Nutrition (ICN) as agreed in the conference held in Rome, Italy in December, 1992 have begun in Bangladesh. Since Bangladesh is a signatory of the World Declaration on Nutrition like other participating countries of the world, it has updated the Bangladesh Country Paper (BCP) on Nutrition and also prepared this National Plan of Action for Nutrition (NPAN). The Government of the People's Republic of Bangladesh has taken the nutritional considerations as one of the topmost priorities for the development of the human resources. It has commissioned a National Working Committee headed by the Additional Secretary, Ministry of Health and Family Welfare and represented by different concerned ministries and sectors and agencies both from the government and non-government organisations for updating the BCP and preparing the NPAN. The government has appointed the Joint Secretary (Public Health and Hospital) as the National Focal Point for ICN follow-up activities, and different Sectoral Focal Points for Nutrition were also nominated. A working committee headed by Professor M. Q-K. Talukder, Project Director, Institute of Child and Mother Health (ICMH) and Chairman, Standing Technical Committee of Bangladesh National Nutrition Council (BNNC) was also constituted, and the BNNC was assigned to coordinate the activities and to provide secretarial support to all these committees. A number of meetings and workshops were held to prepare the documents. The Food and Agriculture Organisation of the United Nations has provided all out supports for preparation of these documents, specially by commissioning international and national consultants. As follow-up of activities of ICN the documents prepared in Bangladesh are : (a) Bangladesh Country Paper (BCP) on Nutrition - Updated, 1995; (b) State of Nutrition in Bangladesh, 1995; (c) National Plan of Action for Nutrition: Some Projects from Selected Themes, 1996; (d) National Plan of Action for Nutrition (NPAN), 1997; (e) National Plan of Action for Nutrition: Inputs from Agricultural Sectors, vol-1; and (f) National Plan of Action for Nutrition : Selected Project Proposals for Agricultural Sector. vol-2.

The core document, National Plan of Action for Nutrition (NPAN), is the outcome of untiring efforts of a good number of ministries, organisations and individuals, who gave their valuable inputs, as well as suggestions and comments on the draft outline of the Plan of Action presented in different workshops and meetings. We are grateful to the Hon'ble Prime Minister, Ministers for Health and Family Welfare, and Agriculture, Environment and Forests for their inspiration and continued guidance at all stages of the development of the NPAN. We are very thankful to Mr. Muhammed Ali, Secretary, Ministry of Health and Family Welfare for his valuable suggestions during preparation of NPAN. We acknowledge the contribution of the members of the National Working Committee and other Working Committee, especially Professor M. Q-K. Talukder, Director, ICMH, Mr. Md. Abdul Mannan, Secretary, BNNC and Dr. S. K. Roy, Scientist, ICDDR'B for their relentless efforts, relevant inputs and for reviewing the documents. Thanks are also due to the International Consultants of FAO, Professor Indira Chakravarty, Director and Dean, All India Institute of Hygiene and Public Health, Calcutta, India and Dr. Rahamat U. Qureshi, Visiting Research Fellow, Kings College, London University, U.K. and National Consultants, Professor Harun K. M. Yusuf , Department of Biochemistry, University of Dhaka and Dr. S.M. Ziauddin Haider, Nutritionist, BRAC. We specially thank Mr. Hiroyuki Konuma, FAO Representative in Bangladesh for his continuous support and encouragement at all stages of finalisation of NPAN.

I hope this core NPAN document will be very useful to the nutrition planners, program implementers and others concerned in formulating their future course of action.

M. Azizur Rahman
Joint Secretary (PH&H), MOHFW and
National Focal Point for Follow-up of ICN Activities

Dated: 3 May 1997

FOREWORD

Malnutrition is a serious health concern in Bangladesh. The worst victims of malnutrition are the children and the women. The government has undertaken a number of programs to improve the situation. During the International Conference on Nutrition (ICN) held in Rome, Italy some follow-up activities of the conference were assigned to each of the participating countries. We are very pleased that one of those activities, viz. , preparation of the National Plan of action for Nutrition (NPAN) has been finalised recently. We feel happy that we have finalised our plan before many of the participating countries of ICN. This NPAN will be implemented for improvement of the nutritional status of the population by the year 2010.

The National Plan of Action for Nutrition has been prepared with inputs from different sectors, professionals from the government, NGOs, private sector agencies and donors. I would like to congratulate the professionals and others concerned who were involved in the process of the development of the NPAN for their efforts. I would also like to thank the chairman and the members of the National Working Committee and other working committee, National Focal Point for follow-up of ICN activities, and sectoral focal points for their hard work and continuous assistance in preparing the documents. Special thanks are due to the Secretary, other officers and staff of Bangladesh National Nutrition Council for their constant hard work during preparation of the NPAN, in organising workshops for finalisation of it and making effective coordination among the different sectors concerned. Thanks are due to the development partners, particularly the Food and Agriculture Organisation of the United Nations for their support.

Let me take this opportunity to request all key sectors, organisations, agencies and persons to follow the guidelines in the preparation of their sectoral projects on nutrition and to extend their coordinated and concerted efforts to ensure the effective and timely implementation of this NPAN.

Dated: 3 May 1997.

Muhammed Ali
Secretary
Ministry of Health and Family Welfare

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
ARI	Acute Respiratory Infections
ARMP	Agricultural Research Management Project
ASSP	Agricultural Support Services Project
BARD	Bangladesh Academy for Rural Development
BARI	Bangladesh Agricultural Research Institute
BAU	Bangladesh Agriculture University
BBF	Bangladesh Breastfeeding Foundation
BBS	Bangladesh Bureau of Statistics
BCSIR	Bangladesh Council of Scientific and Industrial Research
BF	Breastfeeding
BFHI	Baby-friendly Hospital Initiatives
BFRI	Bangladesh Forest Research Institute
BIDS	Bangladesh Institute of Development Studies
BINA	Bangladesh Institute of Nuclear Agriculture
BINP	Bangladesh Integrated Nutrition Project
BIRDEM	Bangladesh Institute of Research and Rehabilitation in Diabetes and Endocrine Metabolism
BIRTAN	Bangladesh Institute of Research and Training on Applied Nutrition
BLRI	Bangladesh Livestock Research Institute
BMS	Breast Milk Substitute
BNNC	Bangladesh National Nutrition Council
BRAC	Bangladesh Rural Advancement Committee
BRRI	Bangladesh Rice Research Institute
BRDB	Bangladesh Rural Development Board
BSTI	Bangladesh Standards and Testing Institution
CAC	Codex Alimentarius Commission
CARE	Cooperative for American Relief Everywhere
CDP	Crop Diversification Programme
CIDA	Canadian International Development Agency
CNP	Community Nutrition Promoter
CSD	Central Storage Depot
CSD	Combined Service Delivery
DAE	Directorate of Agriculture Extension
DANIDA	Danish International Development Agency
DLS	Department of Livestock Services
DOE	Directorate of Environment
DOF	Department of Fisheries
DPHE	Department of Public Health Engineering
DPT	Diphtheria/Pertussis/Tetanus
EPI	Expanded Programme on Immunisation
EPM	Energy-Protein Malnutrition
FAO	Food and Agriculture Organization of the United Nations
FAP	Flood Action Plan
FCDI	Flood Control, Drainage and Irrigation
FRI	Fisheries Research Institute
GOB	Government of Bangladesh
GTI	Graduate Training Institute
HDI	Human Development Index

HKI	Helen Keller International
HRD	Human Resource Development
ICDDRB	International Centre for Diarrhoeal Diseases Research, Bangladesh
ICMH	Institute of Child and Mother Health
ICN	International Conference on Nutrition
ICVD	Institute of Cardiovascular Diseases
IDA	International Development Association
IDD	Iodine Deficiency Disorders
IF	Institutional Feeding
IFAD	International Fund for Agricultural Development
IFST	Institute of Food Science and Technology
ILO	International Labour Organization
INFS	Institute of Nutrition and Food Science
IPH	Institute of Public Health
IPHN	Institute of Public Health Nutrition
IPM	Integrated Pest Management
ISRT	Institute of Statistical Research and Training
IU	International Unit
KAP	Knowledge, Attitude and Practice
LGED	Local Government Engineering Department
MCH	Mother and Child Health
MIS	Management Information System
MOA	Ministry of Agriculture
MOC	Ministry of Commerce
MOCn	Ministry of Communication
MODMR	Ministry of Disaster Management and Relief
MOE	Ministry of Education
MOEF	Ministry of Environment and Forest
MOF	Ministry of Food
MOFn	Ministry of Finance
MOFL	Ministry of Fisheries and Livestock
MOHFW	Ministry of Health and Family Welfare
MOI	Ministry of Information
MOIn	Ministry of Industry
MOL	Ministry of Law
MOLn	Ministry of Land
MOLGRD	Ministry of Local Govt., Rural Devt., and Cooperatives
MOP	Ministry of Planning
MOST	Ministry of Science and Technology
MOSW	Ministry of Social Welfare
MOWCA	Ministry of Women and Children Affairs
MOWR	Ministry of Water Resources
NARS	National Agricultural Research System
NEMAP	National Environment Management Action Plan
NGO	Non-government Organisation
NIPORT	National Institute of Population Research and Training
NIMCO	National Institute of Mass Communication
NMDP	Nutritional Message Dissemination Programme
NPAN	National Plan of Action for Nutrition
ODA	Overseas Development Agency
OMS	Open Market Sale
PCP	Project Concept Paper
PEM	Protein-energy Malnutrition
PFDS	Public Food Distribution System

PHC	Primary Health Care
PHL	Public Health Laboratory
PMED	Primary and Mass Education Division
RDA	Rural Development Academy
RHDC	Reproductive Health and Disease Control Programme
RMC	Rural Mother Centre
RMP	Rural Maintenance Programme
SEID	Socioeconomic Infrastructure Division
SIDA	Swedish International Development Agency
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Education Social and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VAC	Vitamin A Capsule
VGD	Vulnerable Group Development
VGF	Vulnerable Group Feeding
WB	World Bank
WES	Water and Environmental Sanitation
WFP	World Food Programme
WHO	World Health Organization
WID	Women in Development
WIF	Worldview International Foundation

BANGLADESH
NATIONAL PLAN OF ACTION FOR NUTRITION
(NPAN)

EXECUTIVE SUMMARY

BANGLADESH
NATIONAL PLAN OF ACTION FOR NUTRITION
(NPAN)

EXECUTIVE SUMMARY

Bangladesh is one of the 159 countries that participated in the International Conference on Nutrition (ICN) held in December, 1992 in Rome, organized jointly by FAO and WHO. The participating countries unanimously adopted a World Declaration and Plan of Action for Nutrition and pledged themselves to prepare a National Plan of Action Nutrition (NPAN) which would identify actions to be taken for eliminating hunger and reducing all forms of malnutrition.

To prepare this NPAN, the Government of the People's Republic of Bangladesh instituted a National Working Committee (NWC) with members from various Ministries under the Chairmanship of the Additional Secretary to Government of Bangladesh, Ministry of Health and Family Welfare. Bangladesh National Nutrition Council (BNNC) was assigned to coordinate all activities towards completion of NPAN. Joint Secretary (Public Health and Hospital), Ministry of Health and Family Welfare, was appointed as the National Focal Point for ICN follow-up activities. He was supported by the Focal Points of twelve other relevant Ministries and two Departments, which are as follows:

Ministries

- Health and Family Welfare
- Agriculture
- Food
- Fisheries and Livestock
- Environment and Forest
- Women and Children Affairs
- Social Welfare
- Disaster Management and Relief
- Local Government, Rural Development and Cooperatives
- Education
- Information
- Planning
- Finance

Departments

- Primary and Mass Education Division (PMED)
- NGO Affairs Bureau

In addition to the Bangladesh National Plan of Action for Nutrition (NPAN), it was decided that NPAN-related activities should lead to the production of an update of the Bangladesh Country Paper (BCP) for ICN, and a paper detailing the State of Nutrition in Bangladesh (SNB) - 1995.

A Working Sub-Committee consisting of experts in nutrition from various national and UN agencies was formed under the Chairmanship of the Director, Institute of Child and Mother Health (ICMH), Ministry of Health and Family Welfare to prepare the NPAN. The Sub-Committee formed two working sub-groups to facilitate its activities.

A series of meetings of the National Working Committee and the Sub-Committee and a major workshop with the Sectoral Focal Points were held to decide on the mechanism to be adopted for the preparation of the NPAN. To support and help the Government, FAO provided technical assistance through a UNDP-funded project and two national and two international consultants were involved in the preparations.

The NPAN provides a description of the existing nutrition situation, defines the policy goals, objectives and targets, outlines the strategies for implementation and provides the institutional framework for translating these plans into action. The Introduction (Chapter 1) describes the process by which the country has taken action relating to the development of the NPAN as follow-up to the December 1992 ICN meeting in Rome. Chapter two on the Existing Nutrition Situation provides the background to the situation and an assessment and analysis of the principal food and nutrition problems. Chapter three presents the goals and objectives of the NPAN. The goal of the NPAN is to improve the nutritional status of the people of Bangladesh to the extent that malnutrition would no longer be a public health problem by the year 2010. The objectives and targets of the NPAN are to:

- develop human resources in nutrition by building institutional capacity in policy making, training, research, and service to address the problems.
- empower the communities and households to understand the nutritional problems and, thereby, to take appropriate measures to address the problems.
- ensure food security to all household members: targets for increasing the consumption of particular foods and for reducing malnutrition are specified.
- ensure food safety and food quality.
- control infectious diseases and provide the required environmental support.
- protect, promote and support breastfeeding.
- ensure support for the socio-economically deprived and nutritionally vulnerable.
- reduce micronutrient deficiencies including nutritional anaemia, Vitamin A deficiency and iodine deficiency disorders (IDD).
- promote appropriate diets and healthy lifestyles.
- promote nutrition advocacy, education and community participation.
- ensure proper assessment, analysis and monitoring of the nutrition situation using surveillance and evaluation procedures.

Based on a comprehensive analysis of the existing situation and on current programmes, Chapter Four presents the strategic framework for NPAN implementation and provides the names of the coordinating ministries/organizations, indicates various actions and programmes that need to be undertaken, identifies the target population, the time frame (short/long term), and a series of outcome indicators by which the activities can be evaluated. Actions for attaining the goals and objectives of the NPAN are provided according to priority under each of the following themes which are considered as strategic elements for nutrition programmes:

1. Incorporating nutritional objectives, considerations and components into developmental policies and programmes.

   - Strengthening Bangladesh National Nutrition Council.
   - Strengthening the Executive Committee of the Council.
   - Formation of Working Groups in each Sector.
   - Field level infrastructure and support system.
   - Incorporation of nutritional objectives.
   - Updating the documents.
   - Preparation of food balance sheets and food composition tables.
   - Inclusion of nutrition in the curriculum at all levels.

2. Improving household food security.

   - Food production.
   - Food distribution.
   - Food preservation and processing.
   - Food fortification.
   - Supplementary feeding.
   - Food behaviour.

3. Food quality and food safety.

   - Food legislation and its enforcement.
   - Infrastructure development.
   - Education of the food industry and consumers.

4. Prevention and management of infectious diseases.

   1. Water and environmental sanitation.

      - Water quality.
      - Sanitation (latrines).
      - Garbage disposal.
      - Personal hygiene.
      - Education.
      - Use of animal waste.
      - Monitoring of industrial effluents.

2. Control, management and prevention of infectious diseases.

- Strengthen coverage of EPI.
- Better management of ARI.
- Better management of diarrhoea.
- Reduce worm infestation.
- Treatment of infections

5. Breastfeeding and complementary feeding.

1. Breastfeeding.

- Baby friendly hospital initiatives.
- Breastfeeding: exclusive for 6 months, continue for 2 years.
- Regulations on marketing of breast milk substitutes.
- Baby care centres/crèches.
- Maternity leave: legislation.

2. Complementary feeding.

- Creation of available resources for ideal complementary foods.
- Education and motivation for preparation of weaning foods.

6. Caring for the socio-economically deprived and nutritionally vulnerable.

- Support and strengthening the care-giving institutions.
- Information and KAP for the care-givers and the community.
- Delivery of facilities till grassroot level.
- Proper networking among supporting organisations.

7. Prevention and control of micronutrient deficiencies.

- Nutritional anaemia.
- Vitamin A deficiency.
- Iodine deficiency disorders.
- Other deficiencies.

8. Promotion of appropriate diets and healthy lifestyles.

- Generating awareness and right KAP
- Strengthening of institutions as well as manpower.
- Develop suitable strategic programmes involving the community.

9. Nutrition education, advocacy and community participation

- Institutional development from Union up to National level
- Human resource development from Ward up to National level
- Formation of a coordinating committee.
- Community participation.

Nutrition curriculum in educational institutions.

10. Assessment, analysis and monitoring of nutrition situation

    - Strengthening of BBS.
    - Formation of a central coordinating body.
    - Preparation of a comprehensive data base.

Finally, Chapter Five describes the Institutional Framework for translating these plans into action. Four steps are proposed:

1. Reorganisation and strengthening of the **Bangladesh National Nutrition Council (BNNC)** as the main body to develop the policy guidelines needed to achieve the goals of the NPAN and guide the country in the right direction.

2. **Intersectoral Steering Committee** to ensure participation of all Ministries in planning and coordinated implementation of the plan.

3. **Sectoral Working Groups** to implement the programmes through related agencies and organisations.

4. **Monitoring and evaluation** from the Ward level.

The NPAN document of Bangladesh is thus a comprehensive presentation of strategies that should be adopted with intersectoral coordination. The envisaged plans mention both short (2000) as well as long term (2010) strategies. It gives a clear indication of the sectoral responsibilities in relation to each theme along with strategic plans of action. Important projects and programmes that need to be strengthened and initiated have also been indicated. Lastly, the steps of implementation have also been given so that immediate adoption and execution of the plan is possible.

1. INTRODUCTION

Bangladesh, along with representatives from 158 other countries, met at the International Conference of Nutrition (ICN) which was held in December 1992 in Rome, Italy unanimously adopted the World Declaration and Plan of Action for Nutrition. At the ICN the Bangladesh team, headed by the Honourable Minister for Health and Family Welfare, presented the Bangladesh Country Paper (BCP) on nutrition to the conference.

To prepare the National Plan of Action for Nutrition (NPAN) as follow-up to the ICN, the government formed a National Working Committee with Additional Secretary, Ministry of Health and Family Welfare as its Chairperson. Bangladesh National Nutrition Council (BNNC) was assigned to coordinate the task. The National Committee entrusted the responsibilities for preparing the documentation to a working sub-committee for up-dating the BCP and the preparation of the NPAN. Through the support of a UNDP/FAO technical assistance project two national and two international consultants were appointed to help in the preparation of this document. As part of this process The State of Nutrition in Bangladesh (SNB), 1995, as well as an update of the Bangladesh Country Paper (BCP) were produced. The Bangladesh National Plan of Action for Nutrition was prepared in two phases, the first covering the goal, objectives, strategies and the framework of the plan and the second the sectoral inputs and implementation strategies were indicated.

This National Plan of Action for Nutrition is a comprehensive document highlighting the existing nutrition situation in the country; its goal, objectives and targets with a time frame and outcome indicators; a strategic framework for plan implementation based on analysis of the existing programmes; and an institutional framework for translating plans into actions with effective sectoral cooperation and coordination. In addition selected interventions and activities are proposed for implementation on priority basis.

Although the ICN had suggested nine themes that should be taken up while formulating the action plan, this NPAN includes ten themes which are:

1. Incorporating nutritional objectives, components and considerations into development policies and programmes.
2. Improving food security till household level.
3. Protecting consumers through improved food quality and food safety.
4. Preventing and managing infectious diseases.
5. Promoting breastfeeding and proper weaning practices.
6. Caring for the socio-economically deprived and nutritionally vulnerable.
7. Preventing and controlling specific micronutrient deficiencies.
8. Promoting appropriate diets and healthy lifestyle.
9. Promoting nutrition education, advocacy and community participation.
10. Assessing, analyzing and monitoring nutrition situation -- surveillance and evaluation.

To ensure inter-sectoral coordination, cooperation and support, the inputs of all the concerned sectors (Ministries and Departments) have been considered. The sectoral implementation strategies indicate the programmes and projects that need strengthening or initiation. The sectors covered include the following:

Ministries

- Health and Family Welfare
- Agriculture
- Food
- Fisheries and Livestock
- Environment and Forest
- Women and Children Affairs
- Social Welfare
- Disaster Management and Relief
- Local Government, Rural Development and Cooperatives
- Education
- Information
- Planning
- Finance

Departments

- Primary and Mass Education Division (PMED)
- NGO Affairs Bureau

Four steps are indicated as mechanisms of implementation of the various inter-sectoral nutrition programmes:

- Reorganization and strengthening of the Bangladesh National Nutrition Council (BNNC) for giving the policy guidelines
- Inter-sectoral Steering Committee
- Sectoral Working Groups (Task Forces)
- Monitoring and evaluation from the Ward level

2. EXISTING NUTRITION SITUATION

2.1. COUNTRY BACKGROUND

2.1.1. *Geography and Ecology*

Bangladesh is the largest delta in the world. Three major rivers - the Padma (downflow of the Ganges) flowing from the west, the Jamuna (downflow of the Brahmaputra) flowing from the north and the Meghna flowing from the north-east form this huge delta. The land lies between 21 and 26°N latitude and 88 and 93°E longitude, having a common border with India of 3715 km in the west, north and the east, a small border of 280 km with Mayanmar in the south-east, and the Bay of Bengal in the south. The coastal length along the Bay of Bengal is about 732 km.

Except for the highlands of Chittagong and Chittagong Hill Tracts in the south-east and parts of Sylhet and Mymensingh in the north-east, the entire country is comprised of alluvial flood-prone basin land of the three major rivers mentioned above and alluvial non-flood prone plains. Ecologically, the country thus has three different zones, namely the plain zone, the flood-prone zone and the hilly zone. Bangladesh is one of the monsoon lands in Asia. The yearly rainfall ranges from 120 to 240 cm with an average of 200 cm.

The alluvial soil deposits left by flood waters from the enormous rivers, coupled with abundant rainfall, provides the country a fertile agriculture base. About 75% of the total land area (13017 ha) is agriculture land and about 66% of the total population depends on agriculture directly or indirectly for earning their livelihood. Agriculture plays a vital role in the national economy contributing to around 35% of the GDP. Sixty percent of the export earnings of the country are obtained through this sector.

There are at present 6 administrative divisions (Dhaka, Rajshahi, Chittagong, Khulna, Barisal and Sylhet), 64 districts, 490 Thanas, 4451 unions, 59,990 mauzas, about 68,000 villages and about 20 million households. The average household size is 5.4 persons.

2.1.2. *Population*

The population and demographic characteristics in Bangladesh have undergone dramatic changes over the past few decades. The population in the area which now is Bangladesh was about 42 million in 1941. It increased rapidly to 76 million in 1974 to 90 million in 1981. According to the latest population census of 1991, the population of Bangladesh is 111.4 million (BBS 1992-93) which, with an area of 147,570 sq.km gives a population density of about 755 per sq.km, one of the highest in the world. The population growth rate peaked at 2.5 percent per annum in the mid 70's, and then decreased steadily to the current rate of 2.17% appearing to follow the rise in urbanization. About 80% of the total population live in rural areas and the remaining 20% live in urban areas. About 57.3 million

are males and 54.1 million are females; the male/female ratio is 106 for the country as a whole, with the ration of 102 in rural areas rising to 119 in urban areas. Under 5 year olds constitute 13.5% (11.7% urban and 13.7% rural) while children aged 5-9 years constitute 15.3% (13.1% urban and 15.6% rural) of the total population.

2.1.3. *Demography*

Demographically Bangladesh is in a transition phase where, despite the recent declines in fertility but the population growth rate is still high, causing adverse effects on development. The latest Bangladesh Demographic and Health Survey (BDHS) of 1993-94 shows that the fertility rate in Bangladesh is declining at an accelerating rate. The total fertility rate (TFR) was 6.3 in 1975, which slowly decreased to 4.3 in 1989-91 but then fell rapidly to 3.4 in 1991-93. The drop over the two year period 1989-91 and 1991-93 was 21%. This is the most dramatic drop in TFR ever achieved in Bangladesh. Mother's education is inversely related to TFR. Women with no formal education have TFR of 3.8, compared to 2.6 for women with some secondary education. Analysis of the latest Demographic and Health Survey (1993-94) confirms

The number of married women of reproductive age was 22 million in 1992. This number is projected to rise to 31 million by the year 2001. The total population in Bangladesh is projected to rise to 150 million by 2010. It may stabilize at 211 million by 2056 if the present success trend in programmes of family planning, maternal and child health and other socio-economic sectors can be sustained.

Despite the trend of higher maternal age at first birth, childbearing still begins quite early in Bangladesh. One in three teenage women (age 15-19) (i.e. 33%) is pregnant with first child or is already a mother. Again, teenage motherhood is more prevalent in rural (34.8%) than in urban areas (20.2%). Mother's education has a profound effect on this aspect: prevalence of teenage motherhood is 44.8% in women having no education, which is almost 3 times more than in women with at least secondary education (16.3%). Female education is thus a highly needed strategy for reducing teenage motherhood. The concept of a small family now appears to be accepted by Bangladeshi couples. More than half of ever-married women consider a two-child family ideal while another one-quarter think a three-child family ideal, as against only one percent willing to have six or more children.

2.1.4 *Resources and Economy*

Bangladesh is well endowed with human and material resources. It has a large civilian labour force, fertile land and enormous water resources. Also, it has forest, natural gas, coal, oil and other mineral resources. However, despite promising reserves of coal and oil, no coal has yet been mined and only a small quantity of oil (about 1800 barrels a day) is currently being produced.

During the past few years, there has been a positive trend in economic growth, with the per capita gross domestic product (GDP) increasing from Taka 6472 (US$ 161) in 1990 to Taka 10,789 (US$ 255) in 1995-96 (provisional) at the market price.

The agricultural sector continues to make the highest contribution to GDP (36.8% in 1991-92) compared to 10.1% for the industrial sector. While the sectoral contribution of industry increased to 11.0% in 1993-94, that in the agricultural sector slightly decreased to 34.9% over the same period.

The current annual growth rate of GDP is 4.6%, favourably approaching the target of 5.0% fixed for the Fourth Five-Year Plan (1990-95). The annual growth rate in agriculture sector was 2.2% in 1991-92 which decreased to 1.8% in 1993-94. This decrease was mainly due to fall in the production of crops.

Bangladesh's economy has been to a great extent dependent on foreign aid which provides around 40% of total government earnings. However, in recent years, foreign aid dependence showed a steady decreasing trend, from 45% in 1990 to 36% in 1993.

Prices of essential food commodities have increased by 2-4 times over the last decade. The lowest increase in price has been observed in case of rice while the highest increases were seen in the prices of pulses, fish and milk.

The major share of household income (over 85%) in the majority of households in Bangladesh is spent on food items, indicating very little opportunity to spend on other basic needs of life (i.e., health, education, housing, etc.). The highest expenditure is on cereals, while the lowest are on pulses, milk and fruits. It is, however, encouraging to note that there is a gradual increasing trend in household expenditure on meat, fish and vegetables with concomitant reduction on cereals. Expenditure on edible oil is declining which is undesirable given the prevalence of calorie deficiency in Bangladesh.

The percentage of functionally landless households has increased over the years from 1977 to 1993-94. The current landlessness rate is about 55%. However, the proportion of the population with no land has improved from 15.3% in 1977 to 3.5% in 1988-89. Conversely, the proportion of households with marginal landholding (land up to 0.49 acre) increased between 1977 and 1989 from 33.2% to 49.4%.

Per capita incomes have risen both in rural and in urban areas over the period 1983-84 to 1988-89. However, rural-urban disparity in income has widened over these years. The average per capita income in 1988-89 was higher in urban than in rural areas.

Despite some improvements, poverty persists at an alarming level in Bangladesh, particularly the state of hard-core poverty. About 45-50% of the population live in absolute poverty (energy intake < 2122 Kcal/person/day) and 20-25% live in hardcore poverty (energy intake < 1805 Kcal/person/day). In a recent survey conducted by the Planning Commission,

60.9% of the urban population live below the absolute poverty line (income less than Taka 3,500 per month) and 40.2% live below the hardcore poverty line (income less than Taka 2,500 per month). In Dhaka, the figures are 55% and 32% respectively.

The standard of living of the urban poor is precariously low. Housing conditions are appalling with many living in flimsy shacks (jhupri). In Dhaka, only 41% have access to sanitary toilets; the situation in small cities and towns is even worse. The street dwellers (estimated number in Dhaka about 11,500) are the poorest of the poor with an income of only Taka 1200 per month. Most of their income is spent on food. They enjoy hardly any utility services. They use open spaces and drains for defecation and cook their food on the street.

The nutritional indicator table from the Bangladesh Bureau of Statistics (BBS, 1995) estimates that per capita daily energy intakes for the rural population was 2267 Kcal and that of the urban population was 2258 KCal in 1991-92.

2.2 ASSESSMENT AND ANALYSIS *

PROBLEMS/ ISSUES	ASSESSMENT	ANALYSIS
2.2.1 Chronic Food Deficit	A downward trend in intake per person per day of cereals, pulses, vegetables, fruits, fish, meat, egg, milk & oil has been seen over the last few decades (1962/64 to 1992/93).	Overall food production in the country has increased over the last few decades, but the rate of increased production fell behind the rate of population growth. Other reasons for this are reduction in food aid, discrepancy in distribution, inappropriate storage facilities etc.
	Cereal (rice and wheat) intake has decreased from 528g to 465 g/person/day over the same period. Rice intake was 423 g/person/day in 1992-93 against the recommended intake of 454 g/person/day.	Decreased cultivable land due to river erosion, increased rate of urbanization, and splitting of extended family into nucleus family. Inadequate appropriate technology in agricultural sector. Inadequacy of good quality seeds, and other agricultural inputs. Loss of food due to natural and man-made calamities. Loss of food due to inadequate packaging, transport and storage facilities.
	Intake of white potato increased from 17 g in 1975-76 to 45 g/person/day in 1981-82, while the intake of sweet potato decreased from 18 g to only 8 g/person/day over the same period. Potato intake in 1992-93 was 42 g/person/day.	Emphasis is now given for crop diversification, one of the programmes of which is to produce and consume more potato to reduce pressure on rice. Sweet potato although rich in energy and vitamin A, is not considered as a food item of dignity.

PROBLEMS/ ISSUES	ASSESSMENT	ANALYSIS
	Intake of pulses has decreased from 28 g/person/day in 1962-64 to 14 g in 1992-93, as against a minimum recommended intake of 50 g/day.	Cereal production has been given the highest priority with inadequate emphasis on crop diversification for other essential nutrient-rich foods (e.g. pulses, nuts, and oils). Lack of HYV.
	Vegetable intake decreased from 142 g/person/day in 1962-64 to 57 g/person/day in 1992-93 (recommended intake 213 g/person/day) .	Great emphasis should be given in vegetable production and consumption at community and school levels to achieve the average adult requirement. Lack of use of unconventional and nutritious vegetables.
	Intake of fruits increased from 15 g to 34 g/person/day between 1962-64 and 1992-93 (recommended intake 56 g/person/day.	Emphasis is given for increased production and consumption of fruits and vegetables (crop diversification) is now given at the national level, but the efforts are still not enough. Great loss of seasonal fruits (e.g., mango, jackfruit, pineapple, etc.) due to improper harvesting, inadequate storage and preservation technologies, and transportation facilities.
	Total animal food intake almost remained the same at the level of 56-60 g/person/day between 1962-64 and 1992-93.	Despite increased growth in the fisheries and livestock sectors, the intake did not increase due to increase in population at the same rate. Lack of improved breed of livestock and vaccination facilities.
	Fish intake decreased from 27 g to 24 g/person/day between 1962-64 and 1991-92.	Enhanced production and accessibility needed.

PROBLEMS/ ISSUES	ASSESSMENT	ANALYSIS
	Intake of meat increased from 4 g to about 10 g/person/day between 1962-64 and 1992-93.	Intake of meat, egg, and milk is much less than the recommended level of intake.
	Egg intake has increased from 1.2 g to about 4 g/person/day between 1962-64 and 1992-93.	Livestock and poultry sectors had for long not received the attention and importance that they deserved. The situation has now begun to change to a positive direction through private sector poultry enterprises. High price and non availability of poultry feed.
	Milk consumption remained at the level of about 20-22 g/person/day during the same period.	Per capita availability of milk has decreased due to reduced production and higher price. Lack of diversified use, processing and preservation.
	Intake of edible fats and oils has remained at the level of 6-7 g/person/day between 1962-64 and 1992-93.	Present per capita consumption is only about 10% of the recommended amount. Per capita availability decreased, increased price hike and low purchasing ability. Lack of HYV.

PROBLEMS/ ISSUES	ASSESSMENT	ANALYSIS
2.2.2 Chronic Nutrient Deficiency	Energy intake has decreased from 2301 Kcal/person/day in 1962-64 to 1961 KCal/person/day in 1992-93.	Per capita availability of all kinds of food decreased proportionately hand in hand with the production-population imbalance. Lack of proper distribution of food.
	Protein intake has fallen from 58 g/person/day in 1962-64 to 52 g/person/day in 1992-93 (recommended intake 45 g/person/day).	Unequitable distribution of food, low purchasing capacity, ignorance and lack of nutrition education, wastage of food due to lack of transport and storage facilities.
	Intake of vitamin A decreased from 1590 IU to 1568 IU/person/day between 1962-64 and 1992-93 (recommended intake 2013 IU/person/day).	Low per capita availability. Loss of fruits and vegetables due to lack of proper post/harvest processing and storage.
	Calculated dietary iron intake increased from 10 mg to 22 mg/person/day between 1962-64 and 1991-92 (average recommended intake 15 mg/person/day).	Decreased bio-availability due to the plants being the major source of iron in the diet.
	Per capita iodine intake is about 10 mcg/day (recommended intake 150-200 mcg/day).	Low iodine content in soil, food and water.
	Per capita daily vitamin C intake decreased from 48 mg to 13 mg (recommended intake 26 mg/person/day).	Decreased production and availability of fruits. Faulty cooking practices.

PROBLEMS/ ISSUES	ASSESSMENT	ANALYSIS
2.2.3. Protein-Energy Malnutrition (PEM)	A vast majority of the total population particularly children and mothers suffer from protein-energy malnutrition.	Inadequate food, compounded by inadequate health care, poor hygiene, and unhealthy environment.
Malnutrition in Children aged less than 5 years	Only 6.2% of the under five children in Bangladesh are normally nourished. Remaining 93.8% are suffering from different grades of malnutrition. Percentage of mildly malnourished children has increased from 28.8% in 1981-82 to 39.8% in 1991-92. Percentage of moderately malnourished children remained almost the same during this period (46.1%-47.2%). MUAC: Percentage of children having MUAC less than 12.5 cm was 11% in 1990 which dropped to 10% in 1994. Stunting: in 1992, 46 % under five children were stunted (height-for-age less than 90% of NCHS median) compared to 44 % in 1981-82. Wasting: in 1992, 7 % children were wasted (weight-for-height less than 80% of NCHS median).	Gap in dietary energy is the major cause. Diet deficient in energy-dense items such as oil. Traditional food habits (preparation and eating) resulting in loss of essential nutrients (e.g., discarding water after cooking rice, overcooking of vegetables with lots of spices, etc.). Faulty intra-household food distribution pattern (e.g., mother eating last and mostly the least). Large scale adulteration of food items (e.g., cooking oil) causing health hazards and malnutrition. Faulty weaning (complementary feeding) practices. Frequent attacks of diarrhoea and other infections. Infection e.g. frequent attacks of diarrhoeal diseases, ARI, measles, pertussis, tuberculosis etc.

PROBLEMS/ ISSUES	ASSESSMENT	ANALYSIS
Gender Differential	In 1981-82, girls were more severely malnourished (22.6%) than the boys (8.0%) and the percentage of normally nourished girls was 5.7% compared to 14.1% for boys.	Culturally, girls are often neglected in the family for not being potential future earner. Current practice of intra household food distribution often favours the males over the females. Lack of education and motivation to family.
	In 1991-92, the percentages of girls and boys suffering from various degrees of malnutrition were almost the same (e.g. severely malnourished girls 7.4%; severely malnourished boys 6.3%.	The situation is improving due to nation wide campaign by both government and NGOs.
Rural-Urban Differential	In 1991-92, higher proportion of the rural children suffered from severe (7.2%) and moderate (48.3%) malnutrition compared to the urban children (4.3% and 38.7%, respectively). Similarly, in 1991-92, 13.2% of the rural children had MUAC less than 12.5 cm, i.e. severely malnourished, compared to 8.4% of urban children.	Rapid urbanization, creating job/work opportunities in cities and townships. Migration of rural people to the cities. Relatively no development and industrialization in the rural areas. Poor income most of the year and absolute joblessness in certain months (July-September).
Age Differential	Both wasting and stunting are highest in the age group 12-23 months; wasting declines after that but stunting stays at the same level.	Continued breastfeeding not done due to the arrival of a new member in the family. As the child grows older he/she can feed himself/herself by all possible means. Inadequate knowledge and caring practices.

PROBLEMS/ ISSUES	ASSESSMENT	ANALYSIS
Infant Mortality	In 1990, infant mortality rate (IMR) was 94 per 1000 live births which dropped to 77 per 1000 live births in 1994 (79 in urban and 58 in rural areas).	Low-birth-weight (LBW) is a strong determinant of infant mortality. Frequent morbidity ultimately leads to death. IMR and CMR decreased in recent times due to improved health care facilities, e.g., immunization, more access to safe drinking water.
Child Mortality	Child mortality rate (CMR) in 1990 was 151 per 1000 live births which dropped to 137 in 1994 (146 in rural and 80 in urban areas).	The recent improvement in IMR and CMR is visualized as due to intensification of nation-wide immunization (e.g. EPI) and other child survival programmes both by the government and NGOs.
2.2.4 **Breastfeeding Problems**	Colostrum rejection is common (60-90%) in Bangladesh. Exclusive breastfeeding is only 4% (i.e. almost non-existent). Complementary food is given to 100% babies at 1-12 weeks. Bottle feeding is practiced in 59% among the hospitalized malnourished children. 90% of the urban mothers use bottle for supplementary feeding. Prelacteal food is given to 100% of infants.	Lack of information concerning the benefits of colostrum and breastfeeding. Promotion of breast milk substitute (BMS) through advertisement and widespread marketing. Artificial feeding practices in hospitals and clinics. Inadequate training on breast feeding practices to all level of health personnel. Change in cultural practices.
2.2.5 **Complementary Feeding Problems**	Proper weaning at proper time (5 months) is lacking. Mean age of introducing solid food ranges from 12-13.5 months. 18% of slum infants receive additional foods in the first month and 47% by the 3rd month of life. Weaning food is usually lacking in adequate energy and protein density. Unhygienic weaning practice leads to intercurrent infections.	Food taboos and false beliefs. Lack of information and education concerning proper weaning practices. Low purchasing capacity. Promotion of breast milk substitutes through advertisement and widespread marketing. Lack of appropriate weaning time and food.

PROBLEMS/ ISSUES	ASSESSMENT	ANALYSIS
2.2.6 **Maternal Malnutrition**	Mean weight and height of non-pregnant women are 39 kg (range 32-48 Kg) and 148 cm (range 135-157 cm). Mean MUAC of non-pregnant women is 21.2 cm (range 18.6 cm to 25.8 cm). Loss in mother's body weight per child birth is estimated to be 1 kg . 74% of adult women and 80% of pregnant and lactating mothers suffer from anaemia (Hb < 11 g/dl blood). The haematocrit value (Hct %) is 35.9% at beginning of pregnancy which decreases to 30.0% at full term. 25% of non-pregnant slum mothers suffer from undernutrition (BMI < 17). Weight gain during pregnancy is 4.7 kg in rural mothers and 5.7 kg in urban mothers. Percentage of mothers suffering from severe undernutrition (BMI < 16) is 10.6% in urban slums compared to 8.4% in rural areas.	Social discrimination favouring male more than female. Physical and mental stress. Intra family food distribution favouring both the male adult and the male child Inadequate food intake during pregnancy. Food taboos during pregnancy and lactation. Intake of animal food which is rich in iron and protein is poor during pregnancy and after childbirth. Child spacing not done. Urban mothers are somewhat better off than the rural mothers in terms of income, decision making and food intake. The magnitude of urban poverty is increasing alarmingly with the migration of rural poor to the urban cities.
2.2.7 **Low Birth Weight (LBW)**	Mean birth weight in both rural and urban areas is 2.7 kg. 37-41% babies born in rural areas are of low birth weight (< 2500 g) as against 23-27% babies in urban areas. In urban slums, 39% babies are of low birth weight. 74% of LBW babies are born to adolescent mothers. 84% of LBW babies are small-for-date and the rest are pre-term babies.	Iodine deficiency during pregnancy. Infection of the mother during pregnancy. Teenage pregnancy Heavy physical work load during pregnancy. Stress syndrome - Physical - Psychological Again, urban mothers are better off than the rural mothers in nutrition during pregnancy, although the magnitude of urban poverty is increasing alarmingly with the migration of rural poor to the urban cities. Lack of balanced diet during pregnancy.

PROBLEMS/ ISSUES	ASSESSMENT	ANALYSIS
2.2.8. Micronutrient Deficiencies	Over 60% of population in Bangladesh suffer from deficiency of one or more of the micronutrients (particularly iron deficiency and iodine deficiency). Vitamin A deficiency is also wide spread in the country.	Micronutrient deficiencies in Bangladesh accompany protein-energy malnutrition due to acute and chronic food shortages and faulty dietary habits and practices.
Anaemia	74% of adult females, 80% of pregnant and lactating mothers, 73% of under five children, and about 40% of adult males suffer from iron deficiency anaemia. Among the children aged 5-14 years, boys suffer more (74%) from anaemia than the girls of the same age (63%).	Decreased bio-availability of iron and decreased intake of vitamin A, C, folate and protein rich foods. Hookworm infestation and other infections Perhaps boys are more exposed to parasitic infestation due to their wider mobility compared to the girls of same age.
Vitamin A Deficiency	1.78% of children aged between 6-71 months in 1989 were suffering from night-blindness compared to 3.6% in 1982-83. This is still well above the WHO cut-off point (1.0%) for a major public health problem. In 1989, 1.59% boys compared to 1.97% girls of the above age group were suffering from night-blindness. More than a million children have visible signs of vitamin A deficiency. About half a million suffer from night-blindness. Around 30,000 children go blind every year due to chronic vitamin A deficiency and almost half of them die within a year of becoming blind.	There are much higher levels of production and consumption of cereal crops (mainly rice) compared to horticultural crops (vegetables, fruits, etc.) Less intake of vitamin A rich food. Rejection of colostrum. Less fat (oil) intake which is essential for Vitamin A absorption. Boys have greater access to naturally grown vitamin A rich fruits due their wider mobility compared to traditionally lesser mobility of the girls. Vitamin A rich fruits and vegetables are not available throughout the year. On average, 1.61% population aged 6 years and above suffer from night-blindness. Vitamin A deficiency is prevalent not only in children age 6-71 months, but also in older population.
Vitamin A Capsule (VAC) Coverage	VAC coverage among children aged 12-71 months has increased to 74% in urban areas and 85% in rural areas.	VAC distribution programme intensified by Government and NGOs.

PROBLEMS/ ISSUES	ASSESSMENT	ANALYSIS
Iodine Deficiency Disorders (IDD)	69% of the population in Bangladesh are deficient in iodine. 47% have goitre of which 9% have visible goitre. 53% of girls aged 5-11 years and 56% of women aged 15-44 years have goitre. 500,000 persons in Bangladesh are mentally retarded due to iodine deficiency in early life.. 100% of the population in Bangladesh are feared to be at risk of iodine deficiency disorder. An estimated 250 million IQ points are at risk of being lost permanently due to iodine deficiency.	Low iodine intake is the major cause of IDD which is the result of very low iodine content in soil, food and water. This is due to continuous leaching of the soil off iodine caused by heavy rainfall and recurrent flooding. Physiological demand for thyroxin (and therefore of iodine) is higher in females than in males. Crops grown in such iodine deficient soil usually contains less iodine. Iodine deficiency in foetal and post natal life impairs brain growth and development leading to mental retardation and improper functioning of the brain.
Iodised Salt Coverage	Over 90% of the total salt produced in Bangladesh for human consumption is now iodised. However, the iodine level is not regularly monitored. Also, percentage of population taking iodised salt is to be ascertained.	Increased sensitization among policy makers about IDD. Activation of salt iodation programme of BSCIC. Increased motivation of the general public in favour of more use of iodised salt. Implementation of the law is not fully satisfactory.

PROBLEMS/ ISSUES	ASSESSMENT	ANALYSIS
Other micro-nutrient deficiencies	In addition to the micronutrient deficiencies mentioned above concern is growing about deficiencies of other important micronutrients (e.g. riboflavin, vitamin C, vitamin D, zinc).	Chronic food deficit coupled with poverty and illiteracy leads to deficiencies of a wide spectrum of nutrient deficiencies.
Riboflavin Deficiency	The average daily intake of riboflavin (0.68mg) meets only 50% of the requirement.	Poor intake of food containing riboflavin e.g. milk, green vegetables, fruits, fish and meat.
Vitamin C Deficiency	The intake of Vitamin-C (13 mg) meets only 26% of the requirement.	Poor intake of food containing vitamin-C e.g. fruits and vegetables
Vitamin D Deficiency	Nutritional rickets are not common in Bangladesh, but recently some pockets have been identified, such as, Chokoria in Co..'s Bazar where rickets in children is seen in endemic form.	Etiology is not known. Investigation is in progress.
Zinc Deficiency	Bangladesh soil is reported to be deficient in zinc.	Soil is zinc deficient due to heavy rain and recurrent flooding. Poor intake of foods containing zinc (meat, fish and milk).
Other Nutrition Related Diseases	In Bangladesh, diseases are prevalent which are not due to dietary deficiency but due to overconsumption of food items rich in sugar, fats and oil. Some diseases occur due to toxins present in certain food items, e.g., lathyrism	Associated to dietary habits and unhealthy lifestyles. Over consumption of *Khesari* which contains a neurotoxin.

* Source: Bangladesh Bureau of Statistics, Ministry of Planning, GOB, 1995.

3. GOALS, OBJECTIVES AND TARGETS

The high rates of widespread malnutrition in Bangladesh needs immediate attention. The situation is unacceptable and the Government of the People's Republic of Bangladesh is determined to take immediate and urgent action to arrest and reverse the situation. In this process the National Plan of Action for Nutrition is a tool for achieving this objective. It is important that realistic goals are defined, specific objectives formulated with indicators identified for measuring if success has been achieved in reaching the targets set.

3.1 GOAL

The goal of the NPAN is to improve the nutritional status of the people of Bangladesh to the extent that malnutrition would no longer be a public health problem by the year 2010, thereby, improving the quality of life.

3.2 OBJECTIVES AND TARGETS

The objectives of NPAN are outlined below. Targets are mentioned where appropriate.

1. To develop human resources in nutrition by strengthening institutional capacity in the area of policy making, training, research and the provision of services

2. To empower the communities and households to understand the nutritional problems and thereby to take appropriate measures to address the problems

3. To ensure food security to all household members:

   (a) Enhance intake (consumption targets):

   - Increase energy intake to 2150 Kcal per person per day.
   - Pregnant and lactating mothers to take an extra 300 Kcal of energy per day
   - Protein intakes from plants and animals of at least 45 g per person per day
   - Increase oil intake to 20 g per person per day
   - Increase pulse intake to 50 g per person per day
   - Increase vegetable intake to 213 g per person per day
   - Increase fruit intake to 56 g per person per day
   - Increase animal food intake to an appropriate level.
   - Ensure availability of enough calories for the economically deprived and nutritionally vulnerable

Indicators are to be developed for different groups of population to assess impact.

(b) Reduce energy-protein malnutrition (EPM):

- Reduce the prevalence of low birth weight to 20% by 2000 and to less than 5% by 2010.
- Reduce severe and moderate EPM (weight for age) in under-two children: severe EPM to 3% by 2000 and to <1% by 2010; and moderate PEM to 25% by 2000 and <10% by 2010
- Restore growth rate in under-two children: 50% children by 2000; and 80% by 2010
- Reduce EPM in under-five children: wasting to 4% (by 2000) and <1% by 2010; and stunting to 25% by 2000 and to <10% by 2010
- Reduce severe malnutrition in women (BMI <16) to 5% by 2000 and to <1% by 2010
- Ensure adequate nutrition support to adolescent girls and elderly population

4. To ensure food safety and food quality:

(a) Assess existing food and water qualities in special groups, viz., street food, processed food, etc

(b) Ensure adoption and implementation of the revised food law along with enforcement

5. To control infectious diseases and provide the required environmental support:

(a) To increase ORT use rate (to indicate the diarrhoea control status) to 96% by the year 2000

(b) To reduce hookworm infestation rate to 5 % by the year 2000 and to <1% by the year 2010

(c) To provide potable water to at least 90% of the population by the year 2000 and to 100% by the year 2010

(d) To ensure sanitation facilities to 80% population by the year 2000 and 100% by the year 2010

(e) To sustain EPI success and increase the coverage to 100% by the year 2000

(f) To ensure better management of ARI and reduce case fatality - reduce death by 1/3 by the year 2000 and by 3/4 by the year 2010

6. To protect, promote and support breastfeeding:

   (a) To empower all women to breastfeed their children exclusively for 6 months and to continue breastfeeding well into the second year supported by home made energy dense complementary food

   (b) To exclusively breastfeed all infants by 80% mothers by 2000; and 95% mothers by 2010

   (c) To transform 100% maternity service providing hospitals into baby friendly by 2000

7. To ensure support for the socio-economically deprived and nutritionally vulnerable

8. To reduce micronutrient deficiencies:

   (a) Nutritional anaemia:
   - To reduce the prevalence of anaemia in women of reproductive age group to 50% by 2000; and 25% by 2010
   - To reduce the prevalence of anaemia in under-five children to 50% by 2000; and 25% by 2010

   (b) Vitamin A deficiency:
   - To reduce the prevalence of night-blindness in children aged 6-71 months to $<1\%$ by 2000; and to eliminate by 2010

   (c) Iodine deficiency disorders (IDD):
   - To reduce the prevalence of goitre in the entire population to 25% by 2000; and $<10\%$ by 2010
   - To iodise all edible salt by the year 1996

9. To promote appropriate diets and healthy lifestyles

10. To promote nutrition advocacy, education and community participation

11. To assess, analyses and monitor the nutrition situation

4. STRATEGIC FRAMEWORK FOR PLAN IMPLEMENTATION

The success of achieving the objectives of the NPAN depends on two closely related issues:

- ensuring the sectoral inputs for various supportive programmes; and
- inter-sectoral coordination to make it most effective and focused.

In this chapter, these two issues are discussed under following ten major themes, which are considered as strategic elements for nutrition programmes.

1. Incorporating nutritional objectives, components and considerations into development policies and programmes.
2. Improving household food security.
3. Protecting consumers through improved food quality and food safety.
4. Preventing and managing infectious diseases.
5. Promoting breast feeding and proper weaning practices.
6. Caring for the socio-economically deprived and nutritionally vulnerable.
7. Preventing and controlling specific micronutrient deficiencies.
8. Promoting appropriate diets and healthy lifestyle.
9. Promoting nutrition education, advocacy and community participation.
10. Assessing, analyzing and monitoring nutrition situation.

Under each theme details of on-going programmes and an analysis of the situation is provided, the sectors involved are identified, the strategic framework and action plan described and selected interventions are proposed.

The success of any developmental programme is dependent on the socio-economic status of the country and therefore the existing socioeconomic status and various on-going programmes are briefly discussed. This is important, not only for creating better linkages between the sectors, but to ensure most the effective utilization of all existing resources in a properly timed and targeted manner.

Bangladesh has frequently undergone traumatic experiences like war, natural disasters, political instability at the same time as experiencing high growth rate in population, unemployment and poverty. Despite improvements in the economy, Bangladesh is classified as a least developed country (LDC) because of these negative impacts. The present per capita

gross domestic product (GDP) is Tk. 10,789 (US$ 255) (BBS 1995-96) (provisional). In response to these conditions the country has had to improvise and create various types of supportive programmes, specially linked to economic development and poverty alleviation.

For reducing malnutrition and achieving full physical and mental growth, the important basic and underlying causes as follows are to be considered to be addressed:

- Poverty alleviation.
- Agricultural and food based interventions.
- Safe water and sanitation.
- Improved literacy.
- Empowerment in the developmental process.
- Child spacing and child caring practices.

A coordinated inter-sectoral approach with people's participation are the two most important factors which can make the strategies feasible and viable to achieve the goal, as envisaged in the NPAN.

Poverty alleviation has been a top priority of the Government of Bangladesh. The country has a number of poverty alleviation programmes being supported by GOB and various UN and foreign assisted programmes (WFP, ILO, UNDP, FAO, UNICEF, ADB, WB, ODA, CIDA, SIDA, NOVIB, NORAD, Aga Khan Foundation, USAID, CARE and others), which are approved by the Bangladesh Planning Commission and implemented by various government departments and agencies as well as NGOs. These programmes include:

- Rural maintenance programme (RMP)
- Poverty eradication programme
- Rural development programme coordinated by WFP
- Food for work
- Rural women employment creation programme
- NGO-community based programme for poor women and children
- Rural women development programme
- Vulnerable Group Development Programme coordinated by WFP
- Women vocational training for population activities
- Assetless women development programme
- Technology transfer programme for employment generation for rural women
- Technical assistance for women agriculture training centre
- Urban based women development programme
- Urban community development programme
- Use of rural mother centres (RMC) for population activities
- Rural social service programme
- Rural development project - 8
- Development of small irrigation projects
- Poverty alleviation programmes through NGOs
- Children in especially difficult circumstances (CEDC)

Although the country is well aware of the policy reforms needed for development, more coordination among the various programmes, supported by properly designed approaches would definitely lead to better outcomes. Measurable indicators which specifically monitor nutritional status should be in-built into such programmes to evaluate and monitor the ultimate achievement and highlight the gaps to formulate future action strategies.

SECTORS INVOLVED

The various sectors which have a significant contribution, directly or indirectly towards achieving the objectives and targets of the NPAN are identified as follows:

1. Health and Family Welfare
2. Agriculture
3. Food
4. Fisheries and Livestock
5. Environment and Forest
6. Women and Children Affairs
7. Social Welfare
8. Disaster Management and Relief
9. Local Government, Rural Development and Cooperatives
10. Education
11. Primary and Mass Education
12. Information
13. Science and Technology
14. Planning
15. Finance
16. Various UN Agencies like FAO, WHO, UNICEF, UNDP, WFP, WB, ODA
17. Non-governmental Organizations (NGOs)

The Planning Commission has the critical role of supporting and Bangladesh National Nutrition Council of coordinating action among the various sectoral inputs.

4.1 INCORPORATING NUTRITIONAL OBJECTIVES, CONSIDERATIONS AND COMPONENTS INTO DEVELOPMENT POLICIES AND PROGRAMMES

The incorporation of nutritional objectives, considerations and components into development policies and programmes of the country is the first major step for ensuring proper planning, and successful implementation of all programmes. This is essential for ensuring significant improvement in the nutritional status of the population for economic growth and development; structural adjustment; food and agricultural production, processing, storage and marketing of food; health care; education and social development. Issues that need to be covered individually are administrative, institutional as well as human resource development.

4.1.1 *On-going programmes and situation analysis*

The major steps already initiated by the government of Bangladesh as a follow-up action of the ICN include the following:

1. Strengthening the already existing Bangladesh National Nutrition Council (BNNC) by reconstituting the Council with the Prime Minister in the Chair and the Ministers of all concerned Ministries as members.

2. Preparation of a document on State of Nutrition in Bangladesh, 1995 subsequent to the formulation of the Bangladesh National Plan of Action for Nutrition (NPAN).

3. Initiation of an integrated nutrition programme as Bangladesh Integrated Nutrition Project (BINP) financed by World Bank.

4. Strengthening of Bangladesh Institute of Research and Training on Applied Nutrition (BIRTAN) to incorporate nutritional objectives and considerations in the Agriculture Sector.

5. Several issue-based projects, details of which are provided under the section on "Ongoing Programmes".

Analysis of the existing situation indicates the following gaps which need special attention when drawing up future programmes:

- Nutritional objectives need to be incorporated in all related programmes.
- A coordinated approach in policy planning is needed.
- Sectoral programmes should be linked.
- Implementation mechanisms need to be clearly indicated.
- All important strategies need to be carefully considered.
- Impact assessment needs to be done at the grassroots level.

4.1.2 *Sectors involved*

The sectors and agencies involved are as follows:

- All Ministries concerned.

- UN agencies and donor agencies viz., FAO of the United Nations, UNICEF, WFP, UNESCO, WB, WHO, USAID and others.

- NGOs.

4.1.3 *Strategic framework*

1. **To incorporate nutritional objectives, considerations and components into development policies and programmes including human resource development, capacity building and empowerment of communities and individuals:**

   - Ensure inter-sectoral coordination for policy planning by involving the highest level government support for the nodal coordinating agency.
   - Creation of an Inter-sectoral Steering Committee and specific working groups under each sector to fulfill the nutritional objectives.
   - Analysis of macro-level policies by involving National and Regional level research institutions and Universities.
   - Collection, analysis and creation of a data base at the district level for micro-level planning.
   - Establishment of nutritional impact assessment procedures in the formulation and implementation of development projects and programmes.

Sr. No.	Actions	Agencies Concerned	Target	Time Frame
4.1.3.1	Strengthening and restructuring of **Bangladesh National Nutrition Council** (already formed).	MOP, MOHFW, MOA, MOFL, MOF, MOEF, MOSW, MOL, MOLGRD, MOI, MOWCA, MOIn, MOE, MOF, MOC, MOST , MODMR, NGO	1. Ensure highest level commitment and support. 2. Cooperation and coordination from the highest level of all the concerned sectors.	Immediate

Sr. No.	Actions	Agencies Concerned	Target	Time Frame
4.1.3.2	Strengthening of the **Executive Committee** of the Council.	As above	Highest level inter-sectoral coordination for policies and planning.	Immediate
4.1.3.3	Formation of **Working Groups** (restructuring and strengthening of the technical committee) under each sector.	As above	Preparation of sectoral action plan in line with nutritional objectives and ensuring implementation of the plan.	Immediate
4.1.3.4	**Field level** infrastructure and support system.	MOP, MOHFW, MOA, MOFL, MOF, MOEF, MOSW, MOL, MOLGRD, MOI, MOWCA, MOIn, MOE, MOF, MOC, MOST, MODMR, NGO	1. To implement the actions till the Ward level. 2. Coordinate and cooperate with the working groups, steering committee and the national nutrition committee for monitoring and evaluation.	Immediate
4.1.3.5	**Incorporation** of nutritional objectives in all the existing sectors	As above	All projects and programmes of the country.	Immediate
4.1.3.6	**Up-dating** the documents on nutritional status.	As above	All relevant documents	Immediate
4.1.3.7	Preparation of **food balance sheet** and **food composition table.**	**MOF, MOA,** MOHFW, MOE, MOA, MOST	All major foods grown	Immediate
4.1.3.8	Inclusion of **nutrition curriculum** at all levels.	MOE, PMED, MOI	All population	Immediate

4.1.4 *Action plan*

1. Development of an inter-sectoral strategy for implementation of the NPAN:

   - Bangladesh National Nutrition Council
   - Inter-sectoral Steering Committee
   - Sectoral Working Groups
   - Union level networking

2. Macro-level policies - involvement of agencies and institutions.

3. Micro-level planning at District, Thana and Ward levels.

4. Strengthening the activities of the nodal agency responsible for creating the nutritional database and implementing the supportive programmes at the central level along with networking at the District, Thana, Union and Ward levels involving the MIS of the MOHFW. Developing a workable and effective coordinating mechanism (agency) between Sectors by ensuring the involvement of the Government at the highest level. A senior Government officer of one of the nodal sectors may act as the Member Secretary to the already existing BNNC being chaired by the Hon. Prime Minister to oversee and plan various activities.

5. Conducting regular surveys (every five years to coincide with the cycle of the national development plan) to up-date the data base on the nutritional status of the country down to Ward level. Nutrition surveillance data being generated by various organizations will be taken into consideration at this time.

6. Avoid duplication of nutrition programmes and activities, strengthen mutually supportive projects and coordinate planing for maximizing nutritional benefits in a most cost effective manner, convene inter-sectoral meetings on a regular basis.

7. Involvement of women at policy making and implementation levels.

8. Ensuring nutrition education, advocacy, motivation and training at all levels highlighting its importance to the planners, administrators and all concerned.

9. Food balance sheet and food composition tables to be produced for providing dietary guidelines to the researchers, planners, and implementors.

10. Inclusion of nutrition in the curriculum in educational institutions.

11. Nutritional indicators to be developed and included in all programmes.

12. Assessment of financial and resource needs by each sector for contributing to the improvement of the nutritional resources with built in mechanism for accountability.

4.1.5 *Proposed interventions*

The following interventions are suggested in order of priority.

1. Formulation of food and nutrition policies and programmes to improve nutritional status. Policies and programmes should be well targeted and implemented with good inter-sectoral coordination.

2. Strengthen the nodal agency/committee for coordinating activities amongst the different sectors, advise the Government on related issues and implement the NPAN. The highest policy making body should give clear recommendations. Necessary technical support has to be provided for this.

3. Workshops and training needed for human resource development (HRD).

4. Development of special policies and programmes, particularly on food security issues, targeted towards women and nutritionally vulnerable and socio-economically deprived population groups and those in distress. Studies will be made to identify such groups. This will include time required and energy expenditures for physical labour (agriculture work, water/feed/fodder collection etc.), other physical activity and morbidity, etc. to calculate actual energy requirement per person.

4.2 IMPROVING HOUSEHOLD FOOD SECURITY

Food security is defined in its most basic form as access by all people at all times to the food needed for a healthy life. To achieve food security, three major aspects need to be highlighted. The first is availability of safe and nutritionally adequate supply of food at both national and household levels. Secondly, there has to be a reasonable stability in the supply of food spatially and seasonally. Thirdly each household should have physical, social and economic access to sufficient, safe and good-quality food to satisfy its needs.

4.2.1 *On-going programmes and situation analysis*

Major on-going programmes are presented in the table presented below. Supportive programmes include:

1. Strengthening of plant protection.
2. Food for work.
3. Food for education.
4. Vulnerable group development programme.
5. Post harvest handling, processing and preservation of food stuffs.
6. Support to master plan for the forestry sector (FAO).
7. Soil fertility and fertilizer management project.
8. Strengthening of central extension resources development institute,

9. Marginal and small farm system intensification project.
10. Coconut development project.
11. Agriculture development in Southern regions.
12. Seed development project.
13. Strengthening of national vegetable production programme.
14. Establishment of regional duck hatchery.
15. Extension of animal health management project.
16. Conversion of dairy farms into breeding farms.
17. Poultry research and development.
18. Duck-weed research project.
19. Third fisheries project.
20. North-west aquaculture development project.
21. Development of Kaptai fisheries.
22. NGO-supported income generating and food production projects.
23. Integrated resource development of the Sundarbans reserved forests (FAO).

Analysis of the existing situation indicates special attention is required on the following:

- Household food security.
- Nutritional considerations in existing programmes.
- Linkage of food security to poverty alleviation programmes.
- Food diversification.
- Food security for urban poor.
- Accessibility to food at household and individual levels.
- Local food preservation facilities and technologies.
- Balanced diet.
- Research and development activities to increase food production.

On-going major programmes and projects of the country (Theme-2)

Sl. No.	Project	Actions	Agency Concerned	Donors	Coverage	Duration
1.	Thana cereal technology transfer and identification project.(TCTTI)	- Technology transfer as block demonstrations in irrigated areas. - Use and management of irrigation water. - Increased cropping intensity and land saving agronomy. - Use of agro -inputs for correction of multinutrient deficiencies. - Increased coverage of high-yielding varieties. - IPM - Integrated nutrient management. - Quality seed production and storage. - Income generation for farm women. - Research on germplasm. - Better linkages between research and extension.	MoA/DAE	FAO	Divisional Headquarters	1995-2000
2.	Integrated pest management (IPM)	- Support govt.'s accelerated cereal production. - Increase farm outputs and yields.	MoA/DAE	FAO	120 Thanas	1995-2000
3.	Crop diversification programme (CDP)	**Increase pulse production** - Demonstration farms/plot building. - Seed distribution. **Increase oil seeds production** - mustard. - Soybean. - Sunflower **Increase white potato production** - Demonstration plots - Technology transfer	MoA/DAE	GOB	59 Districts 48 Districts 18 Districts 12 Districts 40 Districts	1995-2000

SL. NO.	PROJECT	ACTIONS	AGENCY CONCERNED	DONORS	COVERAGE	DURATION
4.	Agricultural support services project (ASSP)	- Strengthening DAE · Farmer information need assessment. · Planning and implementation. · Monitoring and evaluation. · Training and management. - Strengthening homestead production. · Support homestead technology development. - Seed industry, research and training.	DAE	WB, ODA, GOB	National	1991-98
5.	Livestock development project for small and marginal farmers	- Training. - Credit. - Chick rearing. - Research.	MoFL/DLS, BLRI, NGO	IFAD	80 Thanas	present-1998
6.	Utilization of AEZ database and installation of GIS for agricultural development.	- Development of national updated agricultural development planning information system. - Development of manpower.	MoA	FAO	225 end-users	1995-2000

Sl. No.	Project	Actions	Agency Concerned	Donors	Coverage	Duration
7.	Strengthening of national vegetable seed production programme through increased participation of private sector.	- Improved supply of vegetable seed. - Support to private companies.	BARI, BADC, NGOs, Private companies	FAO	National	1996-2001
8.	Bangladesh Horticulture Research and Development Project	- Development of fruits, vegetables and spice crops. - Diversify cropping pattern. - Increase rural employment and income.	BARI, DAE, BADC	FAO	National	1992-1996
9.	Strengthening of rural pond fish culture extension services.	- Increase fish culture production in rural areas. - Enhance fish production in aquaculture sector.	MoFL/DOF	FAO	3000 farmers	1994-1996
10.	Thana afforestation and nursery development	- Upgrade and expand the capacity of forest department and Thana Parishads.	MoEF	FAO	61 Districts	1990-1995
11.	Establishment of dairy and cattle development	- Farm development	MoFL/DLS	GOB, ADB	3 Districts (Barisal, Chittagong & Bogra	On-going
12.	Second aquaculture development project	- Demonstration plot. - Fry release in open water. - Training.	MoFL/DOF	ADB	Eastern zone	On-going
13.	Beel and baor fisheries development and management project	- Farm development - Training	MoFL/DOF	IFAD, DANIDA	Jessore, Chuadanga, Kushtia, Faridpur	1988-On-going
14.	Aquaculture extension project (second phase)	- Pond development. - Interest free credit to farmers. - Training.	MoFL/DOF	DANIDA	Mymensingh, Patuakhali, Barguna, Noakhali	up to 2000

Sl.No.	Project	Actions	Concerned agency	Donors	Coverage	Duration
15.	Bangladesh Integrated Nutrition Project (BINP)	**National level:** - Programme development and institution building. - Information, education and communication development. - Strengthening existing nutrition activities. - Management Information System. **Community based Nutrition Component:** - Community mobilization. - Supplementary feeding to targeted children and women. - Growth monitoring and promotion. - IEC **Inter-sectoral nutrition programme development:** -Creation of inter-sectoral nutrition cell and fund to support inter-sectoral sub-projects.	MoHFW	IDA/WB	40 Thanas	1995-2000
16.	Nutrition Surveillance Project (NSP)	- Monitoring of child anthropometric status, food price, VAC distribution, emergency food aid, foodgrain intake at household level, magnitude of distress, and home garden implementation.	HKI, IPHN and NGOs	USAID	35 rural Thanas and 4 urban slums	1990-ongoing
17.	Model School Gardening Promotion Programme	- Training to school teachers on nutrition and Vit. A deficiency. - Education, motivation of students on malnutrition, Vit. A deficiency and night-blindness and on vegetables and fruits rich in Vit. A. - Establishment and follow-up of school gardens. - Provide seed and seedlings and support for fencing and fertilizer. - Establishment of coordination and cooperation between health and agriculture departments at local level.	WIF, IPHN	UNICEF	240 schools in 4 Districts	1995-on-going

Sl. NO.	Project	Actions	Agency Concerned	Donors	Coverage	Duration
18.	NGO Gardening and Nutrition Education Surveillance Project (NGNESP)	- Promotion of production and consumption of Vit. A rich fruits and vegetables. - Establishment of central nurseries, village nurseries, and household gardens.	HKI and partner NGOs	USAID, NOVIB, ODA, ASSP	90 Thana (315,000 households)	1995-on-going
19.	Promotion of Home Gardening through Training	- Training on home gardening to Block Supervisors and NGO workers, nursery farmers. - Supply of seeds and fertilizers. - Support for irrigation by treadle pumps or tubewells.	HKI, DAE, ASSP and 6 NGOs	ODA	5 Districts (30 Thanas)	1995-on-going
20.	Community Nutrition Programme - Control of PEM - Control of IDD - Control of Vit. A deficiency - Anaemia control programme	- Nutrition Education. - Growth monitoring. - Advocacy and social mobilization. - Research. - Child nutrition survey. - Nutrition surveillance. - Quality control of iodised salt. - Training and orientation to the salt traders. - Motivation and awareness of general population. - Operation research on efficacy of iodised salt. - Monitoring and evaluation of the IDD prevention and control programme. - Procurement of Vit. A capsule. - Advocacy. - Home/school gardening. - Training/workshop. - Innovative research. - Procurement of iron folate tablets. - Supplementation of iron/folate. - Orientation/workshop. - Monitoring and evaluation.	IPHN, BNNC of MoHFW, MOLGRD	UNICEF	National with special attention to urban areas	996-2000

Sl No.	Programme	Activities	Agencies Concerned	Funded by	Coverage	Duration
[illegible]	[illegible]	Home/kitchen gardening component	BNNC	WB/IDA	National	1991-1997
[illegible]	[illegible]	Field research on fruits and vegetable production, processing and distribution, and nutritional awareness to targeted population.	BIRTAN	GOB	15 Thanas	1986-2000
		Short training on applied nutrition for field workers of different ministries, NGOs and community leaders.	BIRTAN	GOB	National	1995-2000
		Trainers' training for Thana/District level officers.	BIRTAN	GOB	National	1995-2000
[illegible]	[illegible]	Utilization of fruits and vegetables for prevention of micronutrient deficiencies.	BIRTAN	ASSP	National	1995 ongoing
[illegible]	[illegible]	Safe motherhood. Counseling vaccination Iron folate tablet distribution Advise on health and nutrition. Breastfeeding Motivation of mothers. Family planning Counseling and social marketing. EPI Diarrhoeal disease control. Prevention of Vit. A deficiency. Nutritional awareness of the caretaker. Administration of one dose of Vit. A to children under 1 year (25,000 IU during each visit for immunization). Administration of Vit. A capsule (200,000 IU to children aged 1-6 years two times a year). Promotion of production and consumption of Vit A rich foods. Health education	MOHFW	GOB	Manikgonj	1994-2000

4.2.2 *Sectors involved*

The Sectors and agencies involved are as follows:

- Ministry of Agriculture
- Ministry of Food
- Ministry of Fisheries and Livestock
- Ministry of Environment and Forest
- Ministry of Local Government, Rural Development and Cooperatives
- Ministry of Disaster Management and Relief
- Ministry of Health and Family Welfare
- Ministry of Women and Children Affairs
- Ministry of Social Welfare
- Ministry of Communication
- Ministry of Science and Technology
- FAO, UNDP, WHO, UNICEF, USAID, UNESCO, CIDA, WB, ADB.
- Grameen Bank, BRAC, HKI and other NGOs

4.2.3 *Strategic framework*

Improving household food security:

- Poverty alleviation and economic growth.

- Maintain sustainable food grain production, particularly that of rice and wheat.

- Increase minor crops production (maize, millet) to reduce pressure on rice.

- Intensify crop diversification programme for increased production of roots and tubers, oil seeds and pulses along with fruits and vegetable production.

- Ensure availability of food till the household level with minimum food loss.

- Disseminate nutrition information and messages linked to food security.

- Highlight and intensify women oriented programmes.

- Involving women in all community based programmes.

Sr. No.	Actions	Agencies Concerned	Target	Time Frame	Outcome Indicators
4.2.3.1	**Food production**				
i.	**Self sufficiency** in food grain (**rice and wheat**) production.	**MOA**, MOF, MOWR, MOLGRD, MOFLS, MOI, MOL, NGO	Total population	2000	Adequate energy intake. Protein intake 45 g/person/day
ii.	Increase production of **pulses**.	**MOA**, MOLGRD MOWR, MOF, MOI, MOL, NGO	Total population -Do-	2000 2010	Intake 20 g/person/day Intake 40 g/person/day
iii.	Increase production of **sweet potato**.	**MOA**, MOLGRD, MOF, MOI, MOL, NGO	Total population -Do-	2000 2010	Intake 25 g/person/day Intake 50 g/person/day
iv.	Increase production of **white potato**.	MOA, MOLGRD, MOI, MOF, MOWR, MOL, NGO	Total population -Do-	2000	Intake 100 g/person/day
v.	Increase production of **oilseed**.	**MOA**, MOLGRD, MOF, MOI, MOL, NGO	Total population	2000	Oil intake 20 g/person/day
vi.	Marginal and small farm system **crop intensification**.	**MOA**, MOI, MOLGRD, MOEF, MOL, NGO	Marginal, small & landless farmers	2000	Total amount of produce
vii.	**Coconut** development and large scale plantation of useful trees.	**MOA**, MOI, MOLGRD, MOEF, MOL, NGO	Total population	2000	Increase total amount of produce

Sr. No.	Actions	Agencies Concerned	Target	Time Frame	Outcome Indicators
4.2.3.1	**Food production**				
viii.	**Home gardening**	**MOA**, MOE, MOI, MOLGRD, MOEF, MOHFW MOWCA, MOSW, NGO	Rural households, schools, all Parishads, religious and community centres (emphasis on women and children	2000 2010	Fruit Intake 20 g/person/ day Vegetable Intake 213 g/person/day Fruit Intake 56 g/person/day
ix.	**Crop diversification** programme.	**MOA**, MOI, MOL, MOEF, NGO	All rural farmers	2000	Increased production
x.	Low and stable **food prices.**	**MOF**, MOA, MOI, MOC, MOFL	Total population	2000	Stable food prices
xi.	Enhance production of **fish.**	**MOFL**, MOL, MOC, MOI, MOE, MOA, MOF, MOLGRD NGO	Total population (emphasis on children & mothers)	2000 2010	Fish intake 40 g/person/day Fish intake 67 g/person/day
xii.	Increase production of **livestock** (cattle and goat)	**MOFL**, MOL, MOI, MOA, MOWCA, MOSW, MOLGRD, NGO	Total population (emphasis on children & mothers)	2000 2010	Meat (from cattle) intake 5 g/person/day Meat (from cattle) intake 10 g/person/day
xiii.	Poultry production. - Homestead - Large scale	MOFL, MOI, MOWCA, MOSW, MOA, MOF, MOLGRD, NGO	Total population (emphasis on children & mothers)	2000	Egg intake 1.5 g/person/day Meat (from poultry) 1 g/person/day

4.2.3.2 Food distribution					
i.	**Uniform distribution** throughout the country till village level.	**MOF**, MOLGRD, MOP, MOHFW, MOA, MOCn, NGO	Entire country with special reference to deficit zones	Continuous	2310 KCal/day/ person
ii.	**Open market sales (OMS)** - Urban (to strengthen) - Rural (to initiate) (to cover at least 30% of population living under poverty line)	**MOF**, MOC, MOA, **MOLGRD**, MOSW, MOWCA	To increase the number of OMS dealers/municip ality To establish OMS till village level	1998 2000	25% enhanced One OMS dealer/Uni on 30% coverage
iii.	**Food safety net** (to strengthen)	**MOF**, MOC, MOLGRD, MOA, MOF, MOP, MODMR	Food godowns at Thana level	Contin uous	Buffer stock at Thana level
iv.	**Food for work** (to strengthen).	**MOF**, MOLGRD, MODMR, NGO	Socio-economically deprived population	Contin uous	Adequate energy intake by all family members
v.	**Food for education** (to strengthen).	MOE, **PMED**, MOF, MOLGRD, NGO	Primary school going poor children	Contin uous	Proportion of school aged children attending school
vi.	Vulnerable group development programme (**VGD**) (to strengthen).	**MOLGRD** MODMR, MOF, MOSW, MOWCA, **NGO**	Destitute women	Contin uous	Proportion of women below the level of destituteness

vii.	**Women's empowerment** for intra household food distribution.	**MOWCA,** MOSW, MOLGRD, MOHFW, MOI, MOA NGO	All women	2000	2000 KCal intake by all women
viii.	**Emergency food distribution** under special conditions, viz., disaster (to strengthen). - Nutritionally balanced diet of requisite energy value need to be distributed.	**MODMR,** MOF, MOLGRD MOSW, MOWCA, MOI, MOA, NGO	Disaster victims	As and when required	100% coverage during disaster.
ix.	Food security for urban poor - **street foods**	**MOHFW,** MOSW, MOWCA, MOF, NGO	Urban poor	1998	Safe and low cost street foods developed.
4.2.3.3	**Food preservation and processing**				
i.	Initiating **food preservation** at strategic places specially for seasonal fruits and vegetables. - Home and community level - commercial level	**MOF,** MOI, MOA, MOHFW, MOLGRD, MOF, NGO	Total population	2000	10% of total vegetable & fruit production are preserved
ii.	**R and D** programmes to develop appropriate technologies.	**MOST,** MOI, MOA, MOE, DU, NGO	Community	2000	10% of total vegetables and fruits preserved
4.2.3.4	**Food fortification**				
i.	Develop **fortification methods for common foods** with important nutrients e.g., vitamin A, iron, iodine, calcium, vitamin D and so on at - Home/community level - Industry level	**MOF, MOST,** MOA, MOHFW, MOE, NGO	Total fortification	2000	Fortified foods available in markets
ii.	**R and D** programmes to develop **appropriate technologies.**	**MOST,** MOF MOA, MOHFW, MOE, NGO	Related institutions	2000	Technologies adopted and fortified foods available in markets
iii.	Nutritional indicators in all food security related programmes.	MOA, **MOF,** MOFL, MOE	All related sectors	1998	Indicators developed

4.2.3.5	**Supplementary feeding**				
i.	Identification of low socioeconomic groups at village level to provide **supplementary feeding** to: -	**MOSW,** MOWCA, MOLGRD, MOHFW, MOA, MOE, PMED, NGO.			
	- **Pregnant and lactating mothers** (up to 6 months).		Selected mothers (600 KCal).	2000 2010	Severe CED to 5% Severe CED to <1%
	- **Children under five years** (with special emphasis to under two years).		Selected severely malnourished U-5 children (600 KCal).	2000 2010	Wasting to 4% & severe PEM to 3% Wasting to <1% & severe PEM to <1%
	- **Mid-day meal for school going children** from 5-14 years.		Selected school going children (300 KCal)	2000 2010	Reduction of drop-out rate to 25% Reduction of drop-out to <5%
4.2.3.6	**Food behaviour**				
i.	Development of strategies for total **community participation** to: - Overcome wrong food taboos. - Uniform distribution of food at household level. - Selection of balanced food. - Proper cooking and food handling procedures.	**PMED, MOE, MOWCA, MOSW, MOHFW, MOA, MOI, NGO**	Adults and adolescents in community	2000	Change in KAP

4.2.4 *Action plan*

1. Identification and inclusion of specific nutritional indicators in all food related programmes.

2. Increasing household food production.

3. Increasing pisciculture and small farm animal production.

4. Attain self-reliance in cereals (rice and wheat), and increase pulse, sweet potato, white potato, oil seed, maize, fruit and vegetable production by the following processes:

   - marginal and small farm systems.
   - crop intensification.
   - home gardening.
   - agriculture support services.
   - crop diversification.
   - agro service centre.
   - low and stable food price
   - large scale plantation of useful trees.
   - credit to small farmers.
   - special support to disadvantaged people.

5. Assessment of nutritive value of indigenous foods and development of balanced diet.

6. Nutritional security for the urban poor:

   - slum support programmes
   - street foods

7. Food preservation centres at village level

   - training
   - technology transfer

8. Local-level food fortification.

9. Income generation linked activities for women.

10. Village level extension education and training.

11. Women-oriented activities in the Agriculture Sector.

12. Extension and education on nutrition.

4.2.5 *Proposed interventions*

The following interventions are proposed in order of priority.

1. **Household production** of different kinds of foods.

Accessibility to be enhanced at home level by gardening, growing of small farm animals, fisheries etc. by a comprehensive approach - area based.

2. Household **vegetable gardening**.

Home gardening for production of vegetables/fruits to diversify food for balanced intake, through community participation, cooperatives etc.

3. Innovation and use of appropriate technology for homescale **processing and preservation** of foods.

Develop and use of low-cost local methods for processing and preserving seasonal foods, e.g fruits, vegetables, roots and tubers.

4. Regular training and technology transfer on **local level fortification methods** for fruits, green leafy and other vegetables.

Use local self fortification methods, specially by using seasonal vegetables/fruits which grow in abundance.

5. Prevention of **post harvest losses** through proper processing and preservation of food at commercial level.

Better facilities and technologies for processing, storage, preservation and distribute.

6. Development of appropriate technology for production of **nutrient-dense complementary food** and its dissemination for household preparation through nutrition education programme.

Use of local ingredients to produce complementary food of high nutritive value at reasonable cost. Share information and recipe with community.

7. **Food preservation centres** at local level for training and technology transfer.

Community food preservation centers at district level for training and provision of preservation technologies-facilities to farmers, particularly women farmers.

8. Comprehensive **women-oriented** support programmes.

Special programmes for women to have access to economic and nutritional independence like homestead production of fruits, vegetables, livestock etc. access to develop food preservation units; agricultural extension activities and support; etc.

9. Programmes on **agricultural support services** linked to development of KAP of **women** on **family welfare, reproductive health and population education.**

Combined service programmes to link agricultural extension training activities to other issues like reproductive health, population education etc.

10. **School lunch** programme for children.

Programme for school children on nutritional supplementation using local products, supported by school gardening/farming programmes and nutrition education.

11. Management of **urban street foods**.

Urban street foods need special support as it is a most rapidly growing business which provides valuable nutritional support to the urban poor. Municipal corporation and police administration authorities are to be involved for effective management.

12. **Credit and support programmes** for intensifying production of pulses, tubers and oil seeds.

Economic support, as rolling funds, to identified farmers for growing these foods. Women should be given priority.

13. **Assessing nutritional impact** of the agricultural policies and programmes - identification of suitable indicators and inclusion in each project/programme.

Use of specific indicators - economic, agricultural, nutritional and environmental, to assess impact of programmes.

14. **Training, workshops and community awareness** generation with development of suitable audio-visual aides on food based approaches.

Creation of awareness on "food based" strategies to control malnutrition - highlight economic benefits, nutritional support etc.

15. Development of suitable **net-working** to ensure availability of weaning foods to children and supportive foods to other vulnerable groups through PFDS (using locally available affordable food items).

PFDS may extend its existing coverage to special weaning/supportive foods by using locally available ingredients.

Development of locally available **weaning food** and **supportive foods**.

Suitable recipes to be developed to give nutritional support to vulnerable groups using locally grown/available foods.

4.3 PROTECTING CONSUMERS THROUGH IMPROVED FOOD QUALITY AND SAFETY

Safe food and water of adequate quality is essential to maintain proper nutrition. Consumer protection has to be ensured through availability of special quality control and safety evaluation measures. A safe food should not contain harmful chemicals and biological contaminants which would endanger consumers' health. Food safety needs to be ensured at levels of production, handling, processing, packaging, distribution and preparation stages. Suitable legislation, laws, and standards have to be developed along with an effective inspection and monitoring system linked to well-equipped laboratories and well-trained staff. This is essential not only for export purposes but also for local consumption. Unsafe foods, often leads to morbidity resulting from a continuous loss of valuable nutrients from an already deprived individual.

4.3.1 *On-going programmes and situation analysis*

There are significant activities in food quality control and food safety in the country. The "East Pakistan Pure Food Ordinance 1959" is the adaptation of the "Bengal Food Act - 1939". This law has been revised and updated through an Inter-ministerial Committee to "Bangladesh Food Safety Ordinance-1994" . It proposed to make full use of the standards and practices published by the Codex Alimentarius Commission which are also applicable to Bangladesh. It covers the dosages and residues of fertilizers, fungicides, pesticides and other chemicals in crops and animal feed; food additives (colours, preservatives, flavourants, fortifying agents, etc.). Hopefully the ordinance will soon be approved by the Government and it will then be possible to formulate and implement the "Bangladesh Pure Food Rules".

The food standards from the country are available from the Bangladesh Standards and Testing Institution (BSTI) Ordinance (1985). There also exists the Essential Commodity Act 1990 in which provisions are made for food standards and food adulteration. BSTI makes standards for food items but does not authorise quality control. At present, there are 10

laboratories (8 in Dhaka and 1 each in Chittagong and Khulna) which undertake food quality testing in the country. No such laboratory exists at District or lower levels.

The laboratories are as follows:

1. Public Health Laboratory (PHL) of the Institute of Public Health (IPH) *
2. Armed Forces Food and Drug Laboratory.
3. Chemical Examiners' Laboratory.
4. Bangladesh Standards and Testing Institution.
5. Radiation Biology Laboratory.
6. Dhaka City Corporation Laboratory.
7. Food Laboratory of the Ministry of Food.
8. Bangladesh Council for Scientific and Industrial Research (BCSIR).
9. Quality control laboratories for frozen fish at Khulna and Chittagong under MOF.

* *Only laboratory which has the legal authority for food quality testing*

A project on Preparation of a HACCP based Fish Quality Assurance Programme, supported by FAO is helping the Government of Bangladesh in the formulation and implementation of a national HACCP based quality assurance programme for fisheries products (shrimp/fish). The target subjects are the key Government officials and industry representatives.

Food and water contamination in the country is very high. Therefore, to ensure consumer safety as well as to promote the export of agricultural products, it is essential to adopt the suggested legislation and develop a suitable support system down to the District level.

Analysis of the existing situation indicates special attention is needed in the following areas:

- Adoption, implementation and enforcement of the Bangladesh Food Safety Ordinance (1994).
- Formulation and Implementation of Bangladesh Pure Food Rules.
- Facilities at central laboratories.
- Development of food and water testing laboratories at Division and District levels.
- Enhancement of KAP on food and water safety and quality.

4.3.2 *Sectors involved*

The Sectors and agencies involved are as follows:

- Ministry of Health and Family Welfare
- Ministry of Local Government, Rural Development and Cooperatives
- Ministry of Food

- Ministry of Environment and Forest
- Ministry of Trade and Commerce
- Ministry of Science and Technology
- Ministry of Women and Children Affairs
- WHO. FAO

4.3.3 *Strategic Framework*

Protecting consumers through improved food quality and food safety:

- The up-dated **Bangladesh food law** based on the relevant codes of the Codex Alimentarius Commission needs to be adopted and implemented.

- Providing **suitable regulations** for food quality and safety at all steps, viz., **production, processing, fortification, packaging, labeling and storage** and develop a suitable **monitoring system.**

- Effective maintenance of **export quality**.

- **Education** to producers and consumers (including consumers' association).

- Promoting food safety for **locally available cheap foods**, specially for the **urban poor**, e.g., **street foods**.

- Involving women in all community and household level programmes.

Sl No	Actions	Agencies Concerned	Target	Time Frame	Outcome Indicators
4.3.3.1	**Food legislation and its enforcement.**				
i.	**Assessment of existing food safety and food as well as water quality** situation with respect to special groups, viz., street food vendors, food processors, hotels and restaurants, etc.	MOHFW, MOI, MOF, MOST, MOC, MOEF, NGO	All food handlers	1998	Detailed report
ii.	The existing **food laws** need to be strengthened for preventing contamination (physical, microbiological and chemical) and improving food quality.	MOHFW, MOI, MOF, MOST, MOC, MOL	All food processors, manufacturers handlers	1998	Updated report
iii.	**Enforcement** of the above laws and regulations by the government till Union level.	MOLGRD,MOL, MOHFW	Till Union level	2000	Overall improvement of food quality
4.3.3.2	**Designation of a competent authority / body to ensure food safety and quality**				
i.	Designation of a competent authority (main coordinator) to oversee all aspects of food control viz. permitted substances in food; good manufacturing practices; train and empower food control officials; legal proceedings, etc.	MOHFW, MOI, MOF, MOST, MOC, MOEF, NGO	Creation of inter-sectoral group to oversee food low, laboratory, inspection system, enforcement etc.	1997 (in conjunc-tion with adoption of food laws)	Maintenance of strict vigilance by authority.
4.3.3.3.	**Infrastructure development**				
i.	Strengthening of the **food analysis laboratory** at National level.	MOHFW, MOF, MOI, MOC, MOEF	All food laboratories	2000	Improved laboratory quality
ii.	**Creation of food analysis laboratory** at District level.	MOHFW, MOF, MOC, MOEF	One Food laboratory at District level	2000	Improved food quality
iii.	**Creation of trained manpower** for laboratories as well as for field services at National and District levels. Food technologists and scientists	MOE, MOI, MOHFW, MOF, MOC, MOEF	Concerned labs	2000	Skilled person power

4.3.3.4.	Education of the food industry and consumers				
i.	**Information, education and communication materials** on food safety, food laws, hygiene, sanitation to be developed and distributed among all concerned at National, District, Union and Village level involving the community.	**MOI**, MOC, MOL, MOLGRD, CAB, MOHFW, NGO	All producers, consumers, planners and food traders.	2000	Improvement of food quality
ii.	Strengthening of **consumer linked activities.**	**MOI**, MOC, MOL, MOLGRD, CAB, MOHFW, NGO	All producers, consumers, planners and food traders.	2000	Improvement of food quality
iii.	Strategies to **educate and inform all food producers,** viz., industrial food processors, food vendors, etc.	**MOI, MOE** MOC, MOL, MOLGRD, MOHFW, NGO	All producers, consumers, and traders.	2000	Improvement of food quality

4.3.4 *Action Plan*

1. Formation of a **coordinating mechanism** at the ministerial and institutional levels to monitor various issues, policies and programmes on food safety.

2. Strengthening of the existing laboratories by the way of institutional as well as human resource development.

3. Developing a regular **monitoring system** down to the District level.

4. Regular **consumer and producer education** programmes.

5. Vending of **street foods** in the urban areas is a growing demand both for nutritional as well as economic benefits. This sector needs stringent monitoring of quality along with drawing up of suitable action plan linked to laboratory analysis, awareness of vendors, consumers, food inspectors, legal authorities and finance managers (banks) in a comprehensive manner. This sector needs special attention and immediate intervention.

4.3.5 *Proposed Interventions*

The following interventions are suggested in order of priority:

1. Establishment of **food testing laboratories at the district level** for monitoring food quality and food safety.

   Facilities are available only in Dhaka and for specific reasons in two more cities. These need to be extended up to district level.

2. Development of a comprehensive project to ensure quality and safety of **street foods** along with a city plan of action.

   Demand for vending street foods is increasing every day, with rise in number of consumers. There is no facility for regular monitoring and quality control. This needs to be developed, along with other issues like control of traffic, pedestrian movement etc. Hence, it would need a comprehensive planning information.

3. Development of a comprehensive **networking** among the central level laboratories with a focal point at Public Health Laboratory (PHL) at the IPH, MOHFW.

   Different laboratories existing at central and peripheral levels need to be coordinated with proper legal authority of each.

4.4 PREVENTING AND MANAGING INFECTIOUS DISEASES

The vicious cycle of infection and malnutrition is well known. Its overwhelming impact on the health and well-being, specially in the socio-economically deprived groups is a point of great concern. The vulnerable groups of the population are most affected due to sickness, disability or death. Prevention, control and proper management of infections ensures improved nutritional status and enhanced productivity, resulting in economic benefits.

4.4.1 *On-going Programmes and Situation Analysis*

Major on-going programmes are presented in the table provided below. Supportive programmes include:

1. Primary health care service.
2. Expanded programme on immunization (EPI).
3. Pilot project for the control of ARI in children.

4. Tuberculosis and leprosy prevention and control programme.
5. Diarrhoeal disease control programme.
6. Family health education programme.
7. Pilot project for development of maternal and neonatal health care.
8. Intestinal parasite control project.
9. School health project.
10. Rural social service.
11. Use of mother centres for population activities.
12. Urban community development programme.

Analysis of the existing situation indicates following weaknesses which need immediate attention:

- Sanitation coverage.
- Coverage of water supply for all purposes.
- KAP on environmental management and personal hygiene.
- Role of women in water and sanitation.
- Enhancement of ORT use.
- Specific nutritional objectives in primary health care up to Ward level.
- Programmes related to control of morbidity.

On-going major programmes and projects:

Sl. No.	Programme	Activities	Agencies Concerned	Funded by	Coverage	Duration
1.	Essential Health Care Programme & Reproductive Health and Disease Control Programme	- Preventive and curative health care services through Village Health Volunteers (SS). - Provision of essential drugs through SS. - Ante-natal care services. - Family planning facilitation. - Provision of health services through BRAC Health Centres. - Special project on ARI and tuberculosis control. - Nutrition and health education.	BRAC	ODA, NOVIB, Aga Khan Foundation, UNICEF, SIDA, CIDA, BRAC	170 Thanas	On-going
2.	Vitamin A capsule (VAC) supplementation	- Supplementation of VAC to infants under 1 year (25,000 IU during each visit for immunization, children aged 1-6 years(200,000 IU 2 times/year). - Supplementation of VAC to lactating mothers (200,000 IU 2 weeks after delivery). - Distribution of VAC to diarrhoeal and measles patients.	IPHN, NGOs	UNICEF, WB	National	On-going
3.	Combined service delivery	Please see sr. no. **24** of **Theme 2 (section 4.2.1)**.				
4.	Bangladesh Integrated Nutrition Project (BINP)	Please see sr. no. **15** of **Theme 2 (section 4.2.1)**.				

4.4.2 *Sectors Involved*

The Sectors and agencies involved are as follows:

- Ministry of Health and Family Welfare
- Ministry of Environment and Forest
- Ministry of Local Government, Rural Development and Cooperatives
- Ministry of Women and Children Affairs
- Primary and Mass Education Division
- Ministry of Social Welfare
- WHO, UNICEF, UNFPA, UNESCO, WB, USAID, UNDP
- NGOs

4.4.3 *Strategic Framework*

Preventing and managing infectious diseases:

- Controlling of morbidity and mortality through various **sectoral programmes** and using **nutritional indicators** to assess the outcome.

- Ensuring **health care facilities** through the primary health centres till the ward level.

- Encouraging **preventive and promotive** health care.

- Ensuring availability of **safe water**, **sanitation** and **solid waste and garbage disposal** facilities at rural and urban levels.

- Social mobilization to ensure intensified motivation for **personal and environmental hygiene.**

- **Involvement of women** in all community based interventions right from planning level.

SL NO	Actions	Agencies Concerned	Target	Time Frame	Outcome Indicators
4.4.3.1	**Water and environmental sanitation**				
i.	Assessment and improvement of drinking water quality (microbiological and chemical)	**MOHFW, MOEF,** MOLGRD, MOA, MOE, NGO	Central institutions, LGRD till village level	1998 Continuous	Drinking water quality mapping Reduction of diarrhoea
ii.	Sanitation (latrines)	**MOHFW,** MOEF, **MOLGRD,** MOSW, **NGO**	Total population	Continuous Continuous	Reduction of worm infestation Reduction of diarrhoea
iii.	Garbage and solid based disposal	**MOHFP, MOEF,** MOLGRD, MOSW, **NGO**	Total population	Continuous Continuous	Reduction of worm infestation Reduction of diarrhoea
iv.	Education on environmental, personal hygiene & water usage pattern.	**MOHFP, MOEF,** MOLGRD, MOA, MOSW, **NGO**	Total population	Continuous Continuous	Increase in KAP Reduction of worm infestation. Reduction of diarrhoea.
v.	Use of animal and other wastes.	**MOST, MOEF,** MOLGRD, MOA, NGO	Total population	Continuous	Establishment of bio-gas plants. Bio fertilizers
vi.	Monitoring of industrial effluents in all surface and ground water sources	**MOEF, MOST,** MOLGRD, NGO	Total population	Continuous	Published report
4.4.3.2	**Control, management and prevention of infectious diseases**				
i.	Strengthen coverage of all related EPI programmes.	**MOHFW,** MOSW, MOWCA, NGO	Children under 5 years	2000	100% coverage
ii.	Ensure better management of ARI	**MOHFW,** MOSW, MOWCA, **NGO**	Children under 5 years	2000	Reduction in ARI prevalence
iii.	Ensure better management of diarrhoeal and other gastrointestinal disorders: i. ORT ii. Water quality iii. Water management	**MOHFW,** MOSW, MOWCA, MOE **MOEF, NGO**	Total population	2000	Reduction in diarrhoeal prevalence
iv.	Reduce worm infestation and related diseases: i. Sanitation. ii. Personal hygiene.	**MOHFW,** MOSW, MOWCA, **MOEF** MOE, NGO	Total population	2000	Reduction in worm infestation rate

4.4.4 *Action Plan*

1. Ensure better **sanitation and water supply** coverage.

2. Development of **nutritional indicators** for all programmes related to control of morbidity.

3. Incorporation of **nutritional objectives** in programmes related to control of **infectious diseases, environmental protection** and so on.

4. Development of suitable **education materials** for achieving the above mentioned strategies at all levels.

5. Develop a methodology for assessing the **impact of infection** on the nutritional status of an individual.

6. Assess the impact of **water and environmental sanitation (WES)** on the nutritional status of a community by using special indicators.

7. Initiate research projects to assess the correlation between **environment and nutrition; protective function of nutrients to combat infection** and **nutrient-drug interaction**.

8. Ensure **role of women** in water and sanitation in policy and implementation levels.

9. Strengthen **primary health care** system and knowledge of the community on the cause, effect and control of infectious diseases.

10. Reduce **worm infestation** and related diseases.

11. The success of the **EPI programme** should be made sustainable.

4.4.5 *Proposed Interventions*

The following interventions are suggested in order of priority :

1. Undertake a **comparative analysis** of the relative impact of different programmes eg. water and sanitation vis-a-vis other direct nutrition programmes such as supplementary feeding on the nutritional status of a community.

   Using nutritional indicators, programmes related to water and environmental sanitation to be compared with those on supplementary feeding, prophylaxis programmes etc.

2. Development and use of **nutritional indicators** after provision of **sanitary latrines**.

Evaluate success of latrine programmes using nutritional indicators, such as anemia (linked to worm infestation), wasting (linked to diarrhoea), etc.

3. Assess the **time and energy** saved after provision of **potable water**, specially in difficult zones such as hilly areas, arid zones and other areas having a limited access to potable water.

   Energy expenditures of physical labour related to water, feed, fodder collection is very high. This needs to be known to assess energy requirement of the individual. Time saved can also be used most usefully, if these activities can be reduced.

4. Comprehensive **National Environmental Management Action Plan** (already formulated).

   Conserve nature, reduce environmental degradation, promote sustainable development and raise quality of human life.

5. Development of **workshop, training** and **motivational** courses with supportive audio-visual aides linked to health, environmental and nutrition education.

   Development of comprehensive IEC material interlinking issues related to health, environment and nutrition.

6. Comprehensive project proposal on **role of women** in various issues linked to control of infection and improvement of the nutritional status.

   Enhancing the knowledge, attitudes and practices (KAP) of women on personal hygiene and handling of food/water.

4.5 PROMOTING BREASTFEEDING

Medical opinion agrees that breast milk is the ideal food for the infant and young children. Apart from being the most inexpensive form of infant feeding, it has many other beneficial effects including those on child spacing and on providing immunocompetence against many common diseases. All healthy women should be encouraged to breastfeed their babies exclusively for the first four to six months and subsequently to continue with breastfeeding along with provision of appropriate supplementary food for two years. However, optimum breastfeeding in Bangladesh is reported to be virtually absent. In order to achieve this objective, we need to create awareness, provide maximum support to women, educate the government and concerned parties of the private sector, and develop a positive social attitude.

4.5.1 *On-going Programmes and Situation Analysis*

Major ongoing programmes are presented in the table provided below. Supportive programmes include:

1. Pilot project on maternal and neonatal health care.
2. Coordinated nutrition programmes of BNNC.
3. Community nutrition programme.
4. Urban primary health care programme at Divisional level.
5. Nutrition education programmes of NGOs

Analysis of the existing situation highlights that the following interventions are needed:

- Adequate information to the mother and family on nutritional needs of a nursing mother.
- Nutritional support to mothers using homestead based strategies.
- Mandatory creches for babies at working places.
- IEC to mothers on proper breastfeeding.
- Preparation of weaning foods with local ingredients.
- KAP to mothers on personal hygiene and sanitation.
- Enforcement of BMS code.
- Baby-friendly hospital concept.

4.5.2 *Sectors Involved*

The Sectors and agencies involved are:

- Ministry of Health and Family Welfare
- Ministry of Women and Children Affairs
- Ministry of Social Welfare
- Ministry of Information
- Ministry of Agriculture
- WHO, UNICEF, UNESCO, NOVIB, WB,
- BBF, BRAC and other NGOs.

On-going major programmes and projects (Theme 5):

Sl. no.	Programme	Activities	Agencies Concerned	Funded by	Coverage	Duration
1.	Bangladesh Breastfeeding Foundation (BBF)	- Awareness creation on exclusive and appropriate BF. - Implementation of Breastmilk Substitute (BMS) code. - Training & research - Promotion and monitoring of Baby Friendly Hospital Initiatives.	BBF	WB, UNICEF through BINP	National, special attention to BINP Thanas	1996-2000
2.	Health education programme of PHC	- Health education through field level workers, schools and mass media.	MoHFW	UNICEF	National	On-going
3.	Reproductive Health and Disease Control Programme	Please see sr. no. **1** of **Theme 4 (section 4.4.1).**				
4.	Bangladesh Integrated Nutrition Project (BINP)	Please see sr. no. **15** of **Theme 2 (section 4.2.1).**				
5.	Combined service delivery	Please see sr. no. **24** of **Theme 2 (section 4.2.1).**				

4.5.3 *Strategic Framework*

Promoting breastfeeding and proper weaning practices:

- Strengthen efforts for exclusive breastfeeding.
- Development of appropriate technology for production of nutrient dense **complementary foods at home and community** level.
- **Baby-friendly hospital initiatives.**
- **Nutritional support** to mothers.
- **Increased maternity leave,** particularly post-part

4.5.4 *Action Plan*

1. Nutritional and related economic support to mothers, through food based strategies.
2. Household based programmes to be aimed towards nursing mothers.
3. Production of nutrient dense complementary food at community and home level.
4. Economic support for the vulnerable groups by targeted income generating activities, including training, loan and technology support.
5. Popularize and implement proper and exclusive breastfeeding.
6. Nutrition education on breastfeeding, proper complementary feeding, BMS code, baby friendly hospital initiative needs to be strengthened.
7. Development of proper complementary and weaning foods.
8. Baby care centres at all work places:
   - government
   - private
9. Stringent enforcement of BMS code.

Sl No	Actions	Agencies Concerned	Target	Time Frame	Outcome Indicators
4.5.3.1	Breastfeeding				
i.	Baby friendly initiatives at all hospitals, and family welfare centres (Union level).	MOHFW, MOSW, MOWCA, NGO	All hospitals and family welfare centres	2000	100% initiation
ii.	Education and motivation on breastfeeding and exclusive breastfeeding.	MOHFW, MOE, MOSW, MOWCA, MOI, NGO	Women along with community	2000	Increase in KAP
iii.	Imposing standard international regulations on commercial breast milk substitutes.	MOC, MOL, MOI, MOHFW, MOWCA	BMS manufacturers, importers and traders	Already imposed	Enforcement
iv.	Strengthen baby care centres/creches at places of work.	MOSW, MOWCA, MOE, MOLM, MOI, NGO	Mother with children U-2 at all working places	2000	100% coverage
v.	Period of maternity leave may perhaps be extended to five months.	MOE, MOLM, MOWCA, MOSW	Pregnant and lactating mothers	2000	Mothers availing of leave
4.5.3.2	Complementary feeding				
i.	Creation of available resources at local level for ideal weaning foods.	MOA, MOSW, MOWCA, MOLGRD, MOHFW, NGO	Total community with emphasis on U-2 children	Contin-uous	Proportion of children given proper weaning food
ii.	Education and motivation on quality, quantity and hygienic preparation of weaning foods.	MOHFW, MOA, MOSW, MOWCA, MOI, NGO	Women along with community	Contin-uous	Increase in KAP

4.5.5 *Proposed interventions*

The following interventions are suggested in order of priority :

1. Establishment of **day care centres for the working mothers** at their working places.

   Support system for mothers to keep babies safely, breastfed and weaned, as needed.

2. **Assess the breastfeeding capacity** of a malnourished mother to plan necessary support to her.

   Nutritional sufficiency of lactating mother to ensure her capacity to breastfeed without loss of health.

3. **Enhance food intake and improve the lifestyle of mothers** by increased **household level production** of fruits, vegetables, etc. along with nutrition education.

   Enhance accessibility to food of rural and urban poor mothers, through all available means of producing food at home.

4. Use of **existing health infrastructure** and manpower at the village level to promote **healthy breastfeeding practices** and proper weaning foods.

   Plan of action to enhance MIS and KAP capacities through strengthening of Thana level PHC.

5. **Develop recipes** using locally available ingredients to produce complementary and weaning foods.

   Use of locally available ingredients to prepare safe, energy-dense foods for weaning babies.

6. Develop **comprehensive education materials** on importance of breastfeeding and safe weaning foods for community.

   Proper guidance and comprehensive information on all issues on breastfeeding and weaning practices.

4.6 CARING FOR THE SOCIO-ECONOMICALLY DEPRIVED AND NUTRITIONALLY VULNERABLE

Caring for the deprived and vulnerable requires support not only from the various sectors involved but also from the community. Time, attention, support and skills are needed to meet the physical, mental and social needs of these groups. Priority attention and care needs to be

directed towards those who are physiologically vulnerable and socio-economically deprived. The growing child and pregnant and lactating women are perhaps the most physiologically challenged, with at-risk groups including women, adolescent girls, the elderly and the mentally, physically and sensory disabled. Disadvantaged households include displaced persons, river erosion affected families, post-disaster victims, refugees, indigenous people, isolated communities, the unemployed, recent immigrants, orphans, children in difficult circumstances, and the landless. About 50% of the population fit under this category. In Bangladesh, specifically targeting the women and children of the socio-economically disadvantaged is a practical response to this situation and therefore under each theme in this plan of action specific actions are directly aimed towards this sector of the population. The presence, knowledge and skill of the care giver (who is often the mother), is most important.

4.6.1 *On-going programmes and situation analysis*

On-going programmes:

1. Rural social service programme.
2. Control of iodine deficiency through universal salt iodisation.
3. Bangladesh Integrated Nutrition Project (please see sr. no.15 of Theme 2 (section 4.2.1).
4. Food for work programme.
5. Community nutrition programme (please see sr. no.20 of Theme no. 2 (section 4.2.1).
6. Nutritional surveillance Project (NSP) (please sr. no. 16 of Theme no. 2 (section 4.2.1).
7. Institute of mentally handicapped children in Chittagong.
8. Programme for urban social development for welfare and rehabilitation of street children.
9. Development and extension of the centres for training and rehabilitation for the destitute and the homeless.
10. Vulnerable group development programme (VGD).
11. Advocacy, awareness and strengthening of information base for WID phase 2.
12. Self-reliance programme for rural women
13. Rural women employment creation projects.

14. NGO/community based programme for poor women and children.

15. Assetless women development programme.

16. Strengthening and expansion programme of Bangladesh Shishu Academy.

17. Use of rural mother centres for population activities (RMC).

18. Urban community development programme.

19. Post-flood primary schools rehabilitation programme.

20. Emergency relief programmes (as and when required).

21. Strengthening of early warning and flood information system.

22. Open market sales (OMS).

23. Vulnerable women development programme.

24. Training and rehabilitation of vagrants.

25. Training and rehabilitation of released prisoners from jails.

Analysis of the existing programmes indicates that:

- Though this group accounts for more than 50% of the population, due importance is not recognized or reflected in the existing programmes. Moreover, most of the programmes do not have a nutritional objectives.

- Inter-sectoral coordination among various programmes specially on nutritional issues is not recognized.

- Nutritional needs should be assessed and the necessary support provided to the distressed population.

- Mechanisms of accountability at the field level needs to be incorporated.

4.6.2 *Sectors Involved*

The Sectors and agencies involved are as follows:

- Ministry of Social Welfare

- Ministry of Women and Children Affairs.
- Ministry of Disaster Management and Relief.
- Ministry of Education.
- Ministry of Food.
- Ministry of Local Government, Rural development and Cooperatives.
- Ministry of Water Resources.
- Ministry of Industries.
- Ministry of Health and Family Welfare.
- Ministry of Agriculture.
- Ministry of Fisheries and Livestock.
- Ministry of Environment and Forest.
- Ministry of Communication.
- Primary and Mass Education Division.
- WHO, UNICEF, WB, WFP.
- NGOs such as UCEP, Red Crescent, Grameen Bank, BRAC, HKI, etc.

4.6.3 *Strategic Framework*

- **Caring** for the socio-economically deprived and nutritionally vulnerable:

- **Nutritional support** to distressed population groups.

- **Assessing the nutritional needs** of selected sections of the deprived and vulnerable population.

- Incorporating **nutritional objectives** in all relief and development oriented programmes.

Caring for the deprived and vulnerable can be only done with proper inter-sectoral coordination and support from the Government, community as well as the household. Those who are both socio-economically and nutritionally deprived need to be supported. Special attention should be aimed at women, adolescent girls, the elderly, the disabled, post-disaster victims, displaced persons, the landless, the unemployed, children in difficult situation, juvenile delinquents, indigenous people and isolated communities. Planning and coordination is required to support and help those affected. Special mention may be made for:

- Providing the necessary support to and strengthening the care giving institutions.

- Providing information and promoting the good attitudes and practices (KAP) of the care-givers and the community.

- Ensuring the delivery of the facilities to the grassroots (target) level using existing infrastructure.

Networking between the supporting organizations for coordination and maximizing the beneficial effects.

4.6.4 *Action Plan*

1. Identify and incorporate nutritional indicators in all on-going programmes.

2. Assess nutritional needs of the socio-economically deprived and nutritionally vulnerable when planning and implementing programmes.

3. Develop an information system for making available data on the existing situation.

4. Develop suitable training materials for generating awareness among the planners, implementors, the community, family and care-giver.

5. Development of suitable plan of actions for procurement, storage, distribution and availability of food (targeted).

6. Introduce a safety net programme for the landless and small farmers in lean periods.

7. Special support programmes for the socio-economically deprived and nutritionally vulnerable.

   - growing child
   - women and adolescent girls
   - elderly
   - mentally and physically disabled
   - post-disaster victims
   - displaced persons, Including the river erosion affected families,
   - refugees
   - indigenous people
   - unemployed
   - orphans
   - children in difficult circumstances
   - juvenile delinquents
   - landless

4.6.5 *Proposed Interventions*

The following intervention activities are proposed in order of priority:

1. Poverty alleviation through introduction of **micro-credit system** involving co-operatives, groups and other channels.

   Enhance food security, e.g. grains, fruits, vegetable etc. through group level activities using credit facilities.

2. Re-orientation of **food assisted programmes** targeted to nutritionally vulnerable groups.

   Nutritional objectives and indicators to be incorporated in these programmes.

3. **Development of a database** to identify the nutritional needs of the socio-economically deprived and nutritionally vulnerable.

   Information available by area (Union level), gender, occupation etc. for better targeting of programmes.

4. Strengthening the existing **nutrition surveillance** project (HKI) through expansion and incorporation of new programmes such as follow-up of nutritional status of pregnant and lactating mothers; awareness creation on caring practices and supplementary food for the vulnerable groups.

5. Identification **of socio-economically and nutritionally deprived** groups by region.

   Regional identification of deprived population to target support programmes.

6. Imparting proper **KAP to the care-givers**.

   PHCs at Thana levels to be trained.

7. Suitable **nutritious recipes** for disaster victims.

   Dry, non-perishable, nutritious and energy-dense meals using locally available ingredients.

8. Identification and supportive programmes to improve the health and nutrition of **street children**.

   Special support to street children viz. shelter, education, food, security etc.

9. **Credit and training** facilities for the disabled.

Suitable job oriented training and credit facilities for the disabled.

10. Assessment of **accessibility to food** under conditions of **distress and disaster**.

Food channels identified and kept ready - disaster preparedness.

11. Assessment of the **impact of disaster** on the **nutritional status** of the victims.

Short/long term impact of disaster on nutritional status of victims, specially children, to develop suitable support programmes.

4.7 PREVENTING AND CONTROLLING SPECIFIC MICRONUTRIENT DEFICIENCIES

Micronutrient deficiencies are one of the major nutritional problems in Bangladesh. They are widespread and the consequence causes a significant impact on the health and work capacity of an individual. The principal deficiencies are related to iron, vitamin A and iodine. The deficiency of vitamin A (including beta-carotene) leads to blindness, poor growth and increased severity of infection, specially in children. Iron deficiency leads to learning disabilities, increased susceptibility to infection, diminished working capacity and growth (including intrauterine); iodine deficiency leads to goitre, and physical and mental retardation. Inspite of knowing the source of these nutrients and also that they are required in very minute quantities, the problem has been difficult to control because of several interlinked reasons starting from economic issues to environmental and behavioural aspects. Bangladesh needs to tackle the problem on a war footing. Some of the other micronutrient deficiencies which also need to be looked into are thiamin, riboflavin, vitamin C, zinc and calcium.

4.7.1 *On-going Programmes and Situation Analysis*

Major ongoing programmes are included in the tables provided below. Supportive programmes include:

1. Coordinated nutrition programme of BNNC

2. Urban primary health care programme

3. Home based fruits and vegetable preservation programme of BIRTAN.

4. Nutrition education, home gardening and small farm animal raising programmes of NGOs.

Analysis of the existing programmes indicates that special consideration should be given to:

- Inclusion of food based strategies on the on-going nutrition programmes.
- Inclusion of nutritional considerations in food programmes.
- Importance of the balanced diet concept
- Intensive coordination between Ministries, agencies and organizations for home based food security strategies.
- Effective implementation of VAC supplementation programme.
- Organized distribution of iron-folate tablets.
- Monitoring of iodised salt distribution and iodine levels.
- Identification of target groups at national level.
- Micronutrient requirement under special circumstances like pregnancy, lactation.

On-going programmes

Sl. No.	Programme	Activities	Agencies Concerned	Funded by	Coverage	Duration
1.	**Bangladesh Integrated Nutrition Project (BINP)**	Please see sr. no. **15** of Theme **2 (section 4.2.1).**				
2.	Control of Iodine Deficiency Disorders Programme	- Universal iodisation of salt. - Quality control of iodised salt. - Monitoring and evaluation of iodised salt. - Enactment of edible iodised salt law. - Awareness creation on IDD.	**BSCIC** in collaboration with IPHN, BNNC, INFS, IFST	WB, UNICEF	National	1989-contd.
3.	Vitamin A capsule (VAC) supplementation	- Supplementation of VAC to infants under 1 year (25,000 IU during each visit for immunization) children aged 1 to 6 years (200,000 IU) two times/year, lactating mothers (200,00 IU) 2 weeks after delivery. - supplementation of VAC to diarrhoeal and measles and ARI patients.	IPHN, NGOs	UNICEF, WB	National	On-going
4.	NGO Gardening and Nutrition Education Surveillance Project (NGNESP)	- Promotion of production and consumption of Vit. A rich fruits and vegetables. - Establishment of central nurseries and village nurseries. - Establishment of household gardens.	HKI and partner NGOs	USAID, NOVIB, ODA, ASSP	90 Thanas (315,000 households)	1995-on-going

Sl. No.	Programme	Activities	Agencies Concerned	Funded by	Coverage	Duration
5.	Promotion of Home Gardening through Training	- Training on home gardening to Block Supervisors and NGO workers, nursery farmers. - Supply of seeds and fertilizers. - Support for irrigation by treadle pumps or tubewells.	HKI, DAE, ASSP and 6 NGOs	ODA	5 Districts (30 Thanas)	1995-on-going
6.	Comprehensive Nutrition and Blindness Prevention Programme	- Intensive media approaches through women volunteers and health workers on nutrition education. - Mass/multimedia approaches through schools, folk singers, cinema slides, documentary films, bill boards, flip charts.	WIF, HKI	ODA	3 Districts (Thakurgaon, Panchagarh and Dinajpur)	1995-on-going
7.	Bangladesh Horticulture Research and Development Project	See sr. No. **8** of Theme **2 (section 4.2.1).**				
8.	Nutrition Message Dissemination Programme	- TV spots. - Radio programmes - Folk songs. - News letters (quarterly). - Nutrition journals (bi-yearly)	BNNC, IPHN, BTV, BB, BINP, BBF, INFS, BARI	WB, UNICEF	National	1989-2000
9.	Community Nutrition Programme	See sr. no. **20** of Theme **2 (section 4.2.1).**				
10.	Combined service delivery	See sr. no. **24** of Theme **2 (section 4.2.1).**				

4.7.2 *Sectors Involved*

The Sectors and agencies involved are as follows:

- Ministry of Industries.
- Ministry of Health and Family Welfare
- Ministry of Agriculture
- Ministry of Fisheries and Livestock
- Ministry of Environment and Forest
- Ministry of Local Government, Rural Development and Cooperatives.
- Ministry of Social Welfare
- Ministry of Education
- Ministry of Information
- Ministry of Food
- Ministry of Women and Children Affairs
- FAO, UNICEF, WHO, UNESCO, USAID, WB, etc.
- NGOs

4.7.3 *Strategic Framework*

Preventing and controlling specific micronutrient deficiencies:

- Conduct **district-wide surveys** with stratified sampling to identify the target population in different areas/regions.

- The **quality of diet (the balanced diet concept)** has to be enhanced along with adequate supply of energy.

- The **production and availability of food** (e.g., fruits, vegetables and poultry), need to be increased.

- The **motivation and communication** strategies should be specifically aimed to enhance the **consumption** of micronutrient rich foods with active community participation.

- **Food fortification and food preservation** technologies as well as facilities down to the household level should be developed.

- Supplementation of **vitamin A capsules** should be strengthened through the existing infrastructure as a supportive programme to food-based measures.

- Distribution of **iron-folate tablets** through the existing primary health care system, specially for the vulnerable population needs to be ensured.

Sl No	Actions	Agencies Concerned	Target	Time Frame	Outcome Indicators
4.7.3.1	Control of nutritional anaemia				
i.	Provide iron-folate tablets/syrups through PHC.	MOHFW, MOWCA, MOSW, NGO	Pregnant and lactating mothers, and U-5 children. Adolescent girls	2000 2010 2000 2010	Anaemia reduced - to 50% - to 25% Anaemia reduced - to 50% - to 25%
ii.	Increased production of iron rich vegetables and fruits.	MOA, MOLGRD, MOSW, MOWCA, NGO	Pregnant and lactating mothers, U-5 children and adolescent girls	2000 2010	Fruit Intake 20 g/person/day Vegetable Intake 213 g/person/day Fruit Intake 56 g/person/day
iii.	Deworming.	MOHFW, MOSW, MOWCA, MOLGRD, PMED, MOE, NGO	Total community	2000	100% coverage
iv.	Access to safe excreta disposal.	MOHFW, MOEF, MOSW, MOE, LGRDC, NGO	80% coverage in rural areas	2000	Reduction in worm infestation rate.
v.	Creation of a national database on the prevalence of anaemia using clinical and bio-chemical assessment criteria.	MOP, DU, MOHFW, MOA, LGRDC, NGO	Mothers, adolescent girls and children	2000	Published report
vi.	Nutrition advocacy and education.	MOHFW, MOA, MOSW, MOLGRD, MOE, PMED MOWCA, NGO	Total community	2000	Improvement in KAP

Sl No	Actions	Agencies Concerned	Target	Time Frame	Outcome Indicators
4.7.3.2	Control of vitamin A deficiency				
i.	Distribution of vitamin A capsules (VAC).	MOHFW, MOSW, MOWCA, MOLGRD, NGO	U-6 children and pregnant mothers	To continue till alternative strategies are established	Coverage rate >80%
ii.	Backyard gardening for growing vitamin A rich vegetables and fruits.	MOA, MOLGRD, MOWCA, NGO	Total community emphasis on women and children	2000	Nightblindness prevalence <1%
iii.	Nutrition advocacy and education.	MOHFW, MOA, MOE, MOLGRD, MOWCA, NGO	Total community	2000	Improvement in KAP
4.7.3.3	Control of iodine deficiency disorders				
i.	Universal iodisation of edible salt.	MOI, MOHFW, MOE, MOC, LGRDC, NGO	Total community	2000	100% coverage of iodized salt
ii.	Monitoring of iodine content of salt at all levels.	MOHFW, MOST, LGRDC, NGO	Salt industries, traders, retailers, & consumers	2000	Regular monitoring reports
4.7.3.4	Control of other micronutrient deficiencies				
i.	A cross sectional survey to assess the prevalence rate of deficiencies of riboflavin, vitamin C, vitamin D, calcium, zinc and others.	MOP, MOE (INFS), MOHFW, MOA, MOLGRD, NGO	Total community	1998	Published reports

4.7.4 *Action Plan*

1. Development of **home gardens**, poultry, fisheries and other **small farm animals** at the **village** level through the active participation of the community.

2. Planning **training courses**, to ensure **availability** of these foodstuff at the **grassroots level**.

3. Education and motivation of the community to enhance **knowledge** of the importance of micronutrients in the diet.

4. Preservation of micronutrient rich seasonal foods should be encouraged at the local level.

5. Local level **fortification** of foods.

6. Monitoring and assessment of distribution of vitamin A capsules and iron tablets by the local government and locally active organizations.

7. Concept of **balanced diet** to be incorporated in all on-going programmes.

8. **Integrated farming system** approach.

9. Ensure **universal availability of iodised salt** and regular monitoring of iodine level at the consumption points.

4.7.5 *Proposed Interventions*

The following interventions are suggested in order of priority:

1. Production of **micronutrient-rich fruits and vegetables** at household levels through community participation.

   Group-level organization for sustainable production of fruits and vegetables by community, Union Parishads etc.

2. Intensive **monitoring of iodine levels** in salt by inspectors and extension workers.

   Monitor the universal iodisation of salt project of Bangladesh.

3. Assessment of **micronutrient levels** in the average **Bangladeshi diet** and suggest suitable intervention measures.

   Assess dietary intake patterns to generate suitable IEC strategies.

4. Assess **vitamin A and iron deficiencies in special physiological states**, viz. pregnancy and lactation and develop suitable intervention programmes.

Precipitation of micronutrient deficiencies during pregnancy and or lactation-generation of data and plan intervention strategies.

4.8 PROMOTING APPROPRIATE DIET AND HEALTHY LIFESTYLES

A healthy lifestyle and an appropriate diet are strongly linked with the absence of many non-communicable diseases. In Bangladesh, at the same time as there are large numbers of people suffering from undernutrition due to lack of calories and nutrients, there are some sections of the population, particularly those more affluent and urbanized, who are overweight as a result of overconsumption and inappropriate diets. Quite often, such diets tend to become high in saturated fats, refined carbohydrates and salt, but low in fibre and complex carbohydrates. Other factors like lack of exercise and smoking precipitate into the production of obesity, hypertension, diabetes mellitus, cardiovascular diseases, osteoporosis and certain type of cancers, all of which cause a significant economic and social loss.

4.8.1 *On-going Programmes and Situation Analysis*

Efforts are being made to increase the intakes of oil, pulse, vegetable, fruits and animal products for certain groups of the population, while at the same time reducing the intakes of oil and other energy-dense foods together with more healthy lifestyles in other groups. At the national level the incidence rate of obesity is 0.1%, diabetes mellitus around 2.0% and hypertension of around 1.84%. Though the percentages do not appear very high, considering their occurrence is largely in a limited group, the incidence is rather high.

On-going programmes:

Sl. No.	Institution	Action
1.	Bangladesh Institute of Research and Rehabilitation in Diabetes and Endocrine Metabolism (BIRDEM).	- Treatment and care of diabetic patients. - Rehabilitation. - Awareness creation on healthy lifestyle through disciplined way of life (diet counseling, physical exercise). - Research. - Training and education.
2.	Institute of Cardiovascular Diseases (ICVD).	- Treatment and care of patients with CVD. - Rehabilitation. - Research.

		- Training and education.

Supportive programmes

1. BINP (sr. no.15 of Theme no. 2 (section 4.2.1).

2. NGO gardening and nutrition education surveillance project (sr. no. 18 of Theme no. 2 (section 4.2.1).

3. Community nutrition programme (sr. no. 20 of Theme no. 2 (section 4.2.1).

4. Collaborative training with ASSP, DAE, GTI and BAU (sr. no. 23 of Theme no. 2 (section 4.2.1).

5. Combined service delivery (sr. no. 24 of Theme no. 2 (section 4.2.1).

6. Essential health care and reproductive health and disease control programme (sr. no. 1 of Theme no. 4 (section 4.4.1).

7. BBF (sr. no. 1 of Theme no. 5 (section 4.5.1).

8. Nutrition message dissemination programme (sr. no. 8 of Theme no. 7 (section 4.7.1).

Analysis of the existing situation indicates a need to:

- Better target programmes and facilities.
- Raise awareness at all levels.
- Involve the community in decisions.

4.8.2 Sectors Involved

The Sectors and agencies involved are as follows:

- Ministry of Health and Family Welfare
- Ministry of Agriculture
- Ministry of Social Welfare
- Ministry of Women and Children Affairs
- Ministry of Local Government, Rural Development and Cooperatives.
- Primary and Mass Education Division
- Ministry of Education
- Ministry of Information
- WHO, FAO, UNICEF, UNESCO, WB
- NGOs

4.8.3 *Strategic Framework*

Promoting appropriate diets and healthy lifestyle:

Generating awareness in the target population of the effects of inappropriate diets and lifestyles on health.

Strengthening those institutions dealing with the related problems as it is expected that the incidence rates would rise, along with generation of requisite manpower to tackle the problem.

Sl No	Actions	Concerned Agencies	Target	Time Frame	Outcome Indicators
4.8.3.1	Survey to know the existing situation on overnutrition and unhealthy lifestyle.	**MOP**, MOHFW, MOSW, MOWCA, MOE, NGO	Identified population.	1998	Completed report
4.8.3.2	Education and advocacy programmes including community.	See section **4.9**			
4.8.3.3	Preparation of a plan of action aimed at the target groups (with 10 years prediction)	**MOP**, MOHFW, MOSW, MOWCA, MOE, NGO	Identified population	1999	Implementation by 2005

4.8.4 *Action Plan*

1. Development of **audio-visual aids** such as bulletins, folders, leaflets, posters, TV and cinema spots to raise the awareness of the importance of a balanced diet and healthy lifestyle.

2. Assessment of the present status of inappropriate dietary pattern and unhealthy lifestyle in different sections of the population.

3. Prepare a **predictive assessment of the problem for the next 10 years** and plan programmes to **support** and **equip** the concerned institutions.

4.8.5 *Proposed Interventions*

The following interventions are proposed in order of priority:

1. A survey using stratified sampling method to know the **cause and the effect** of inappropriate diets and unhealthy lifestyles.

   Stratified sampling, using socioeconomic criteria to establish the type, cause and effect of inappropriate diet and unhealthy lifestyle in each group.

2. Prepare a **comprehensive plan** to **prevent, control and cure**.

   Interlinking between existing agencies and strengthening the concerned institutions.

3. Nation-wide **consciousness building campaign** to enhance good civic sense on **health, environment and hygiene**.

   Mass media campaign programme on developing healthy lifestyle and practices.

4.9 PROMOTING NUTRITION EDUCATION, ADVOCACY AND COMMUNITY PARTICIPATION

The promotion of nutrition education and the generation of awareness, advocacy and community participation are important issues for the success of a development programme or project. Yet seldom have they been made a permanent component in planning or implementation and rarely have the targeted population received the benefit. The involvement of women, vulnerable groups and grassroots level workers need to be given their due place during the planning, implementation and evaluation process. However many on-going programmes are conducted without proper assessment of the training and communication needs and their impact have not been monitored and evaluated to plan midstream corrections and alterations. It is necessary to involve the community, not only in the design of a programme but also to provide a feedback of information to the planners and implementors.

4.9.1 *On-going Programmes and Situation Analysis*

On-going programme include:

1. Nutrition message dissemination programme:

   - TV spots
   - Radio programme
   - Folk songs
   - Newsletters
   - Nutrition journals

2. BINP (see sr.no. 15 of Theme no.2 (section 4.2.1).

3. BBF (see sr.no. 1 of Theme no.5 (section 4.5.1).

4. Control of IDD programme (see sr.no.2 of Theme no.7 (section 4.7.1).

5. Model school gardening promotion programme (see sr.no.17 of Theme no.2 (section 4.2.1).

6. NGO gardening nutrition education surveillance project (see sr.no.18 of Theme no.2 (section 4.2.1).

7. Promotion of homegardening through training (see sr.no.19 of Theme no.2 (section 4.2.1).

8. Comprehensive nutrition and blindness prevention programme (see sr.no.6 of Theme no.7 (section 4.7.1).

9. Community nutrition programme (see sr.no.20 of Theme no.2 (section 4.2.1).

10. Support for Bangladesh Institute of Research and Training on Applied Nutrition (see sr.no.22 of Theme no.2 (section 4.2.1).

11. Agriculture support services project (sr.no.4 of Theme no.2 (section 4.2.1).

12. Nutrition courses in primary, secondary, agriculture and medical curricula.

13. NGO-supported programmes

Analysis of the existing situation indicates a need for:

- Coordination between agencies.
- Commitment at all levels to reach the target population.
- Highlight the importance of health, nutrition and environment in literacy projects.
- Sensitization of the community.
- Women-oriented IEC component.

4.9.2 *Sectors Involved*

The Sectors and agencies involved are as follows:

- Ministry of Information
- Ministry of Health and Family Welfare
- Ministry of Agriculture

- Ministry of Fisheries and Livestock
- Ministry of Science and Technology
- Ministry of Education
- Primary and Mass Education Division
- Ministry of Social Welfare
- Ministry of Women and Children Affairs
- Ministry of Local Government, Rural Development and Cooperatives
- UNESCO, UNICEF, WB, FAO, WHO, UNFPA, WFP
- NGOs such as HKI, WIF, BRAC, Grameen Bank and others.

4.9.3 *Strategic Framework*

Promoting nutrition education, advocacy and community participation:

- **Coordination** among all mass media cells of the sectors concerned by the nodal agency.

- **Advocacy** to planners and implementors to be strengthened.

- **Community participation strategies** to be developed and suitably communicated.

Sl No	Actions	Agencies Concerned	Target	Time Frame	Outcome Indicators
4.9.3.1	**Institutional development**				
i.	Nutrition education component to be introduced at the **Union level** health centre.	**MOHFW, MOA, MOLGRD,** MOSW, MOFL, NGO	All Union Health Centres	2000	100% coverage
ii.	A basic training / communication unit at the **Thana level.**	**MOHFW, MOLGRD,** MOSW, **MOA,** MOWCA, MOFL, NGO	All Thana Complex	2000	100% coverage
iii.	A coordination and supervisory unit at the **District level.**	**MOHFW, MOLGRD,** MOSW, **MOA,** MOWCA, MOFI , NGO	All Districts	2000	100% coverage
iv.	Interministerial and interagency coordination council at the **National level** to indicate and guide the process of institutional development in the light of the NPAN objectives. This would require strengthening of the existing institutions, viz., Bangladesh National Nutrition Council (BNNC) along with other institutions of the government, universities and voluntary agencies.	**MOHFW, MOA,** MOF, MOEF, MOSW, MOWCA, MOFL, MOE, PMED MODMR, MOLGRD, NGO, MOC, MOI	Policy planners/ researchers	1998	Committee functioning
v.	Introduction of **nutrition courses in all educational institutions.**	**MOE, PMED** MOHFW, MOA, MOI, NGO	School children	1998	Curriculum formed and incorporated into syllabus

Sl No	Actions	Agencies Concerned	Target	Time Frame	Outcome Indicators
4.9.3.2	**Human resource development**				
i.	**At Ward level** " Women's representative " Youth club " Awareness programmes	**MOWCA**, MOSW, **MOLGRD**, MOA, MOHFW, NGO	Adult men, women and youths	1998 2000	Institutions established Increased KAP
ii.	**At Union level** " Women's groups " Youth forums " Awareness and motivation programmes through health centres (EPI outreach centres and satellite clinics)/block supervisors/voluntary agencies	**MOWCA**, MOSW, **MOLGRD**, MOHFW, NGO	All women and youths	1998	Institutions established
iii.	**At Thana Level** " Women's coordinating committees " Intersectoral coordination committees through existing infrastructure and possible inclusion of additional responsibilities of Thana Nutrition Coordination activities.	All Ministry & NGO representatives at Thana level	Women groups, Thana Council	1998	Committees formed and functioning
iv.	**At District level** " The District level coordination committee to supervise, monitor and evaluate all IECM activities.	All Ministry & NGO representatives.	District level officers	1998	Committees formed and functioning
v.	**At National level** " Already existing interministerial and interagency committees to ensure smooth implementation of all IECM related activities. " Training and exchange programmes within the country and abroad.	All concerned Ministries and NGOs	Nutritionists and other allied professionals	2000	Improved human resource capacity

Sl No	Actions	Agencies Concerned	Target	Time Frame	Outcome Indicators
4.9.3.3	Coordination				
i.	Formation of a coordinating committee by the health education unit of Ministry of Health and AIS of MOA involving all concerned units of different collaborative sectors.	MOHFW, MOA, MOF, MOEF, MOSW, MOWCA, MOFL, MOE, PMED MODMR, MOLGRD, MOI, NGO	Concerned sectors	1996	Functioning of the committee
ii.	Ensure the community participation till the village level with networking from the National Coordinating committee to District to Thana to Union to Village levels using all existing infrastructures.	MOHFW, MOA, MOLGRD, and all existing govt, infrastructure at rural level, NGO	Continuous	Contin-uous	Improvemen t of KAP and inter-sectoral coordination

4.9.4 *Action Plan*

1. A **central committee** to be set-up to coordinate activities of different sectors working towards nutrition education, members of which would be the Chiefs of mass media cells of all sectors concerned.

2. Assessment of the impact of training. IEM activities and community participation to be conducted regularly.

3. Prioritization of messages and communication strategies.

4. Institution of regular **courses** (short and long term) to enhance a trainer's capabilities at the field level.

5. Nutrition courses, awareness and related issues to be made a part of the **curriculum** in all educational institutions.

6. Ensure **community participation** in nutrition related activities for volunteers, working groups for women and NGOs.

7. For **community nutrition activities**, ensure individual contact, family approach, leaders approach, mass approach and institutional approach.

4.9.5 *Proposed Interventions*

The following interventions are proposed in order of priority:

1. Development of **information, education and communication (IEC)** material for household **food security**.

   Compile information on issues related to food security and its impact on nutritional status.

2. Awareness creation on **socio-psychic issues** for caring.

   Required for better caring practices of mothers, primary health workers and other care-givers.

3. A comprehensive **mass media campaign on the prevention of micronutrient deficiencies** at national to village level.

   Develop suitable IEC material and methods to reach the actual target population.

4. **Information, education and communication** material development and campaign for **appropriate diet and healthy lifestyle**. Incorporation of these materials in **syllabus/curriculum** in educational institutions.

   Develop suitable syllabi, module etc. with coordination of the Education Ministry.

5. Develop programmes to ensure **community participation** in nutrition activities.

   Involve Union Parishads, local NGOs, nutrition committees of BINP to have continuous involvement with community.

6. **Strengthening the existing MIS** of Ministry of Health and Family Welfare by incorporating nutritional indicators.

7. Development of a **comprehensive and easy-to-carry package** of important messages concerning control of malnutrition for use at the field level along with a built-in impact assessment methodology.

   For use by agriculture extension workers

8. Development of TV spots, plays and other **mass communication strategies**.

   Identify targeted messages to develop spots, plays etc.

9. Development of curriculum for training the trainers.

For use by agriculture extension workers, PHCs etc.

4.10 ASSESSING, ANALYZING AND MONITORING NUTRITION SITUATIONS

To plan, implement, monitor and evaluate any policy or programme, it is essential to have detailed information on the nature, extent, magnitude, severity and the changes over time of different types of nutritional problems. The causes and the resources available also need to be known. Hence, comprehensive information regarding the nutrition situation will help the decision makers plan more effectively. Better plans will improve the cost-effectiveness of programmes leading to improved social and economic benefits.

4.10.1 *On-going Programmes and Situation Analysis*

Surveys on nutritional status, dietary intake, availability, attitude and other related information are regularly conducted by several organizations of the government as well as the NGOs. Usually these singular efforts run vertically to each other without proper coordination. This can lead to apparently conflicting and confusing data and the credibility of such work is lessened as a result. Hence, it is essential to create an information a system to generate a dependable and universally accepted database.

On-going programmes:

Sl. No.	Sector	Action	Coverage
1.	Bangladesh Bureau of Statistics (MoP)	- Child nutrition status survey (two-yearly). - Household expenditure survey (occasional) - Agriculture Census (yearly). - Health and demographic survey (occasional). - Labour force survey (occasional). - Disability survey (occasional).	National
2.	NIPORT (MoHFW)	- Family planning and health survey. - Fertility survey.	National
3.	HKI, IPHN, ICDDR,B & NGOs	Nutritional surveillance project (NSP).	National
4.	Dhaka University	- National nutrition survey in rural areas every 10 years. - IDD survey	National
5.	ICDDR,B	- Demographic surveillance system.	Matlab (1 Thana)
6.	BRAC	Watch project.	National

Analysis of the existing situation suggests that:

Although efforts are being made on surveillance and monitoring of programmes, greater inter-sectoral commitment and coordination is needed

- Use of the data by the Planning Commission needs emphasis.
- Identification of data gaps at national level needed.
- Accessibility to information needs to be easier.

4.10.2 *Sectors Involved*

The Sectors and agencies involved are as follows:

- Ministry of Planning (BBS)
- Ministry of Health and Family Welfare
- Ministry of Agriculture
- Dhaka University (INFS, Biochemistry Dept., ISRT, Statistics Dept.).
- BIDS
- FAO, WHO, UNICEF, UNESCO, WB, ICDDR,B
- NGOs such as HKI, BRAC

4.10.3 *Strategic Framework*

Assessing, analyzing and monitoring the nutrition situation:

- Develop a **coordinating mechanism** and identify the agency/organization responsible to set-up a comprehensive information system.
- Identify **data gaps**.
- Ensure **easy accessibility** to dependable database.

Sl No	Actions	Concerned Agencies	Target	Time Frame	Outcome Indicators
4.10.3.1	The on-going surveys conducted by the Bangladesh Bureau of **Statistics (BBS)** should include more information generation system on nutrition related issues, viz., maternal nutrition; micronutrient deficiencies; agricultural production vs. nutritional status; land availability vs. food intake and so on.	**MOP**, MOA, MHFW, MOE (DU), NGO	Total community	1998	Evolve a proper monitoring and evaluation system with properly trained manpower
4.10.3.2	A **central coordinating body** comprising of representatives of all concerned ministries, non-government and other agencies should be formed by the **Ministry of Planning** to: " coordinate, assess, analyses and monitor all nutrition related surveys. " Suggest and implement changes in the on-going programmes as and when needed.	**MOP,** MOHFW, MOA, MOF, MOEF, MOSW, MOWCA, MOFL, MOE, PMED MODMR, MOLGRD, MOI, NGO, MOC	All existing survey systems	1998	Coordination body functioning
4.10.3.3	A **comprehensive database** covering all nutritional issues to be compiled and published regularly.	**MOP**, MOA, MOHFW, MOLGRD, INFS, NGO	Total population	1998	Published reports

4.10.4 *Action Plan*

1. Creation of a **Bangladesh nutrition monitoring centre/unit** (responsible agency for developing an up-to-date scientific data bank). Bangladesh Bureau of Statistics may implement it.

2. This monitoring unit/centre should be involved in the development of all nutrition programmes/projects in the country.

3. Development of **computer networking** to make the data easily available. The MIS of MOHFW may be entrusted with responsibility.

4. Proper **analytical methods and models** need to be developed and adopted to assess and analyses all survey data and to use them to the maximum extent by planners, implementors and individuals.

4.10.5 *Proposed Interventions*

The following interventions are proposed in order of priority:

1. Formation of a **national nutrition monitoring centre**.

   Creation of a central monitoring unit which networks with districts and Thanas for nutritional monitoring. Linking the unit with BBS to generate annual updates on the food and nutritional status of the country.

2. Strengthen and expansion of **nutrition surveillance**.

   Extend existing programme of HKI.

3. Monthly or quarterly (as appropriate) **news bulletin** for circulation among all sectors of government, UN agencies and NGOs, highlighting the latest information on nutrition.

   To be prepared by the central monitoring unit or Planning Commission, GOB.

4. Development of suitable **computer programmes** for analyzing the data and subsequently making it **available through net working**.

   For all programmes---suitable hard and software support and interlinking.

5. INSTITUTIONAL FRAMEWORK FOR TRANSLATING PLANS INTO ACTION

The **Bangladesh National Plan of Action for Nutrition** describes the existing situation: the goals, objectives and targets, and presents a strategic framework for implementing the plan. Specific outcome indicators for both short as well as long-term programmes are suggested. A comprehensive analysis of the existing situation has been made, the concerned sectors for improving nutritional status in Bangladesh have been identified, and the related actions that need to be taken up have been highlighted. Lastly, the document has suggested a few important intervention activities which need special attention. A few of these have been identified as priority projects based on the suggestions made at the workshop for finalization of the NPAN organized by BNNC, MOHFW.

The most important action for the country is now to translate this policy framework into action. Accordingly, strategic, targeted as well as sustainable programmes/projects need to be developed and implemented by all the concerned sectors of the government as well as the non-government organizations (NGOs). The help and advice from the various supportive UN and bi-lateral agencies would be welcome. A step-wise plan for implementation of NPAN is suggested as follows:

Step 1 - Formation of the **National Nutrition Council** (already done). This is the highest body (committee) being Chaired by the Prime Minister for implementation of the National Plan of Action. This committee is to develop and issue the policy guidelines needed to achieve the objectives of the Bangladesh NPAN. It acts as the highest body to ensure proper intersectoral coordination among all the concerned sectors through its linkages with the Ministry of Planning. The Council has the main responsibility for improving nutrition which is effected by providing guidance on policy to the Government. Membership of this committee includes the Ministers and most senior Government officials of the concerned sectors. The Member Secretary of this committee would be a most senior officer of the nodal ministry.

Step 2 - Formation of a **Steering Committee** with the Minister of the nodal Ministry as Chair. The members would be the most senior planners and policy makers from the concerned Ministries of the Government along with representation from the most effective NGO bodies. This group would draw up the specific action programmes while considering the intersectoral coordinated approach to maximize their impact in a most cost-effective way.

Step 3 - Formation of **Working Groups** by each sector, with the nodal officer of the particular Ministries/Sectors as Chair. These working groups would ensure the participation of all concerned institutions, agencies, programme

managers, NGO bodies and other experts working in these particular sectors. It is very important that the members of the committee have representation uniformly from all the on-going activities of the country, so that the action plan prepared would take into consideration all the existing efforts, identify the gaps and prepare effective, sustainable and viable projects and programmes.

Step 4 -Monitoring and evaluation of the implementation of the Bangladesh NPAN would be the most critical factor for its success. An in-built system of nutrition surveillance needs to be developed at the Ward level (if possible), to give a regular feed back to the working groups (through the existing sectoral infrastructures, programmes and NGOs) to keep the planners of the concerned sectors informed.

The success of the Bangladesh NPAN will depend on its effective implementation by ensuring intersectoral coordination, community participation and proper analysis and evaluation of the programmes with a sense of responsibility, adaptability, flexibility and mutual understanding.

ANNEXURE

NATIONAL WORKING COMMITTEE (NWC) FOR NPAN

1.	Additional Secretary, Ministry of Health and Family Welfare.	Chairman
2.	Joint Secretary (H & PH), Ministry of Health and Family Welfare.	Member
3.	Director General, Directorate of Health Services.	Member
4.	Director General, Directorate of Family Planning.	Member
5.	Prof. M. Q-K Talukder, Project Director, Institute of Child and Mother Health and Chairman, Standing Technical Committee Bangladesh National Nutrition Council.	Member
6.	Joint Chief, Ministry of Health and Family Welfare.	Member
7.	Representative, Ministry of Agriculture.	Member
8.	Representative, Ministry of Social Welfare.	Member
9.	Representative, Ministry of Women and Children Affairs.	Member
10.	Representative, Institute of Livestock Research.	Member
11.	Representative, Directorate of Fisheries.	Member
12.	Representative, Ministry of Relief & Disaster Management.	Member
13.	Representative, Ministry of Food.	Member
14.	Representative, Ministry of Information.	Member

15.	Mr. Asad Uddin Ahmed, Dy. Chief (Health), Ministry of Health and Family Welfare.	Member
16.	Mr. Syed Azizur Rahman, Asst. Chief, Ministry of Health and Family Welfare.	Member
17.	Dr. S. M. Abudullah Al Momen, Junior Clinician, IPHN.	Member
18.	Director, INFS.	Member
19.	Representative, Bangladesh Rural Development Board.	Member
20.	Representative, Institute of Food Science & Technology.	Member
21.	Representative, Helen Keller International.	Member
22.	Dr. S. K. Roy, ICDDR'B.	Member
23.	Representative, UNDP.	Member
24.	Representative, FAO.	Member
25.	Additional Director, Directorate of Women Affairs.	Member
26.	Representative, BRAC.	Member
27.	Mr. Md. Abdul Mannan, Secretary, Bangladesh National Nutrition Council.	Member-Secretary

WORKING SUB-COMMITTEE

1.	Prof. M. Q-K. Talukder, Project Director, Institute of Child and Mother Health and Chairman, Standing Technical Committee Bangladesh National Nutrition Council.	Chairman

2.	Prof. Rezaul Karim, Director, Institute of Nutrition & Food Science. Dhaka University.	Member
3.	Dr. S. K. Roy, Scientist, ICDDR'B, Dhaka.	Member
4.	Dr. Nazmul Hassan, Professor, Institute of Nutrition & Food Science Dhaka University.	Member
5.	Dr. Hossain Zillur Rahman, Bangladesh Institute of Development Studies.	Member
6.	Mr. Md. Aminul Haque Bhuyan, Assoc. Professor, Instiiute of Nutrition & Food Science Dhaka University.	Member
7.	Dr. Syeeda Begum, Junior Clinician, Institute of Public Health Nutrition.	Member
8.	Dr. S. M. A. A. Momen, Junior Clinician, Institute of Public Health Nutrition.	Member
9.	Dr. Iqbal Kabir World Bank, Dhaka.	Member
10.	Ms. Shahnaz Ahmed UNDP, Dhaka.	Member
11.	Mr. Soren Bo Madsen FAO, Dhaka.	Member
12.	Dr. George J. Komba Kono WHO, Dhaka.	Member
13.	Dr. Sadia Chowdhury, Director, WHDP, BRAC.	Member
14.	Ms. Nasreen Huq, Senior Technical Adviser, HKI, Dhaka.	Member
15.	Mr. Rashiduzzaman Ahmed, Program Officer, VHSS, Dhaka.	Member
16.	Mr. Abu Zafar Amanatullah, Deputy Secretary, Bangladesh National Nutrition Council.	Member

17. Mr. Abdul Motaleb Mia, Member
Deputy Secretary (Public Health),
Minisrty of Health and Family Welfare

18. Mr. Md. Eshaque Ali, Member
Nutritionist,
Bangladesh National Nutrition Council.

19. Ms. Mahfuza Begum, Member
Monitoring and Evaluation Officer,
Bangladesh National Nutrition Council.

20. Mr. Abu Ahmed Shahmim, Member
Program Officer,
Bangladesh National Nutrition Council.

21. Ms. Akhtari Mamataz, Member
Senior Assistant Secretary,
Ministry of Health and Family Welfare.

22. Mr. Mohammad Saidur Rahman Member
Nutrition Information and Documentation Officer
Bangladesh National Nutrition Council.

23. Mr. Md. Abdul Mannan Member-Secretary
Secretary
Bangladesh National Nutrition Council.

NATIONAL FOCAL POINT

1. Mr. M. Azizur Rahman
Joint Secretary (H&PH)
Ministry of Health and Family Welfare (Lead Ministry).

SECTORAL FOCAL POINTS

1, Mr. A. Waheed Khan
Deputy Chief, Ministry of Agriculture.

2. Mr. Fakhrul Ahsan / Mr. Moududur Rashid
Deputy Chief, Ministry of Food.

3. Mr. Abu Mohammad
Deputy Chief, Ministry of Fisheries and Livestock.

4. Mr. Md. Hafizur Rahman
Deputy Secretary (Dev.), Ministry of Women and Children Affairs.

5. Mr. Md. Osman Ali
Deputy Chief (Planning), Ministry of Social Welfare.

6. Mr. M. Shukur Mohammad Pk.
Deputy Secretary (Admin), Ministry of Information.

7. Mr. Motaher Hossain
Deputy Chief (Planning Br.), Ministry of Relief & Disaster Management.

8. Mr. S. C. Khan
Deputy Secretary (Dev.1), Finance Division.
Ministry of Finance.

9. Ms. Nargis Islam
Deputy Chief (Health Wing), Planning Commission..

10. Mr. Abul Khair
Deputy Chief, Ministry of Education.

11. Mr. Md. Sherajul Islam
Deputy Chief, Ministry of LGRD.

12. Mr. Mohammad Ibrahim
Deputy Chief, Ministry of Environment and Forest.

13. Dr. Md. Delwar Hossain, Deputy Chief
Primary & Mass Education Division.

14. Mr. Ahmed Tajul Islam
Director, Project-1, NGO Affairs Bureau.

CONSULTANTS

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4. Dr. Ziauddin Haider
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