Protocol # 98-017 (BINP)

Title of the project:	**Costing of the BINP activities at the Community Level.**
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Name of the institution:	**ICDDR, B**
Start and end dates:	**July to November 1998**
Requested funding level:	**US $ 19,800.**

Abstract

Nutritional status of population in Bangladesh is one of the worst in Asia. Nationally representative surveys indicate that the prevalence of stunting among children declined from 60 to 50% over the last 10 years while the prevalence of wasting remained more or less stagnant. The BINP was adopted to devise national strategies for the reduction of malnutrition in the country through community-based interventions. The objective of this study is to estimate the costs of BINP activities from project's point of view. Costing of BINP will allow policy makers to decide whether a similar national programme will be affordable and to identify steps for making interventions sustainable in the longer-run.

This research study will use standard costing methodology for estimating resource use at the primary care facilities. Since BINP is a multi-sectoral and multi-intervention programme, the costing will be carried out by functional areas or activities. The interventions of BINP will be directly observed by trained enumerators to list all the resources being used at the point of delivery. The inputs listed will then be categorized as recurrent cost item or capital cost item. The second visit will quantify the inputs used at the community level. Production function approach will be used to identify additional resource needed prior to the actual delivery of services. These resources help to organize the functions and activities and may not be observable if the service delivery is observed. Efforts will be made to identify the input requirements at the higher administrative levels for expansion of activities at the community level. The listed inputs will then be valued using appropriate price levels. The projects' data on the number of beneficiaries reached will be considered the intermediate outcome of the interventions and the average cost per beneficiary will be estimated. If the number of beneficiaries vary widely from one thana to another, the estimates may also indicate the effect of scale of operation or scope of the project on average cost of carrying out BINP activities.

Costing of the BINP activities at the Community Level

A. Background information and problem statement

Nutritional status of population in Bangladesh is considered one of the worst in Asia. Despite quite rapid growth in income and food production, nutritional status remained low with considerable impacts on health, quality of life, labour productivity and mental ability (Berg, 1974; Frisch, 1978; Gopalan, 1988; Martorell, 1978; Popkin, 1978; Winikoff, 1978). The Bangladesh Bureau of Statistics (BBS) carryout regular surveys to determine the nutritional status of children in Bangladesh. All the surveys clearly indicate a high degree of malnutrition among children. Other surveys also indicate similarly high rates of malnutrition (HKI Nutrition Monitoring, Surveys carried out by the Institute of Nutrition and Food Science).

The 1995-96 Child Nutrition Survey of Bangladesh shows that more than 50% of children between the age six to 71 months are stunted. Stunting reflects long-term adjustments to nutritional stress and high prevalence of moderate and severe stunting indicates presence of chronic nutritional stress in many households of the country. Prevalence of wasting, which is an indicator of short-term nutritional deficiency, is also very high. In fact, Bangladesh probably shows the highest prevalence of wasting in the world. According to the 1995-96 Survey, the prevalence rate of wasting was more than 16 percent. The nutritional status among rural population is even worse than the urban rates.

In Bangladesh, stunting has shown some improvements over the last 10 to 15 years but the rate of progress has remained very low. For example, the prevalence of stunting

among children has declined from about 60% to about 50% from 1985 to 1995. If this rate of decline continues in the future, reducing stunting by 50% will require another 25 years. What is more disturbing is the complete stagnancy of the prevalence of wasting. In fact, rather than showing a decline over the last 10 years, wasting rate actually increased (BBS 1996).

Multivariate analysis explaining the determinants of malnutrition among children indicate that economic situation is only one of the factors affecting the probability of malnutrition of a child. Social situation, educational levels of parents, mother's knowledge about the control and management of widely prevalent childhood illnesses, etc. affect the nutritional status of children.

The malnutrition situation in Bangladesh is so serious that immediate remedial actions must be undertaken. It is clear that poverty alleviation and economic development efforts alone will not be successful in reducing the malnutrition rates in the short-run. An effective strategy must emphasize creating public awareness and changing household behaviour with respect to health environment and childcare. The Bangladesh Integrated Nutrition Project (BINP) has been launched to address the nutritional problems of the country in a comprehensive manner.

The Bangladesh Integrated Nutrition Project (BINP) was adopted to improve the nutritional status of the population, especially of women and children, through community-based nutrition interventions. The project design started from the premise that improving the nutritional status of population requires a comprehensive strategy with multi-sectoral initiatives. The programme developed through the BINP should be able to identify the national strategy for the reduction of malnutrition. The Government of

Bangladesh (GOB) has already decided to expand the BINP activities in new areas. Expansion in new areas and the need for making the activities sustainable in the longer run require a systematic measurement of resource requirements of BINP activities. The purpose of this research is to estimate the cost of BINP activities from project's point of view so that the implementing agencies will be able to define the resource requirements more concretely.

The community based nutrition component (CBNC) of BINP focuses on growth monitoring and promotion, supplementary feeding, IEC and mobilization of the community. During its first phase, the BINP was launched in six thanas, of which, three were run by the government and the rest by BRAC, a national NGO. This research will identify the inputs used for delivering the CBNC activities. Recently, the project has been expanded to another 17 thanas and the activities will be implemented through six NGOs in partnership with the GOB. Besides running the programme in their assigned geographic area, the NGOs also provide assistance to the government-run thanas for organizing training sessions, social mobilization, food preparation and quality control. To understand the total resource requirement of the project, all these indirect costs will also be considered.

It is assumed that some indirect costs may be incurred elsewhere due to the expansion of the programme at the community level that also needs to be identified as one of the components of the overall cost of community- based BINP interventions. Costing of the services provided by the project and other sources besides the project itself contributing to the BINP services is especially important, since the interventions are being expanded to new areas.

B. Objective of the Study

The purpose of this study is to estimate the cost of specific BINP activities from the perspective of the project. The main focus of costing will be the activities undertaken at the community level. However, cost implications of expanding community level activities at the higher management and administrative levels will also be estimated.

C. Analytical Methodology

The analytical method will be the standard costing approach. Details of costing approaches can be found in Creese and Parker (WHO) and Cost-Effectiveness Analysis (WHO 1988). Since the BINP has different types of interventions, the cost items will be classified by function and activity at the first stage. Each of the functional cost items will be further classified according to type of input used, i.e., whether the cost item is a capital cost or a recurrent cost.

Costing exercises usually start by identifying and listing all activities performed by the project. From the list of activities the items to be costed will be determined. The listing should also note how the various activities are integrated within the programme. However, the scope of costing exercise in the community level interventions and the costs incurred at the higher levels will be estimated if the scale of operation at the community level directly affect the costs.

Production function analysis will be used to identify all relevant inputs in the process of delivery of BINP services. If the services are produced in stages, multi-stage production functions will be defined to ensure that all inputs are taken into account in the costing exercise.

The time period of costing will be the whole year. However, survey data will be specific to certain months of the year and the full-year cost will be approximated from the sample months. Full year cost of a number of cost items will be straightforward; for example, personnel costs are often available for the whole year. If some specific activities of the project started only recently, possible seasonal variability should be taken into account (through expert opinion or by using other secondary information).

D. Data collection method

D1. Selecting the sample

The BINP has large number of geographic units for the delivery of BINP services. At present, more than 20 thanas are covered by BINP activities. However, 17 of these thanas initiated the programme only recently and costing will be distorted if we base the analysis on the newly started programme areas. In six thanas of Bangladesh, the project is in operation for more than three years and the costing exercise will use these six areas for estimating the resource requirements of BINP activities. Five of the six thanas will be selected as study areas. One thana being unique in its working strategy as the emphasis is given on "newly weds", will be excluded from the study thanas. It is expected that the scope and scale of activities will be different in different thanas. Accordingly the net cost involved in providing the services will vary significantly with the number of beneficiaries and service packages. Selecting all the five thanas will provide the opportunity to determine the effect of scale and scope on the cost of the services provided. It will also allow comparative cost analysis of GOB-run and NGO-run programmes.

D2. Data Collection

For costing purposes, the most important initial step is to visit the site or the events where the resources are being used to deliver BINP services. Although the services are delivered at the community level, the organizational set-up has different levels of administration and monitoring. The project itself collects some information on a regular basis for monitoring the implementation and success of the project. To understand the process of organizing and delivery of the services, the researchers should visit the central office of the project. Resources used at the central and other lower levels should be collected from the information available at the central office. The central office may also be able to indicate the possible sources of data for the study. After the visit to the central office, the next-level office will be visited. Again, resources used and the type of information available at this level will be noted.

To lower the cost of data collection, the study will utilize the routinely collected data by the project. However, the method of data collection, the quality control mechanism, relevance of data for costing should be carefully evaluated. The data collection method and sources of the data should be carefully noted so that double counting of same resources can be avoided. The study will also request expenditure reports from the project, if available, for cross-checking the cost estimates with official expenditure levels.

After the selection of the thanas, the next step will be to categorize the activities of CBNC of BINP either as continuous intervention process or periodic/short-term events. A list of inputs used for the provision of the services will be prepared by visiting the intervention delivery points. For the activities that occur on a continuous basis, a

particular time frame will be defined for the collection of data on resource use and costs. For periodic events, all inputs will be listed through direct observation of a number of actual events. If the number of periodic events is too high to be manageable by the research study, a sample will be chosen randomly within a thana to cover about 25 percent of all short-duration events. The list should include all the materials, manpower and time involved with each of the discrete activities of BINP.

After preparing the list of all visible inputs during the delivery of the services, the costing will trace the inputs backward to identify other inputs and activities that must be carried out prior to the implementation of the specific event under consideration. These additional activities ensure that the event can be properly organized and services can be delivered to the target groups in an efficient manner. These invisible inputs at the point of delivery are also essential in the provision of services and must be considered in costing. Apart from these directly relevant inputs, there are also a number of indirect inputs needed for delivering BINP services and the backward tracing will also help in the identification of these indirect inputs.

If two or more services are linked, the costing exercise will examine how the activities in specific intervention affect other interventions of the programme. For example, growth-monitoring activities identify the malnourished children and the project provides additional services to severely malnourished group. Therefore, growth monitoring and interventions directed towards the malnourished group are closely linked. These links should be clearly defined so that the cost implications under different scenarios can be estimated.

E. Data analysis plan

A spread-sheet will be prepared with the list of all the inputs used in the delivery of services with the quantities of inputs used and outputs obtained. Each of these inputs will then be evaluated using the fair market price of the inputs. If it is believed that the market prices of some inputs are distorted due to taxes or other market/ non-market restrictions, alternative financial value will be defined. In most cases, c.i.f. import prices can be used for the monetary valuation of inputs with distorted market. All required inputs, irrespective of source, will be evaluated so that total cost to the project can be estimated.

Number of true beneficiaries will be calculated from the project's MIS. A costing exercise requires the definition of outputs. The outputs will indicate the level of activities of the project in a thana and relating that with costs can show whether the scale of operation has any impact on the average cost of the project. It should be noted here that the outputs of the interventions are actually intermediate effects rather than final outcomes.

F. Quality Control Measures for Ensuring Data Quality

Data will be collected from the field by trained enumerators. For listing the inputs, the research will use two independent enumerators to observe the delivery of services and utilization of resources during the delivery process. The list will be compared at the end of the day to identify the items mentioned by one of the enumerators but not the other. The non-common items will then be listed and together the enumerators will be asked to monitor the delivery of the service again with special emphasis on these items. During this second visit, the enumerators will also note the quantities of inputs used in the

delivery process. In noting the quantities, emphasis will be to measure the most common inputs more carefully to minimize the possibility of error. A crosscheck will be done on the enlisted input categories and other linked cost items by a supervisor later on to ensure that a comprehensive list has been prepared for each of the activities of the programme.

It is often difficult to ensure the quality control of data on quantities of inputs used. One possible crosscheck will be to calculate the gap between the inputs being supplied for the work by the project and the inputs actually reported to be used by the enumerators. Any discrepancies must be addressed adequately. The objective is not to explain 100% of this gap; however efforts will be made to explain the reasons for discrepancies as a data quality control measure. The allocated inputs may not match the quantities actually used due to wastage, misuse, etc. If the misuse or loss appears to be a normal pattern, the use of these inputs should also be included in the costs but the analysis should note that the costs could be reduced by the amount if the management and monitoring system improves.

G. Significance of the Study

The costing of the project's CBNC component will provide an estimate on the overall expenditure required for implementing BINP in Bangladesh. The costing will identify the need for different inputs, the proportion in which the inputs should be supplied, possible areas where costs can be further reduced and whether scale and scope of the programme affect the average cost of the interventions.

The costing exercise will also indicate whether the nutrition interventions are replicable from the point of view of resource needs and how much of the total cost can be

potentially provided through public subsidies. The opportunities for cost sharing by the community can also be examined if the detail costing of the project is carried out.

H. Time Frame

Initiation of the study:	July 01, 1998
Visiting the BINP offices	July 01- July 15, 1998
Data collection at the thanas	July 15 to September 15, 1998
Data Analysis	August 15 to October 15, 1998
Report writing	September 15 to November15, 1998
Final revisions/report submission	November 30, 1998.

- If the initiation of the project is different from the date mentioned above, all the dates should be adjusted accordingly.

I. Budget

Items	In US $
1. PI of the project (10% of time for 7 months)	6,000.00
2. Project manager/programme evaluator (100% for seven months, NOB position)	4,760.00
3. Enumerators, (six for three months)	3,960.00
4. Local travel (total of 12 trips x 5)	1,500.00
5. Per-diem (10 days/trip/person)	1,000.00
6. Questionnaire duplication/communication	280.00
7. Report preparation/duplication	500.00
Total Direct costs	18,000 USD
Indirect cost (10% of direct cost)	1,800 USD
GRAND TOTAL	19,800 USD

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