Cost Analysis of the Positive Deviance Approach to Reducing Child Malnutrition in West Bengal

Technical Report

P.R. Sodani, Hong Wang, Rajni K. Juyal and Ananya Price of Abt Associates Inc. and
Elizabeth Fischer of IntraHealth International Inc. for The Vistaar Project

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List of Acronyms

AWC	Anganwadi Centre
AWW	Anganwadi Worker
BCC	Behaviour Change Communication
BDO	Block Development Officer
BMO	Block Medical Officer
CDPO	Child Development Project Officer
CMHO	Chief Medical and Health Officer
DPO	District Programme Officer
FGD	Focus Group Discussion
GOI	Government of India
GP	Gram Panchayat
ICDS	Integrated Child Development Services
IEC	Information, Education and Communication
MIS	Management Information System
MPR	Monthly Progress Report
NCCS	Nutritional Counseling and Child Care Sessions
PD	Positive Deviance
PRI	Panchayati Raj Institution
SHG	Self Help Group
TOT	Training of Trainers
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VHC	Village Health Committee

Executive Summary

Adequate nutrition during infancy and early childhood is critical to the development of children's full physical and intellectual potential. Given the importance of complementary feeding for improved child health, in 2008, the USAID-funded Vistaar Project conducted an evidence review of complementary feeding interventions. One of the key gaps brought to the forefront by the evidence review was the lack of adequate costing information regarding the different interventions. The review also suggested that the Positive Deviance (PD) approach has potential and should be further applied and evaluated. The PD approach is a community-based initiative to bring about sustained behaviour change in caregivers' prevention and treatment of malnutrition in infants and children under the age of 3. Given this context, this particular study provides governments, donor agencies, policy-makers, and programme managers a comprehensive understanding of the resources required at the district, block, and Anganwadi centre (AWC) levels to implement the PD programme and the requirements for replicating it in other geographic areas. While other studies, evaluations have been conducted to measure the effectiveness of the PD approach in a district, this study is particularly noteworthy, since it is the first systematic effort in analysing the actual cost of implementing the PD approach in a district.

The Government of West Bengal, with technical and financial support from UNICEF, implemented the PD approach through the state's Department of Women and Child Development and Social Welfare, to tackle the problem of malnutrition among children who were less than 3 years old. The present study was conducted in two districts of West Bengal, Purulia and Murshidabad. Within these districts, cost data was collected from four blocks and 12 AWCs. Estimating the cost of implementing the PD approach comprised three steps: The first was to identify all the activities involved in implementing the PD approach. The second was to identify the inputs needed to implement the activities. The third was to estimate costs by input category (capital/recurrent) and source (donor/government) at three levels (district/block/AWC). Three separate study tools, easy to customise to different programme settings, were developed to collect cost data from each level. At each level, the data was gathered to show the value of the contribution by the donor agency and that of the government.

The study found that the total annual cost of implementing the PD approach is Rs. 17,156,358 per district. Of this, capital costs comprise 8.6 percent and recurrent costs 91.4 percent. The donor agency (UNICEF) contributes 35.6 percent and the government 64.4 percent. Donor and government percentage contributions breakdown similarly by input category, with the larger percentage going to recurrent expenditures: Out of the donor's contribution, 24.1 percent goes to capital expenditures and 75.9 percent to recurrent expenditures. Out of the government's contribution, 0.1 percent goes to capital expenditures and 99.9 percent to recurrent expenditures. By level, 42.3 percent of the donor's contribution is utilised at the district level, 20 percent at the block level, and 37.7 percent at the AWC level. 51 percent of the government's contribution is utilised at the district level, 12.4 percent at the block level, and 36.6 percent at the AWC level.

The per beneficiary cost for implementing the PD approach in a district is Rs. 1,354.4 per year of which Rs. 117 goes towards capital inputs and the remaining Rs. 1,237.4 for recurrent inputs. The donor agency contributes Rs. 483.8 per beneficiary, while the government contributes Rs. 870.6, approximately 1.8 times more per beneficiary than the donor agency. Out of the donor's per beneficiary contribution, capital inputs cost Rs. 116.2 while recurrent inputs cost Rs. 367.6. Similarly, out of the government's contribution to the per beneficiary cost, capital inputs cost Rs. 0.8 while recurrent inputs cost Rs. 869.8. Out of the donor contribution towards per beneficiary cost, Rs. 254 is at the district level, Rs. 94.8 at the block level, and

Rs. 135 at the AWC level. Rs. 12.6 of the government contribution is at district level, Rs. 105.9 at the block level, and Rs. 752.1 at the AWC level.

The study also found that the cost of human resources constitutes the major portion of the total cost (60.6%) of implementing the PD approach within a district. The government covers the major part of human resources costs (86%). This implies that more attention should be given to the human resources component for improving the efficiency of PD approach. As the Anganwadi worker (AWW) is involved in implementing the PD activities at the village level, and is the link between the government's existing programme and the community, future studies should look at how to maximise the return of this investment on the performance of the PD programme. The study also recommends that the government needs to reexamine AWW roles and responsibilities to make sure these workers are being used in an optimal way and specific PD related roles and responsibilities need to be incorporated in the job description of the AWWs.

The cost of recurrent trainings, which includes conducting training programmes for AWWs, members of self help groups, and members of village health committees, constitutes around 11 percent of the total cost of implementing the PD approach in a district. Further studies are recommended to understand the effectiveness and impact of these training programmes on the actual performance of the PD approach.

As is evident from the above mentioned per beneficiary cost (Rs. 1,354.4 per year), the PD approach can be a cost-effective way to reduce malnutrition in children. Since malnutrition is a major public health problem, the study argues that there is a solid economic justification for replicating the PD approach in other geographical areas and to integrate this approach into the existing government-led Integrated Child Development Services programme. More attention should be paid to those low-performing areas where malnutrition is a major problem to maximise the allocation of resources and enhance the efficiency of the existing programme.

1 Introduction

1.1 Background

Adequate nutrition during infancy and early childhood is critical to the development of a child's full human potential. Poor infant and young child feeding practices, coupled with high rates of infectious diseases, are the proximate causes of malnutrition during the first two years of life. The second half of an infant's first year, when breast milk alone is no longer sufficient to meet his or her nutritional requirements and complementary feeding should start, is an especially vulnerable time. Many children suffer from under nutrition and growth-faltering during this period, with consequences that persist throughout their lives. Children need food in addition to breast milk from the age of six months. In India, common problems include the provision of poor-quality complementary food, insufficient amounts of complementary food, insufficient breastfeeding, detrimental feeding practices, and contamination of complementary food and feeding utensils. In addition, if complementary food is given too early or too frequently, they displace breast milk, which is of higher nutritional value than other food.

According to the United Nations Children's Fund's (UNICEF) State of the World's Children 2008 Report, of the 19 million infants in the developing world who have low birth weight (< 2,500 grams), 8.3 million are in India. This means that approximately 43 percent of all the world's infants who are born with a low birth weight are born in India. Malnutrition is an underlying cause in up to 50 percent of all deaths in children under 5. About 55 million, or one-third, of the world's underweight children under 5 live in India.

1.2 Evidence Review on Complementary Feeding

Given the importance of complementary feeding for improved child health, the United States Agency for International Development (USAID)-funded Vistaar Project conducted an evidence review on complementary feeding interventions. This review analysed available evidence on specific complementary feeding interventions to determine whether there is an evidence-based model that the Government could roll out; to identify lessons learned about achieving impact in the area; and to identify key evidence gaps, areas about which additional information needs to be gathered.

Of the 20 interventions initially identified as important to investigate, this review focused on 13 interventions, based on the criteria that their results at the outcome or impact level (e.g., changed feeding practices, intake of adequate amounts of complementary food) could be documented.

1.3 Lessons from the Evidence Review

Analysis of the evidence review data showed that most of the 13 interventions applied multiple approaches to positively impact feeding practices. The most common approach was community-based behaviour change communication (BCC) implemented through household-level counseling and education. Some interventions included capacity-building of community-level health care providers, and a few applied a Positive Deviance (PD) approach for promoting positive feeding practices that were identified and accepted locally.

The evidence review identified that an important gap existed in understanding the cost and cost-efficiency of the interventions, which constrains the ability of policy-makers to replicate the approach.

1.4 Justification of the Study

The purpose of this study is to understand the cost of implementing the PD intervention so that others considering similar approaches can allocate sufficient resources and have a better understanding of the costs of achieving improvements in nutrition.

Given the acute resource crunch in the health sector of developing countries, it is extremely important to justify the allocation of these scarce resources for a particular health programme. This study estimates the cost of implementing the PD approach in a district. Donor agencies, governments, and other key stakeholders can use this information to make decisions about whether to implement a PD programme and to guide and facilitate its implementation.

1.5 Organisation of the Report

Chapter 2 of this report describes the process to operationalise the PD approach in a district in West Bengal. Chapter 3 provides the details on the study itself, including the study's objectives, sample, methodology, tools, and data collection method. Chapter 4 presents the study findings and discussion. Finally, Chapter 5 provides the summary of major findings and concludes with recommendations.

This report also includes the following Annexes: Annex A–Detailed Data Tables; Annex B – Study Tools and Annex C- List of Stakeholders Interviewed.

The Positive Deviance Approach in West Bengal 2

2.1 What is the Positive Deviance Approach?

The PD approach is a community-based initiative to bring about a sustained behaviour change in primary caregivers of infants and children to prevent and reduce malnutrition in children under 3. This asset-or strength-based approach works on the principle that in every community, even among those who are socioeconomically disadvantaged, there are certain individuals whose uncommon but successful behaviours or strategies enable them to find better solutions to a problem than their peers. These individuals, known as positive deviants, set an example in their communities. In the PD approach, their local wisdom is tapped through a dynamic process called PD enquiry, a process to find insight into the PD practices. Information about these practices is then disseminated throughout the community, so that others may adopt them and enjoy the resultant benefits.

The problem of malnutrition among children can be improved through the application of PD strategies to motivate all families with children to adopt good practices through participatory learning. As these behaviours are already being practiced by peers in the community, they are likely to be considered culturally acceptable and affordable by the wider community. Since malnourishment arises not only from nutrient deficiency, but also due to negligent attitude of caregivers, behaviour change is a major focus of programmes to prevent malnutrition.

2.2 Application of the Positive Deviance Approach and Its Outcomes

The Government of West Bengal, with technical and financial support from UNICEF, applied a PD approach in its' Kano parbona?' programme to tackle the problem of malnutrition among children under 3.

'Kano parbona?', Bengali for 'Why can't we do it?', a pilot initiative implemented by the Department of Women and Child Development and Social Welfare, was designed to bring malnourished children back to normal weight and develop the capacity of community to prevent future incidences of child malnutrition.

The model, which was initiated in March 2001, covered two blocks each in the districts of Murshidabad - Beldanga, Behrampur, and South 24 Parganas - Falta, and Bishnapur. After these successful pilots, the programme was scaled up to Dakshin Dinajpur and Purulia districts. A study titled “Addressing Malnutrition through Surveillance and Innovative Community-based Strategies” carried out by P. Mustaphi in 2005 for UNICEF (Mustaphi 2005) revealed that levels of moderate and severely malnourished children declined from 20.4 percent in March 2003 to 18.1 percent in April 2005, and an improved growth monitoring process led to the decline in the levels of Grade II nutritional status among children from 22 percent to 4 percent in Dakshin Dinajpur district (Mustaphi 2005).

A study, “Impact Evaluation of Positive Deviance Program in the State of West Bengal”, was carried out by the National Institute of Nutrition (NIN) (Brahman et al. 2006) with the objective of evaluating the impact of the PD programme in West Bengal on the nutritional status of children under 3. The study was conducted in four districts, namely South 24 Paraganas, Murshidabad, Dakshin Dinajpur, and Purulia (Brahmam et. al. 2006). The study revealed that the extent of recording birth weights was higher in PD intervention areas than control areas. The birth weight in the intervention area was significantly higher compared to control areas and much closer to the national average of 2.8 kg. A significantly higher proportion of mothers in PD areas, 69 percent, reportedly received health and nutrition education compared to 27 percent in control areas.

The prevalence of Grade III & Grade IV under nutrition (Box 1), though low, was relatively higher in control areas (3.5%) compared to the intervention areas (2.4%). The prevalence of underweight children in the age group of 12-17 months in the intervention areas was significantly low compared to control areas. The mean birth weight in the PD intervention areas was observed to be 2730g as compared to 2560g in the control areas.

Box 1

Nutrition Level Grades	
Normal	Above 80 % of standard weight-for-age
Grade I	71-80 %
Grade II	61-70 %
Grade III	51-60 %
Grade IV	Less than/equal to 50 %
Grades III and IV are classified as severe malnutrition	

The study also revealed that in the age group of 4-5 months, 79 percent of the children in the intervention areas were exclusively breastfed as compared to 61 percent in the control areas. At 6 months of age, infants who received homemade semi-solid or solid food were about 33 percent in the PD areas as compared to 21 percent in control areas. Among children aged 7-11 months in the PD intervention areas, 58 percent were receiving complementary feeding more than four times a day as compared to only 29 percent in the control areas.

Data on a number of other indicators suggest that the model succeeded in achieving its goals, and the Government of West Bengal expanded this model to other districts where the levels of child malnutrition are high. Table 2.1 shows the geographic spread of the PD approach in West Bengal through December 2009.

Table 2.1 Geographic spread of positive deviance approach in West Bengal, by district, December 2009

Name of District	Number of Blocks in the District	Number of Blocks Implementing the Positive Deviance Approach
Bankura	22	22
Birbhum	19	19
Dakshin Dinajpur	8	8
Murshidabad	26	7
Pascim Medinipur	29	8
Purulia	20	20
Uttar Dinajpur	9	9
24 Parganas (South)	31	4
Total	**164**	**97**

2.3 Operationalising the Positive Deviance Approach in Districts in West Bengal

The PD approach is an integrated strategy that incorporates the following characteristics:

- Capacity-building of service providers at all levels
- Convergence and multi-sectoral partnerships
- Community participation and mobilisation

- Promotion of local solutions to address the problem of malnutrition
- Hands-on practice by caregivers (e.g., mothers and grandmothers) of moderately and severely malnourished children
- Gender-sensitive child care practices
- Behaviour change

Broadly, the PD approach involves two phases of implementation in the districts, namely, community mobilisation and the use of PD approach to improve the nutritional grades of identified malnourished children (Table 2.2).

Table 2.2 Implementation phases of positive deviance approach

Phase	Description	Details on Implementation
Phase 1	Community mobilisation	Identifying the extent of malnutrition among children and to make it visible to the community by using simple monitoring tools
Phase 2	Use of the PD approach	Identifying prevalent beneficial child care practices in the community, teaching improved care behaviour, and advocating the use of those practices in Nutrition Counseling and Child Care Sessions (NCCS)

Operationalising the PD approach involves the following steps:

1. **Geographic Area Identification:** Before the programme is rolled out, the geographic area for the intervention is defined as the entire district, or a smaller area with high malnutrition status. To gauge the levels of malnutrition in the district, it is advisable to implement community mobilisation efforts throughout the district. In bigger districts, it may be easier operationally to implement the initiative in a phased manner.
2. **Personnel Identification:** At the district level, both a coordinator and a data manager are identified and hired as new employees. Implementations on a large scale would also require recruitment of block facilitators. These personnel can either be identified through existing staff of the Ministry of Women and Child Development's Integrated Child Development Services (ICDS) or appointed contractually. Block-level facilitators, who require training before assuming their positions, are responsible for technical support, coordination, data management, monitoring, and liaison work.
3. **District-level Sensitisation Workshop:** A one-day district-level workshop is held to sensitise district officials about the problem of malnutrition and explain how the PD approach can help solve the problem. Workshop participants include district magistrates, sub-divisional officer(s), Chief Medical and Health Officer (CMHO), ICDS District Programme Officer(s), Child Development Project Officer(s) (CDPOs), Block Development Officers (BDOs), and Panchayati Raj Institution (PRI) members.
4. **Block-level Sensitisation Workshop:** Before launching the project at the block level, a block-level sensitisation workshop is held. Workshop participants include BDOs, PRI members, Block Medical Officers (BMO), CDPO, ICDS supervisors, and Health supervisors.
5. **Training of Trainers (TOT) on Community Mobilisation (1st phase):** The project staff(district coordinator(s) and block facilitators) conduct a block-wide, three-day training session on community mobilisation at the district level. Participants include the CDPO, ICDS supervisors, Health supervisors, and PRI members. The training discusses community mobilisation through forums (such as Sachetan Mela) and monitoring tools, such as community growth charts, social maps, mother-child protection cards, and cohort registers.

6. **Training of Anganwadi Workers (AWWs) on Community Mobilisation (1st phase):** Following the TOT on community mobilisation, ICDS supervisors, Health supervisors, and block facilitators train the AWWs on community mobilisation (such as Sachetan Melas). Workshop participants include AWWs, male and female health assistants, and PRI members. The three-day training programme trains the AWWs in using monitoring tools for mapping their areas and identifying pockets of malnutrition as well as sensitising the general community on the problem of malnutrition.

7. **AWWs' Use of Community Mobilisation Tools:** The AWWs use monitoring tools to map their areas to show the prevailing nutritional status of children. Upon completion of this process, supervisors will be able to identify the villages with maximum concentration of malnourished children.

8. **TOT on PD (2nd phase):** District coordinators and block facilitators conduct six-day training on PD at the district level. Participants include the ICDS supervisors and Health supervisors, PRI members, and CDPOs.

9. **Selection of Villages/Anganwadi Centres (AWCs) for PD Training:** After completion of the TOT, the supervisors and CDPOs select the villages/AWCs where the second phase of the PD approach is to be implemented. Those AWCs that show a high concentration of malnourished children as identified in the community mobilisation phase and in the ICDS monthly progress report (MPR)—where the number of children in grades II, III, and IV is high—are selected for this training. A high weighing efficiency is essential to ensure selection of villages correctly.

10. **Training of AWWs on PD (2nd phase):** After selecting the villages/AWCs where the initiative will be implemented, the ICDS and Health supervisors and block facilitators conduct a four-day residential block/ Gram Panchayat training for AWWs, male and female health assistants, and PRI members at the sector level. The training introduces the PD approach and its application and orients the community on PD, child care practices in feeding, PD enquiry, components of NCCS, how to organise home visits, and monitoring programme management tools.

11. **Community Meeting and Village Health Committee (VHC) Formation:** After completion of the PD training, the AWWs and the supervisors meet the influential persons of selected villages to sensitise them about the initiative, share information on the present nutritional status of the area based on the application of the monitoring tools. Following this and before starting focus activities in the selected areas, the AWWs and the supervisors hold a community meeting at which they present the latest nutritional status of the community with the help of colour-coded community growth charts and resource maps. They sensitise residents about the causes and effects of malnutrition and how to recognise malnutrition at the family level. At this meeting, the villagers form VHCs, groups that ensure community participation and are crucial to helping the AWWs implement important aspects of the programme, including mobilising children and their primary caregivers, conducting follow-ups, monitoring malnourished children, and facilitating community contributions of necessary items such as vegetables and fuel. To ensure effective functioning of the VHCs, one-day training on topics such as weighing children and social mapping can be conducted.

12. **Training of Local Women's Groups on PD:** Local women's groups, which are linked with AWCs, are trained, on mobilising children, assisting AWWs in conducting counseling sessions, follow up with children at home, and weighing children who cannot be brought on a regular basis to the AWCs.

13. **Focus Group Discussions (FGDs):** FGDs are held in the village to identify the area's common child care practices and different groups' perceptions about child health, nutrition, and care. These sessions involve group discussions on food, health, psychosocial care, and hygiene. The AWWs and the supervisors facilitate the FGDs with the following groups: mothers, fathers and grandfathers, grandmothers, and siblings. The group participants' statements regarding their perceptions and views about child health, nutrition, and care are recorded.

14. **PD Enquiry:** After completion of the FGDs, the AWW conducts a PD enquiry through home visits to identify good and acceptable child care practices prevalent among some residents/families in the area. A household with three normal-weight children and a household with three grade II/III children are selected for this enquiry, and a

questionnaire designed to reveal child care practices in these families is administered. Questionnaire responses are collated, analysed, and documented on chart paper.

15. **Sharing Meeting:** The supervisors and AWWs share the information drawn out through the FGDs and PD enquiry with the community in a sharing meeting, which includes all community members to the extent possible. At this meeting, the community decides whether the identified moderate and severely malnourished children need special care and their caregivers need NCCS.

16. **Health Checkups:** The BMOs/CMO conduct a checkup of the malnourished children, screen for any diseases or other conditions, and provide appropriate medication.

17. **Nutrition Counseling and Child Care Sessions:** The nutritional counseling and childcare sessions (NCCS) are 12-day monthly sessions, spanning an hour each, where best practices prevalent in the community are learnt by caregivers of moderate and severely malnourished children through a process of "learning by doing". The sessions are conducted by the AWW along with some mothers of children as well as local women's groups. These sessions are geared towards helping the mothers understand the importance of regular attendance and the practice of the newly learned behavioural habits. On the first day, the child's entry weight is taken by the AWW and an exit weight is also taken after the completion of 12 days. During the NCCS, mostly held at the AWCs, the community distributes vegetables and eggs. Mothers take turns in cooking, they learn hygiene practices by washing their hands to feed the child, cleaning the utensils and also learn how to feed the child properly (active feeding). The AWW, members of Self Help Group (SHG) and mothers teach child careskills and feeding practices to the caregivers of the malnourished children and these skills are actually practiced during these sessions. The caregivers of the malnourished children are urged to practice the same behaviour at home for the remaining 18 days of the month. These sessions empower the caregivers and build their confidence in rehabilitating their children. At the end of six such monthly sessions, it has been observed that there is significant weight gain in most moderately and severely malnourished children. However, some children need more time to reach normal grade.

18. **Monitoring:** The main sources of data at the AWCs implementing the PD approach are:

- Completed activity reports from each supervisor, collated by block on a monthly basis
- Completed NCCS rosters, containing monthly data on the children attending the sessions, from each AWC hosting the NCCS
- Growth monitoring and nutritional status data collected from the ICDS MPR generated by AWCs
- Survey of care practices among families in the area implementing the PD approach before programme rollout and six to nine months after NCCS counseling

At the district level, data for key indicators reflecting the process and output of the PD intervention, are entered, compiled, and analysed in Excel. A data analysis system, which is being developed, will enable further analysis and provide feedback. For example, it will track each malnourished child in the AWC area implementing the PD approach.

The responsibility of monitoring at the local level lies with the supervisors, CDPOs, and the block facilitators/coordinators; at the district level with the DPO; and at the state level with officials of the state ICDS. Community monitoring is also equally important.

19. **Scaling Up NCCS:** While scaling up the initiative in a district, the AWWs may be able to substitute a two-day training coupled with peer learning on the second phase of PD for the usual formal four-day training.

20. **Phase Out:** The PD programme is phased out when all the children graduate to a normal weight grade or are at least borderline. However, regular monitoring is continued to track the prevailing nutritional status of children in these areas. AWCs that excel in improving the quality of services through the PD approach are labeled as "living universities" and used as models.

3 Study Design And Methodology

Given the scarce resources for health programme implementation in developing countries, it is important for policy-makers and programme managers to estimate the cost of a health programme. Cost can be defined as the value of resources used to produce something, including a specific health service or a set of services.

The purpose of this study is to estimate the cost of implementing the PD approach in a district. Collection and analysis of cost data provides useful information on the programme. Cost data can be used to improve the efficiency of the PD approach and to scale up or replicate the intervention in other locations.

3.1 Objectives of the Cost Analysis

The specific objectives of the cost analysis of the PD approach are as follows:

- Create a list of the activities required to implement the PD approach in a district
- Estimate the total resource requirement and total annual cost to implement the PD approach in a district
- Estimate the donor and government contribution required to implement the PD approach in a district
- Estimate per beneficiary cost to implement the PD approach in a district
- Provide health planners with information on donor and government contributions needed to implement the PD approach in a district

The study does not include the cost of developing the PD approach, i.e., time required to design the intervention, develop the training curricula and material for various training programmes, design and development of the PD tools, field-testing or data collection for monitoring the outcomes of the initial intervention.

3.2 Study Area and Sample

The study was conducted in two districts, namely Purulia and Murshidabad, where the PD approach is being implemented across the districts with technical, financial, and monitoring support from UNICEF. Two blocks in each of the study districts were identified in consultation with the district PD unit. From each of the blocks, three AWCs, which had completed at least six NCCS, were identified. Thus, the study included two districts, four blocks, and 12 AWCs as shown in Table 3.1.

Table 3.1 Sampling framework for cost analysis of positive deviance approach

Level	Sampled Districts		Total Sample
	Purulia	Murshidabad	
District	1	1	2
Block	2	2	4
AWC	6	6	12

3.3 Costing Approach

To estimate programme cost, which gives planners an idea of the overall scope of investment required, "top-down" and "bottom-up" approaches are used. Costs are calculated based on actual expenditure data, supplemented by budget information. Where expenditure data does not exist, budgets serve as a proxy for costs. The top-down analysis involves collecting cost data from expenditures and budgets starting at the district level and then moving down to the most disaggregated level, i.e., the AWC. The bottom-up costing approach examines how funds are spent for specific activities starting at the point of initial data collection (e.g., at the AWCs) and moving up to the district level. This involves determining how much money is spent on (or budgeted for) each task at sample data collection points and using these costs as indicative to construct total programme cost.

Estimating the cost of implementing PD approach in each district involves the following steps:

1. **Create a list of activities:** A list of all the activities involved in implementing the PD approach in the districts is created. These activities, in order of implementation, comprise district-level sensitisation workshop, block-level sensitisation workshop, TOT on community mobilisation, training of AWWs on community mobilisation, TOT on PD, selection of AWCs for PD training, training of AWWs on PD, discussion with influential persons of the village, community meeting, formation of VHCs, training of VHCs, FGDs, PD enquiry, sharing meeting, health checkups, and NCCS.
2. **Identify inputs:** Inputs required to implement the activities are identified in consultation with district-level PD unit staff and other district-level officials, which include community mobilisation, equipment/furniture, human resources, office operations, office space, PD tools, transportation, and training.
3. **Calculate costs:** Costs of the inputs are estimated by input type (capital/recurrent) and source (donor-funded/government-supported) at various levels (district/block/AWC) in order to arrive at the annual cost of implementing the PD approach at different levels. Cost data is collected from the district, block, and AWC levels and collated in a table (refer to Table 3.2).

Table 3.2 Type of cost data collected by level

Cost Items	District-level	Block-level	AWC-level
Community mobilisation			
Equipment/furniture/PD tools			
Human resources			
Office operations costs			
Office space			
Training			
Transportation			

3.4 Study Tools

Study tools were developed by Abt Associates (a partner of IntraHealth International on the Vistaar Project) in collaboration with UNICEF Kolkata officials. The preliminary draft of the tools was further modified based on programme components and through in-depth discussions with district PD unit staff, AWWs, supervisors, and CDPOs. After the detailed discussions and field visits to the AWCs and blocks, it was decided to collect cost data at the district, block, and AWC levels. At each level, the data was gathered to show the value of the contribution by the donor agency (UNICEF) and that of the existing government set-up.

3.4.1 District-level Cost Estimation Tool

District-level start-up, implementation, and post-implementation costs of the PD approach were collected. The data, which covered capital and recurrent costs, was collected through the district-level cost estimation tool (see Annex B). Information was collected through in-depth interviews with PD district coordinators, block facilitators, ICDS DPOs, CDPOs, supervisors, and AWWs. Cost data was gathered on the following components:

- **Human Resources:** Includes cost estimates associated with the human resources involved in implementing the PD approach in the district. Costs include gross earnings for all the following PD unit staff, including those funded by UNICEF: project coordinator, management information system (MIS) data analyst/monitoring assistant and data entry operator/office assistant. A percentage of the gross earnings of officials from the Department of Women and Child Development and Social Welfare, Government of West Bengal, general administration, and PRI members at the district level (Zila Parishad) are also included in district-level costs, based on the proportion of time they spent implementing the PD approach in the district.
- **Office Space:** Includes annually recurring costs of office space and furnishings utilised by the PD unit at the district level for programme implementation. Although office space is provided by the Zila Parishad in Purulia district and the District Administration in Murshidabad district, annual costs are estimated based on rent for comparable spaces. The cost of basic furnishings (defined as electricity, water, cleaning services, office repair and maintenance) is also included by adding 10 percent to the total cost.
- **Equipment/Furniture:** Includes costs of office equipment and furniture of the PD unit located at the district level. Capital equipment refers to equipment that lasts for more than one year. Cost estimates and useful life of equipment and furniture are based on discussions with stakeholders and a local dealer.
- **Transportation:** Includes transportation costs related to programme monitoring activities at the district level such as car rental, logistics support provided for travel to Kolkata and other districts, and food and lodging during travel. Costs of transportation related to training programmes are included under training.
- **Training:** In calculating the cost of the PD approach in the district, training is one of the most significant components. All types of trainings are included, i.e., district-level sensitisation workshop, block-level sensitisation workshop, TOT on community mobilisation, training of AWWs on community mobilisation, TOT on PD, training of AWWs on PD, and training of VHCs. Training costs are estimated by adding the costs of conducting the training programme; these include per diem, venue, transportation, trainer honoraria, training materials, food/refreshments, and accommodation. The costs of the time trainers and participants spent engaged in training is recorded under Human Resource costs as noted.
- **Community Mobilisation:** Includes costs of all the BCC activities to promote child feeding practices and personal hygiene and sanitation in the villages in the district. Estimates for BCC activities are based on costs of BCC events in the district and AWC-based interactive sessions with mothers and Sachetan Mela.
- **Office Operations:** Includes annual office operations costs based on the time spent conducting the

review meetings and processing documentation, as well as costs of printing, photocopying, stationery, communication charges, books and periodicals, etc., in the district.

3.4.2 Block-level Cost Estimation Tool

At the block level, both capital and recurrent costs were used to estimate the total cost. The data was collected through the block-level cost estimation tool (See Annex B). Information was collected through in-depth interviews with block facilitators, CDPOs, and supervisors. Cost data was gathered on the following components:

- **Human Resources:** Includes cost estimates for human resources involved in implementing the PD approach in the block. Human resources costs include gross earnings for PD staff involved in implementing the PD approach regardless of the funding source, e.g., the block facilitator, who is supported by UNICEF. A percentage of the gross earnings of officials from the Department of Women and Child Development and Social Welfare, Government of West Bengal, are also included in block-level costs, based on the proportion of time they spent implementing PD in the district.
- **Office Space:** Includes the annually recurring cost of office space utilised by the block facilitator in the office of the BDO. Cost estimates are based on rent for a similar space. The cost of basic furnishings is also included by adding 10 percent to the total cost.
- **Furniture:** Includes cost estimates of office furniture, such as office tables, chairs, and almira (armoires), utilised by the block facilitator in the office of the BDO. Cost estimates and useful life of office furniture are based on discussions with stakeholders and local dealers.

3.4.3 AWC-level Cost Estimation Tool

Not all costs of implementing the PD approach at the AWC level, both capital/recurrent and donor/government, can be collected at the district or block-level. Chief among these costs is AWW staff time used to implement activities. The data was collected through the AWC-level cost estimation tool (see Annex B). An understanding of how the PD approach is implemented at the AWC-level was gained through in-depth interviews with AWWs, helpers, supervisors, CDPOs, and block facilitators. Activities undertaken to implement the PD approach were identified and data collected on the costs of capital and AWW staff time associated with the PD approach. Cost data were gathered on the following components:

- **Human Resources:** Includes costs associated with the human resources involved in implementing the PD approach at the AWC-level. At this level, the AWWs and helpers are involved in implementing the PD approach, and information from interviews with these staff determines the percentage of their time allocated to implementing PD approach activities.
- **Office Space:** This category estimates annually recurring cost of office space utilised by the AWWs for PD approach activities. For estimation purposes, the cost to rent a similar space is obtained. The cost of basic furnishings is also included by adding 10 percent to the total cost.
- **Equipment/Tools:** Costs are estimated for the following tools and equipment used by the AWWs to implement the PD approach: community growth chart, community-level social map, cohort register, mother and child protection card, and scales (5 kg and 25 kg). To estimate the costs and shelf life of tools and equipment, discussions were held with AWWs, block facilitators, and others. The registers and other stationery are included in office operations costs.
- **Office Operations:** Includes the annual costs of processing documentation, stationery, pens, pencils, markers, and stickers (*bindis*) used for implementing the PD approach.

3.5 Methods of Data Collection

Various data collection methods were used to identify the activities implemented at the district, block, and AWC levels to operationalise the PD approach in the district and estimate resource requirements and costs of these activities. The key sources of information are described in the following sub-sections.

3.5.1 Review of Records

The team reviewed a number of relevant documents, records, and reports in order to understand the implementation of the PD intervention in the study districts. The review of reference material available with UNICEF Kolkata helped the team understand the operationalisation of the PD approach in the district. The records of the district PD unit were reviewed to understand resource requirements to implement the PD approach in the district, which helped to estimate the costs involved in implementing various activities.

3.5.2 In-Depth Interviews/Discussions

In-depth interviews/discussions were conducted with stakeholders from organisations such as the Department of Women and Child Development and Social Welfare, the Government of West Bengal, UNICEF, Kolkata, the PRIs, and the District PD Units (see Annex C for the list of interviewees). These discussions were held at various levels - state, district, block, and AWC. Discussions provided inputs to better understand the implementation of the PD approach, the district programme management structure, resource requirements, and sources of funds.

Cost Analysis of the Positive Deviance Approach 4

To estimate the cost of implementing the PD approach in a district, the value of resources used in implementation was calculated. This section summarises the costs associated with the intervention by level, inputs and source.

4.1 Classification of Costs

While classifying costs, it was ensured that the cost is relevant to the PD approach, the categories do not overlap, and the categories cover all possibilities.

- **Classification by Level:** Resources were classified according to the administrative and organisational levels at which they are used. In this analysis, which estimates the cost to implement the PD approach at the district level, cost data was gathered from the district, block, and AWC levels.
- **Classification by Inputs:** Resources were further classified into capital and recurrent costs. Items whose costs are classified as capital costs have a useful life of longer than one year, while items whose costs are classified as recurrent are those that are used up in the course of a year and are usually purchased frequently. This type of classification is widely applicable and useful in health programmes. Following standard practice, costs are annualised over the useful life of the factor input, i.e., 'equivalent annual costs' are calculated. The classification scheme used in this study is further described in Table 4.1.
- **Classification by Source:** Resources are classified bytheir source (who provides them). In the PD approach, resources are provided through donor agencies (in this case, UNICEF) and the government through the existing set-up at the district, block, and AWC levels (Department of Women and Child Development and Social Welfare, general administration, and PRIs). The costs are estimated for resources from all sources to arrive at the total cost of implementing the PD approach.

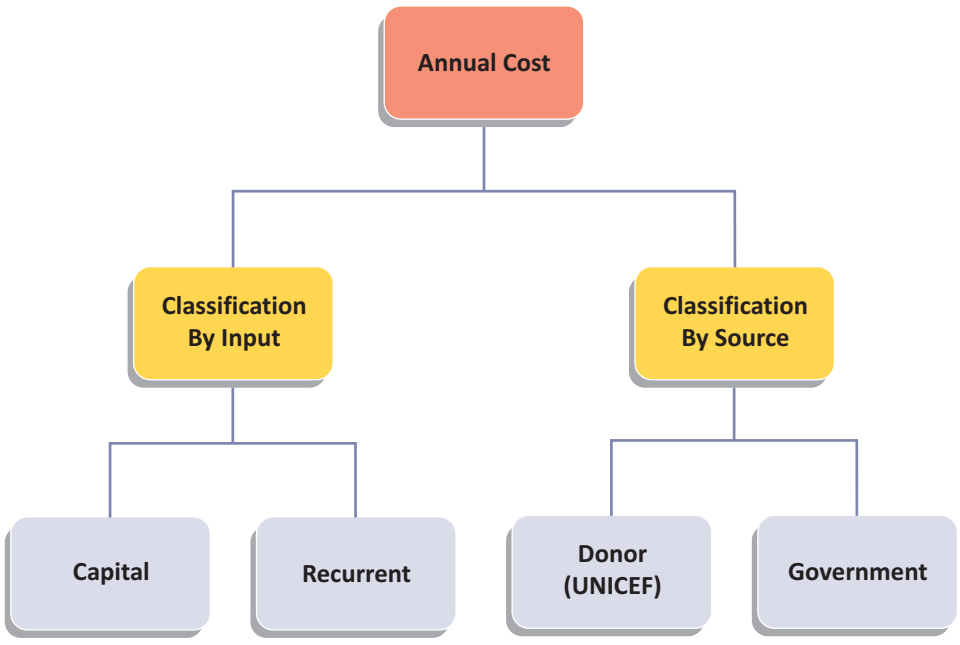
Table 4.1 Cost classification by inputs

A	**Capital Costs**	
A1	Equipment/ furniture/ tools	Office equipment, office furniture, and PD tools. At the district level: office equipment and furniture; at the block level: office furniture; and at the AWC level: PD tools.
A2	Training — Non-recurrent	Training activities that occur only once or rarely - Sensitisation workshops and TOT are included.
B	**Recurrent Costs**	
B1	Human resources	District coordinators, block facilitators, CDPOs, supervisors, AWWs, helpers, district-level administrative personnel, PRI members, etc. The % of time devoted to the PD approach by individuals multiplied by their gross earnings is used to calculate human resources costs. Human resources time used is expressed in person months.

Table 4.1 Cost classification by inputs

B	Recurrent Costs	
B2	Office space	Office space used by the programme and equivalent rent. The office space is provided by government agencies/community groups. Both the total square meter surface area of the office space and duration of rental (in months) are used.
B3	Training — Recurrent	Training activities recurrent in nature - Training AWWs, SHG members, and VHC members are included.
B4	Community mobilisation	Operations costs of community mobilisation to generate awareness among the community groups on the PD approach and its benefits.
B5	Transportation	Transportation/travel costs by programme personnel. The project personnel who are entitled to transportation allowance, and per diem expenses are included.
B6	Office operations	Office operations expenses/contingencies are included.

Figure 4.1 Cost classification scheme used for estimating positive deviance approach cost at each level: District/Block/AWC



The study results are presented at the following levels:

- Estimated Annual Cost at the District-level
- Estimated Annual Cost at the Block-level
- Estimated Annual Cost at the AWC-level

At each level, total annual cost was calculated and analysed by inputs (capital/recurrent) and source (donor/government), and analysis was done by study district. The average annual cost was derived at each level.

4.2 Estimating Annual Cost at the District Level

The district-level total annual cost is Rs. 3,255,560 in Purulia district and Rs. 3,419,603 in Murshidabad district. The average district level annual cost is Rs. 3,337,582.

4.2.1 Classification by Inputs

Table 4.2 shows the district-level annual cost by input category (for details refer to Tables A1 and A9 in Annex A).

- Of the total annual cost in Purulia (Rs. 3,255,560), capital costs comprise only 6.2 percent, while recurrent costs make up 93.8 percent.
- In Murshidabad, the total annual cost is Rs. 3,419,603, of which, capital costs comprise only a small percentage of the total cost, 2.7 percent, while recurrent costs make up 97.3 percent.
- The average district-level annual cost is Rs. 3,337,582, of which capital costs constitute only 4.4 percent, and recurrent costs 95.6 percent.

Capital Costs: At the district-level, equipment/office furniture and non-recurrent training constitute the capital cost items (the capital costs are those incurred by the PD unit to coordinate the PD intervention). To estimate the equipment/office furniture costs, district-level PD officials made a list of these items. It was observed that the district-level PD unit had the following equipment/office furniture: computer, printer, office table, computer table, chair, drawer, almira (armoire), shelves, fans, etc. Programme personnel and local authorities estimated the quantity and current (replacement) costs of similar equipment/office furniture. The useful life of the item was arrived at by asking programme personnel how long this type of equipment generally lasts before it is beyond repair.

Table 4.2 District-level annual cost by input category

	Input Category	District-level Annual Cost in Purulia		District-level Annual Cost in Murshidabad		District-level Average Annual Cost	
		Amount (Rs.)	%	Amount (Rs.)	%	Amount (Rs.)	%
	CAPITAL						
1.	Equipment	16,670	0.5	7,500	0.3	12,085	0.4
2.	Training — Non-recurrent	186,970	5.7	82,770	2.4	134,870	4.0
	Subtotal Capital	203,640	6.2	90,270	2.7	146,955	4.4
	RECURRENT						
3.	Human resources	469,000	14.4	393,000	11.4	431,000	12.9
4.	Office space	26,400	0.8	66,000	1.9	46,200	1.4
5.	Training — Recurrent	1,879,720	57.8	1,764,773	51.6	1,822,247	54.6
6.	Community mobilisation	465,000	14.3	888,000	26.0	676,500	20.3
7.	Transportation	117,600	3.6	117,600	3.4	117,600	3.5
8.	Office operations	94,200	2.9	99,960	3.0	97,080	2.9
	Subtotal Recurrent	3,051,920	93.8	3,329,333	97.3	3,190,627	95.6
	TOTAL	3,255,560	100.0	3,419,603	100.0	3,337,582	100.0

Total capital costs at the district level are Rs. 203,640 in Purulia, and Rs. 90, 270 in Murshidabad. The average total capital costs are Rs. 146,955 at the district level. Based on this data, the average annual cost of each capital item is calculated similar to “straight line" depreciation. Training costs are “depreciated” over five years.

Only 0.5 percent and 0.3 percent of resources are consumed in providing equipment/office furniture support at the district-level PD unit in Purulia and Murshidabad, respectively. On average, equipment/office furniture account for 0.4 percent of total annual costs at the district level.

Non-recurrent training includes those training programmes and workshops that are organised once or rarely. To avoid duplication and double counting, all training costs are estimated only at the district-level. District-level officials, not block-or AWC-level officials, are responsible for organising training activities. The following training programmes and workshops are included in this category: district-level sensitisation workshops, block-level sensitisation workshops, TOT on community mobilisation, and TOT on community mobilisation specific to the PD approach. The district-level annual cost estimates for these training activities are calculated by dividing the total costs by five, a proxy for the estimated useful life of the training. Table 4.2 shows that 5.7 percent of total annual costs are for non-recurrent training in Purulia district, and 2.4 percent in Murshidabad district. The average, non-recurrenttraining support at the district level amounts to 4 percent of total annual cost.

Recurrent Costs: At the district level, the recurrent costs required to implement the PD approach include human resources, office space, recurrent training, community mobilisation, transportation, and office operations.

Human resources at the district level include district coordinator, MIS data analyst/monitoring assistant, and data entry operator/office assistant, who works full time for the PD unit and is supported by UNICEF. Moreover, other government departments also have contributed human resources to the programme. These include the ICDS DPO, an additional magistrate (general), additional executive officer (Zila Parishad) and other PRI members from Zila Parishad. Table 4.2 shows that human resources constitute 14.4 percent of the total annual cost in Purulia district, while it is 11. 4 percent in Murshidabad district. The average human resources support amounts to 12.9 percent of the total annual cost at the district level.

The PD unit office space is provided by the Zila Parishad in Purulia district and by the district administration in Murshidabad. To estimate the cost of office space, the equivalent monthly rent is calculated for a similar type of office space. Table 4.2 shows that office space (rent of the building) constitutes 0.8 percent of total annual costs in Purulia district, while it is 1.9 percent in Murshidabad district. Office costs on average amount to 1.4 percent of the total annual cost at the district level.

The recurrent training includes those trainings that are organised more frequently, such as training of AWWs on community mobilisation and on the PD approach, training of SHG members, training of VHCs, and capacity-building on health and nutrition issues. Table 4.2 shows that in both Purulia and Murshidabad, more than half of the district-level annual cost is for recurrent training (57.8 % in Purulia, 51.6 percent in Murshidabad). The average recurrent training cost for both districts amounts to 54.6 percent of the total annual cost.

The community mobilisation costs include information, education and communication (IEC)/BCC activities, interactive sessions with mothers and Sachetan Mela. It is estimated that 14.3 percent and 26 percent of annual costs at the district-level are for community mobilisation activities in Purulia, and Murshidabad districts, respectively. The average cost of community mobilisation amounts to 20.3 percent of the total annual cost.

The transportation costs, which include car rental charges, travel expenses, and other incidental expenses during travel, constitute 3.6 percent of the total annual cost in the Purulia district and 3.4 percent in the Murshidabad district. The average transportation costs amount to 3.5 percent of the total.

The office operations costs, which include expenses for stationery, communication, books, periodicals, journals, processing documentation (including printing), and review meetings, are 3.0 percent of the district-level annual cost in Purulia district, and 2.9 percent in Murshidabad district.

4.2.2 Classification by Source

The estimated annual cost is classified by source, i.e., who provides the resources for implementing the PD approach at the district level. Table 4.3 shows that at the district level, the donor agency provides the majority of the resources (95.3%), while governmental agencies provide only 4.7 percent through their existing setup (for details refer to Tables A2 and A10 in Annex A). The analysis also shows that the donor agency contributes 97.1 percent of the capital inputs and 95.3 percent of the recurrent inputs. Of the capital inputs, the donor agency has contributed 65 percent of the equipment and office furniture at the district PD unit, and the government has contributed 35 percent. Similarly, the funding agency contributes three-fourths of the human resources costs, while government agencies contribute only one-fourth. Table 4.3 shows that the donor agency contributes 100 percent of the training, community mobilisation, transportation costs, and office operations costs. However, the government provides the office space for the PD unit.

Table 4.3 District-level annual cost allocation by source

	Input Category	District-level Annual Cost in Purulia		District-level Annual Cost in Murshidabad		District-level Average Annual Cost	
		Donor (%)	Government (%)	Donor (%)	Government (%)	Donor (%)	Government (%)
	CAPITAL						
1.	Equipment	81.0	19.0	49.3	50.7	65.1	34.9
2.	Training — Non-recurrent	100.0	0.0	100.0	0.0	100.0	0.0
	Subtotal Capital	98.4	1.6	95.8	4.2	97.1	2.9
	RECURRENT						
3.	Human resources	76.8	23.2	73.3	26.7	75.0	25.0
4.	Office space	0.0	100.0	0.0	100.0	0.0	100.0
5.	Training — Recurrent	100.0	0.0	100.0	0.0	100.0	0.0
6.	Community mobilisation	100.0	0.0	100.0	0.0	100.0	0.0
7.	Transportation	100.0	0.0	100.0	0.0	100.0	0.0
8.	Office operations	100.0	0.0	100.0	0.0	100.0	0.0
	Subtotal Recurrent	95.6	4.4	94.9	5.1	95.2	4.8
	TOTAL	95.7	4.3	94.9	5.1	95.3	4.7

4.3 Estimating Annual Cost at the Block Level

Per Table 4.4, the block-level total annual cost is Rs. 198,165 in Purulia district and Rs. 174,743 in Murshidabad district. The average block-level annual cost is Rs. 186,454.

4.3.1 Classification by Inputs

Table 4.4 depicts the block-level annual cost by input category. It shows that at the block level, total annual cost is

Rs. 198,165 in Purulia district (for details refer to Tables A3 and A11 in Annex A). Capital costs comprise only 0.2 percent of this, while recurrent costs make up 99.8 percent. Similarly, in Murshidabad district, the block-level annual costs are Rs. 174,743. Of this, capital costs comprise only 0.3 percent, while recurrent costs make up 99.7 percent. On average, the block-level annual costs amount to Rs. 186,454, where capital costs constitute only 0.3 percent and recurrent costs 99.7 percent.

Capital Costs: At the block level, office furniture is the only capital input. It was observed that the BDO/PRI provides office furniture, such as office tables, chairs, drawers, and almira (armoires). Table 4.4 shows that only 0.2 percent and 0.3 percent of block-level resources comprise of office furniture costs in Purulia and Murshidabad, respectively. The quantity and current (replacement) cost for a similar piece of office furniture was estimated by programme personnel and local authorities. Based on the data, the average annual cost was calculated in the same manner as straight line depreciation.

Recurrent Costs: At the block level, the recurrent costs of planning, implementing, and managing the PD approach include human resources and office space. Table 4.4 shows that recurrent human resources costs constitute almost all of the annual cost at the block level. Comparison of recurrent human resources costs by district shows that they amount to 95.9 percent of the total in Purulia and 95.3 percent in Murshidabad. The average human resources costs comprise 95.6 percent of the total recurrent costs at the block level, including salaries for the block facilitator, who works full time implementing PD activities and is supported by the donor agency. Apart from the block facilitator, human resources from other government departments also contribute to the PD programme at the block level. These include the CDPO and the ICDS supervisor, who devote their time planning and implementing the PD approach at the block level. The office space for the block facilitator is provided by the BDO.

To estimate the cost of office space, the equivalent monthly rent was calculated for a similar type of office space. Table 4.4 shows that office space (rent of the building) constitutes 3.9 percent of the total annual cost in Purulia district, while it is 4.4 percent in Murshidabad district.

Table 4.4 Block-level annual cost by input category

	Input Category	Block-level Annual Cost in Purulia		Block-level Annual Cost in Murshidabad		Block-level Average Annual Cost	
		Amount (Rs.)	%	Amount (Rs.)	%	Amount (Rs.)	%
	CAPITAL						
1.	Equipment	465	0.2	543	0.3	504	0.3
2.	Training — Non-recurrent	0	0.0	0	0.0	0	0.0
	Subtotal Capital	465	0.2	543	0.3	504	0.3
	RECURRENT						
3.	Human resources	190,000	95.9	166,500	95.3	178,250	95.6
4.	Office space	7,700	3.9	7,700	4.4	7,700	4.1
5.	Training — Recurrent	0	0.0	0	0.0	0	0.0
6.	Community mobilisation	0	0.0	0	0.0	0	0.0
7.	Transportation	0	0.0	0	0.0	0	0.0
8.	Office operations	0	0.0	0	0.0	0	0.0
	Subtotal Recurrent	197,700	99.8	174,200	99.7	185,950	99.7
	TOTAL	198,165	100.0	174,743	100.0	186,454	100.0

4.3.2 Classification by Source

The estimated annual cost is classified by source, i.e., who provides the resources for implementing the PD approach at the block level. Table 4.5 shows that in all, at the block level, the donor agency provides 47.5 percent of the resources, and government agencies provide 52.5 percent of the resources through their existing set-up (for details refer to Tables A4 and A12 in Annex A). The analysis also shows that the government contributes all capital inputs. The donor agency contributes 47.6 percent of the recurrent costs, the government 52.4 percent. Human resources costs at the block level are paid nearly equally by the funding agency (49.7 %) and the government (50.3 %). Table 4.5 shows that the government contributes all the office furniture and office space for the block facilitator.

Table 4.5 Block-level annual cost allocation by source

	Input Category	Block-level Annual Cost in Purulia		Block-level Annual Cost in Murshidabad		Block-level Average Annual Cost	
		Donor (%)	Government (%)	Donor (%)	Government (%)	Donor (%)	Government (%)
	CAPITAL						
1.	Equipment	0	100.0	0	100.0	0	100.0
	Subtotal Capital	0	100.0	0	100.0	0	100.0
	RECURRENT						
2.	Human resources	48.9	51.1	50.5	49.5	49.7	50.3
3.	Office space	0.0	100.0	0.0	100.0	0.0	100.0
	Subtotal Recurrent	47.0	53.0	48.2	51.8	47.6	52.4
	TOTAL	46.9	53.1	48.1	51.9	47.5	52.5

4.4 Estimating Annual Cost at the AWC Level

Table 4.6 shows that at the AWC-level, the total annual cost is Rs. 9,794 in Purulia district and Rs. 9,268 in Murshidabad district respectively. The average AWC-level annual cost is Rs. 9,533.

4.4.1 Classification by Inputs

Table 4.6 depicts the AWC-level annual costs by input categories (for details refer to Tables A5 and A13 in Annex A). It shows that at the AWC-level total annual costs are Rs. 9,794 in Purulia district. Of this, capital costs comprise only 11.5 percent, while recurrent costs amount to 88.5 percent. Similarly, in Murshidabad district, the AWC-level annual cost is Rs. 9,268. Of this, capital costs comprise only 12.2 percent, while recurrent costs amount to 87.8 percent. The average AWC-level annual cost is Rs. 9,533, where capital costs constitute 11.9 percent, and recurrent costs 88.1 percent.

Capital Costs: At the AWC level, costs of tools related to the PD approach constitute the only capital costs. To estimate the costs of the PD tools, a list was prepared with the help of the AWWs. The tools are mother and child protection card, community growth chart, community level social map, and cohort register (Box 2). Scales (5 kg and 25 kg) were also provided. As each of these tools can be used for at least a year, they are considered as capital costs for calculation purposes.

Box 2. PD Tools at the AWC Level

Mother and child protection card: The card facilitates monitoring of growth milestones in children. It includes immunisation details and pictures that advocate good feeding and child care practices. It also features useful information for pregnant women and lactating mothers and advice on childbirth.

Community growth chart: The chart contains vital information on the health and nutritional status of children, pregnant women, and lactating mothers. The chart's visual display draws the immediate attention of mothers and Health and ICDS workers.

Social map: This unique map of the village highlights and labels important features such as the school, health centre, market, tubewells, water bodies, and roads. This tool aims to raise awareness among villagers about existing social resources and their locations, so that gaps in social infrastructure can be identified and discussed.

Cohort register: The register contains detailed information on the health and nutritional status of pregnant women, lactating mothers, and children through the age of three. The register also contains important information related to childbirth, illness, care practices, and availability of services.

Total capital costs at the AWC level amount to Rs. 1,128 in Purulia district and Rs. 1,133 in Murshidabad district. The average total capital cost is Rs. 1,131 at the AWC level.

Table 4.6 AWC-level annual cost by input category

	Input Category	AWC-level Annual Cost in Purulia		AWC-level Annual Cost in Murshidabad		AWC-level Average Annual Cost	
		Amount (Rs.)	%	Amount (Rs.)	%	Amount (Rs.)	%
	CAPITAL						
1	Equipment	1,128	11.5	1,133	12.2	1,131	11.9
2	Training — Non-recurrent	0	0.0	0	0.0	0	0.0
	Subtotal Capital	1,128	11.5	1,133	12.2	1,131	11.9
	RECURRENT						
3	Human resources	6,629	67.7	6,042	65.2	6,336	66.4
4	Office space	1,721	17.6	1,760	19.0	1,741	18.3
5	Training — Recurrent	0	0.0	0	0.0	0	0.0
6	Community mobilisation	0	0.0	0	0.0	0	0.0
7	Transportation	0	0.0	0	0.0	0	0.0
8	Office operations	316	3.2	333	3.6	325	3.4
	Subtotal Recurrent	8,666	88.5	8,135	87.8	8,402	88.1
	TOTAL	9,794	100.0	9,268	100.0	9,533	100.0

Recurrent Costs: At the AWC level, the recurrent costs to plan, implement, and manage the PD approach are human resources, office space, and office operations costs. Human resources include AWCs and helpers who work full time with the state government and spend time implementing the PD activities at the AWC level.

Table 4.6 shows that at the AWC level, human resources comprise the majority of the total annual cost: 67.7 percent in Purulia district and 65.2 percent in Murshidabad district. The office space for the AWC is provided by community groups, the government department, and others; however, it is still important to estimate these costs. Table 4.6 shows that at the AWC level, office space constitutes 17.6 percent of total annual cost in Purulia district and 19 percent in Murshidabad district. The average annual office space costs are 18.3 percent of the total annual cost at the AWC level.

Office operations costs, which include registration expenses, pens, pencils, markers, *bindis*, community mobilisation and VHC refresher training, and interactive sessions, constitute 3.2 percent of the AWC-level annual cost in Purulia district and 3.6 percent in the Murshidabad district.

4.4.2 Classification by Source

The estimated annual costs are classified by source, i.e., who provides the resources for implementing the PD approach at the AWC level. Table 4.7 shows that at the AWC level, the government provides the majority of the resources (84.8 percent) overall, while the donor agency provides only 15.2 percent (for details refer to Tables A6 and A14 inAnnex A). However, the donor agency fully funds both the capital (PD tools) and the recurrent (office operations) inputs. Human resources costs at the AWC level include the time allocated by the AWWs and helpers for implementing PD activities in the AWC. The AWWs and helpers are supported by the existing government programme.

Table 4.7 AWC-level annual cost by source

	Input Category	AWC-level Annual Cost in Purulia		AWC-level Annual Cost in Murshidabad		AWC-level Average Annual Cost	
		Donor %	Govt. %	Donor %	Govt. %	Donor %	Govt. %
	CAPITAL						
1	Equipment	100.0	0.0	100.0	0.0	100.0	0.0
	Subtotal Capital	100.0	0.0	100.0	0.0	100.0	0.0
	RECURRENT						
2	Human resources	0.0	100.0	0.0	100.0	0.0	100.0
3	Office space	0.0	100.0	0.0	100.0	0.0	100.0
4	Office operations	100.0	0.0	100.0	0.0	100.0	0.0
	Subtotal Recurrent	3.6	96.4	4.1	95.9	3.8	96.2
	TOTAL	14.7	85.3	15.8	84.2	15.2	84.8

4.5 Estimating Total Cost for a District

Total annual cost of implementing the PD approach in a district is calculated by adding the total annual cost at the district, block, and AWC levels. Block-level annual cost is estimated by multiplying the block-level annual cost per block by the number of blocks implementing the PD approach in the district. Similarly, the AWC-level annual cost is estimated by multiplying the AWC-level annual cost per AWC by the number of AWCs implementing the PD approach in the district.

Table 4.8 shows that the total annual cost per district for implementing the PD approach is Rs. 17,156,358 (for details refer to Table A17 in Annex A). Of this, the majority (91.4 %) is recurrent; capital costs are only 8.6 percent. The majority (60.6 %) of the recurrent costs are incurred for human resources inputs (See Table A17 in Annex A) required to implement the PD approach in the district.

Table 4.8 Total cost for implementing positive deviance approach in a district by input category

	Input Category	Total Cost in Purulia		Total Cost in Murshidabad		Average Total Cost Per District	
		Amount (Rs.)	%	Amount (Rs.)	%	Amount (Rs.)	%
1	**Capital**	1,712,052	8.5	1,247,465	8.9	1,479,759	8.6
2	**Recurrent**	18,523,034	91.5	12,830,163	91.1	15,676,599	91.4
	TOTAL	20,235,086	100.0	14,077,628	100.0	17,156,358	100.0

Table 4.9 shows that the donor and the government contribute the total annual cost per district. The donor contributes Rs. 6,110,629, and the government Rs. 11,045,729 (for details refer to Table A18 in the Annex A). Of the donor's total contribution, 24.1 percent is capital costs, and 75.9 percent is recurrent costs. Of the government's total contribution, almost all (99.9 %) of the costs are recurrent in nature. Table 4.9 shows that the donor agency contributes 35.6 percent (6,110,629) of the total cost (17,156,358), while the government contributes 64.4 percent (11,045,729).

Table 4.9 Total cost for implementing positive deviance approach in a district by source

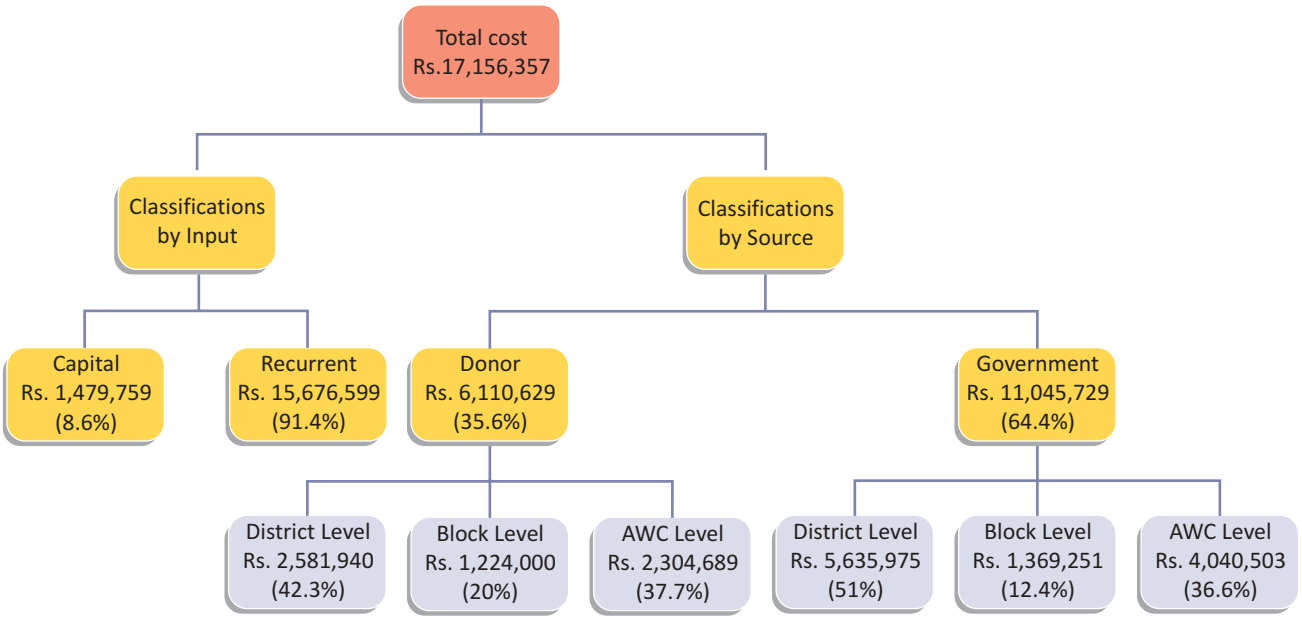
	Input Category	Total Cost in Purulia		Total Cost in Murshidabad		Total Cost Per District	
		Donor	Government	Donor	Government	Donor	Government
1	**Capital**	1,699,582	12,470	1,239,864	7,601	1,469,723 (24.1%)	10,036 (0.1%)
2	**Recurrent**	5,196,484	13,326,550	4,085,327	8,744,836	4,640,906 (75.9%)	11,035,693 (99.9%)
	TOTAL	6,896,066	13,339,020	5,325,191	8,752,437	6,110,629 (100.0%)	11,045,729 (100.0%)

Table 4.10 shows the donor and government funds required to implement the PD approach at the various governmental levels. Of the donor's contribution, 42.3 percent is utilised at the district level; 20 percent at the block level; and 37.7 percent at the AWC level. Of the government's total contribution, 51 percent is utilised at the district level; 12.4 percent at the block level; and 36.6 percent at the AWC level. That is, the greatest proportion of both donor and government funds is utilised at the district level, followed by the AWC level.

Table 4.10 Total cost of implementing positive deviance approach in a district by source and level

	Input Category	Total Cost in Purulia		Total Cost in Murshidabad		Total Cost Per District	
		Donor	Government	Donor	Government	Donor	Government
1	District	1,919,076	1,1097,150	3,244,803	174,800	2,581,940 (42.3%)	5,635,975 (51.0%)
2	Block	1,860,000	2,103,300	588,000	635,201	1,224,000 (20.0%)	1,369,251 (12.4%)
3	AWC	3,116,990	138,570	1,492,388	7,942,436	2,304,689 (37.7%)	4,040,503 (36.6%)
	TOTAL	6,896,066	13,339,020	5,325,191	8,752,437	6,110,629 (100.0%)	1,1045,729 (100.0%)

Figure 4.2 Total annual cost of implementing positive deviance approach in a district



4.6 Estimating Per Beneficiary Cost

To estimate annual per beneficiary cost, the total cost per district is divided by the total number of beneficiaries in a year. A beneficiary is defined as the total number of children in Grades I, II, III, and IV nutritional status.

There were 13,290 and 11,868 beneficiaries in Purulia district and Murshidabad district, respectively, in 2009 or an average of 12,579. Table 4.11 shows per beneficiary annual cost of implementing the PD approach in a district as Rs. 1,354.4 (for details refer to Table A19 in Annex A). Table 4.12 shows that, of this, the donor agency contributes Rs. 483.8 per beneficiary, and the government contributes Rs. 870.6 per beneficiary, that is, the government contributes 1.8 times more per beneficiary than the donor agency (for details refer to Table A20 in Annex A). Table 4.13 shows per beneficiary cost by level.

Table 4.11 Per beneficiary cost of implementing positive deviance approach by input category

	Input Category	Per Beneficiary Cost in Purulia (Rs.)	Per Beneficiary Cost in Murshidabad (Rs.)	Average per Beneficiary Cost (Rs.)
1	Capital	128.8	105.1	116.9
2	Recurrent	1,393.7	1,081.1	1,237.5
	TOTAL	1,522.5	1,186.2	1,354.4

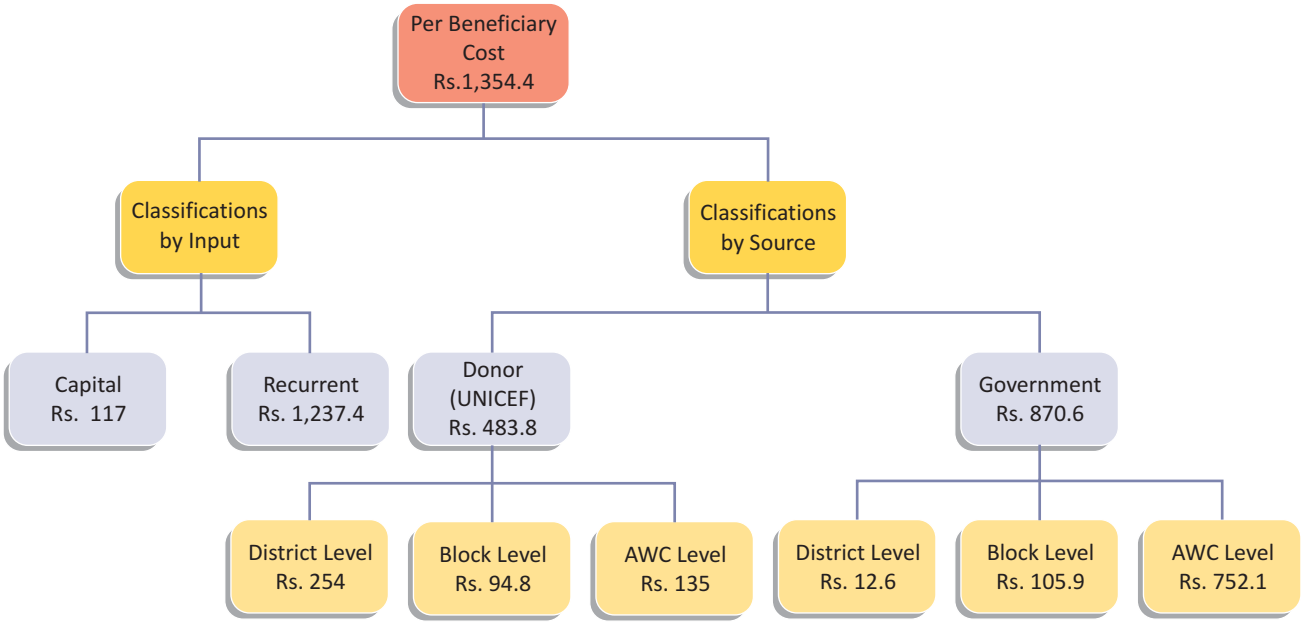
Table 4.12 Per beneficiary cost of implementing positive deviance approach by source

	Input Category	Per Beneficiary Cost in Purulia (Rs.)		Per Beneficiary Cost in Murshidabad (Rs.)		Average Per Beneficiary Cost (Rs.)	
		Donor	Government	Donor	Government	Donor	Government
1	Capital	127.9	0.9	104.5	0.6	116.2	0.8
2	Recurrent	390.9	1,002.8	344.2	736.8	367.6	869.8
	TOTAL	518.8	1,003.7	448.7	737.4	483.8	870.6

Table 4.13 Per beneficiary cost of implementing positive deviance approach by source and level

	Level	Per Beneficiary Cost in Purulia District (Rs.)		Per Beneficiary Cost in Murshidabad District (Rs.)		Per Beneficiary Cost (Rs.)	
		Donor	Government	Donor	Government	Donor	Government
1	District	234.5	10.4	273.4	14.7	254.0	12.6
2	Block	140.0	158.3	49.5	53.5	94.8	105.9
3	AWC	144.4	835.0	125.7	669.2	135.0	752.1
	TOTAL	518.9	1003.7	448.7	737.5	483.8	870.6

Figure 4.3 Per beneficiary annual cost of implementing positive deviance approach by classification



4.7 Assessing Efficiency of Positive Deviance Approach

The PD approach is more efficient as it provides more beneficial results from the use of a given set of resources. The programme managers can gauge efficiency by examining simple cost presentations based on cost profiles, which show the value and percentage share of total annual cost for each input at district, block, and AWC levels. Table 4.14 summarises the cost profiles, which programme managers can use in two ways to improve the efficiency of the PD approach:

- Cost profiles highlight the categories on which PD programme managers should focus further studies of efficiency. The larger the cost category, the greater the potential for savings, and consequently, the more attention programme managers should pay to it. For example, at the district level, reducing training (recurrent) costs by a certain percentage would have a much larger impact on total annual cost than reducing costs of other inputs by the same percentage. For example, a 20 percent reduction in training (recurrent) costs would reduce total annual cost by 11 percent (20 % of 55=11 %), but the same percentage reduction in equipment would only reduce total annual cost by 0.08 percent (20 % of 0.4 %=0.08 %).

- The comparative size of the categories also tells programme managers how much relative effort to put into estimating costs by category. However, PD programme managers must be very careful in using cost profiles for efficiency gains. Input categories which seem to have the most potential for achieving cost reductions are not necessarily those that should be altered. These inputs may already be used efficiently, and cutting back on them may impact programme outputs and outcomes. Even if the inputs are being used inefficiently, they may be difficult to change. In the example used above, district-level training (recurrent) may be an important input that is being used inefficiently, but any change in these activities might be impossible in the short term. Nevertheless, identifying the inputs using cost profiles is a useful starting point in exploring the efficiency of the PD programme.

Table 4.14 Cost profiles (% share of total cost) by district, block, and AWC levels

Input Category	District-level Annual Cost	District-level Annual Cost	District-level Annual Cost	Block-level Annual Cost (per block)	Block-level Annual Cost (per block)	Block-level Annual Cost (per block)	AWC-level Annual Cost (per AWC)	AWC-level Annual Cost (per AWC)	AWC-level Annual Cost (per AWC)
	Purulia	Murshidabad	Average	Purulia	Murshidabad	Average	Purulia	Murshidabad	Average
CAPITAL									
Equipment	0.5	0.3	0.4	0.2	0.3	0.3	11.5	12.2	11.9
Training — Non-recurrent	5.7	2.4	4.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal Capital	6.2	2.7	4.4	0.2	0.3	0.3	11.5	12.2	11.9
RECURRENT									
Human resources	14.4	11.4	12.9	95.9	95.3	95.6	67.7	65.2	66.4
Office space	0.8	1.9	1.4	3.9	4.4	4.1	17.6	19.0	18.3
Training — Recurrent	57.8	51.6	54.6	0.0	0.0	0.0	0.0	0.0	0.0
Community mobilisation	14.3	26.0	20.3	0.0	0.0	0.0	0.0	0.0	0.0
Transportation	3.6	3.4	3.5	0.0	0.0	0.0	0.0	0.0	0.0
Office operations	2.9	3.0	2.9	0.0	0.0	0.0	3.2	3.6	3.4
Subtotal Recurrent	93.8	97.3	95.6	99.8	99.7	99.7	88.5	87.8	88.1
TOTAL	100.0	100.0	100.0	100.0	100.0	100.00	100.0	100.0	100.0

5 Conclusions

This study focuses on estimating the cost of implementing the PD approach at various levels (district, block, and AWC). The cost of implementing the PD approach is classified by inputs (capital and recurrent). Estimated costs are divided into contributions from the donor agencies and governments. Since implementing the PD approach in the district leverages the government's existing structure, estimates of existing government resources are factored into the total cost of implementing the PD approach. Cost estimates are based on consultations with key staff at the district, block, and AWC levels to obtain information on quantities and prices. Considerable efforts were made in calculating appropriate quantities of input categories.

The study finds that the total cost of implementing the PD approach within a district is Rs. 17,156,358. Of this, capital costs comprise 8.6 percent, and recurrent costs, 91.4 percent. Donors and the existing government structure cover the total costs of the programme in the district. The study finds that the donor contributes 35.6 percent, and the government contributes 64.4 percent. The largest portion of the donor's total contribution, 24.1 percent, goes to capital costs, and 75.9 percent goes to recurrent costs. Of the government's contribution, 0.1 percent goes to capital costs, and 99.9 percent to recurrent costs.

The study also finds that **human resources costs constitute the major proportion of the total cost (60.6%) of implementing the PD approach within a district.** Deploying additional staff at the district and block level was required to implement the programme, however, the key human resources, the AWWs, are already present in the government system. The PD approach helps AWWs utilise their time effectively to reduce child malnutrition without increasing the cost of the services rendered to the government. Of the total human resources costs, the government contributes the majority (86%). This implies that more attention should be given to the human resources component for improving the efficiency of the PD approach. Since the AWWs are involved in implementing PD activities at the village level, further studies should explore how to optimise their roles, thus maximising the return on this investment.

The study also finds that per beneficiary cost of implementing the PD approach in a district is Rs. 1,354.4. Of this, the donor cost is 483.8, and government cost is 870.6. The programme was able to reach an average of 12,579 beneficiaries over a one year period for this cost. Given this investment, districts were able to achieve a reduction in children in Grade II nutritional status from 22 to 4 percent and a 2 point reduction in the proportion of children who were moderately or severely malnourished.

Given the fact that malnutrition is a major public health problem, this cost analysis can help governments determine the investment required to replicate the PD approach in other geographic areas and to integrate this approach into existing government programmes. More attention should be paid to those low-performing areas where malnutrition is a major problem, as this will help maximise the allocation of resources and enhance the efficiency of existing programmes.

The study also recommends that given that the AWWs are the key implementers of the PD approach, their roles and responsibilities be revisited by the Government. It is suggested that since the PD approach has contributed significantly to the reduction of malnutrition among children, the activities related to the PD approach need to be included more explicitly in the AWWs' roles and responsibilities. The time spent by AWWs to carry out the PD approach will enable them to provide better and more targeted counseling, which is already part of their responsibilities. Therefore, incorporation of this

approach will allow them to use their time more effectively, but its impact on their ability to carry out their other duties is an important factor to consider.

Finally, one of the study's major contributions is to provide tools for estimating programme costs at various levels. These tools are easy to adapt to other settings and programmes (see Annex B). For example, the tools elaborate how to estimate programme implementation cost, quantity and prices of the input categories required.

This report systematically analyses the cost of implementing the PD approach in two sampled districts in West Bengal. In doing so, it provides useful information to the governments, donor agencies, policy-makers, and programme managers, which can be applied to replicating the successful programme in other geographic areas.

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Annex A: Detailed Data Tables

Table A1 District-level annual cost by input category in Purulia district

	Input Category	Annual Cost (Rs.)	Share of Total Cost (%)
	CAPITAL		
1	Equipment	16,670	0.5
2	Training — Non-recurrent	186,970	5.7
	Subtotal Capital	203,640	6.2
	RECURRENT		
3	Human resources	469,000	14.4
4	Office space	26,400	0.8
5	Training — Recurrent	1,879,720	57.8
6	Community mobilisation	465,000	14.3
7	Transportation	117,600	3.6
8	Office operations	94,200	2.9
	Subtotal Recurrent	3,051,920	93.8
	TOTAL	3,255,560	100.0

Table A2 District-level annual cost by source in Purulia district

	Input Category	Donor		Government	
		Amount (Rs.)	%	Amount (Rs.)	%
	CAPITAL				
1	Equipment	13,500	81.0	3,170	19.0
2	Training — Non-recurrent	186,970	100.0	0	0.0
	Subtotal Capital	200,470	98.4	3,170	1.6
	RECURRENT				
3	Human resources	360,000	76.8	109,000	23.2
4	Office space	0	0.0	26,400	100.0
5	Training — Recurrent	1,879,720	100.0	0	0.0
6	Community mobilisation	465,000	100.0	0	0.0
7	Transportation	117,600	100.0	0	0.0
8	Office operations	94,200	100.0	0	0.0
	Subtotal Recurrent	2,916,520	95.6	135,400	4.4
	TOTAL	3,116,990	95.7	138,570	4.3

Table A3 Block-level annual cost by input category in Purulia district

	Input Category	Annual Cost (Rs.)	Share of Total Cost (%)
	CAPITAL		
1	Equipment	465	0.2
2	Training — Non-recurrent	0	0.0
	Subtotal Capital	465	0.2
	RECURRENT		
3	Human resources	190,000	95.9
4	Office space	7,700	3.9
5	Training — Recurrent	0	0.0
6	Community mobilisation	0	0.0
7	Transportation	0	0.0
8	Office operations	0	0.0
	Subtotal Recurrent	197,700	99.8
	TOTAL	198,165	100.0

Table A4 Block-level annual cost by source in Purulia district

	Input Category	Donor		Government	
		Amount (Rs.)	%	Amount (Rs.)	%
	CAPITAL				
1	Equipment	0	0.0	465	100.0
2	Training — Non-recurrent	0	0.0	0	0.0
	Subtotal Capital	0	0.0	465	100.0
	RECURRENT				
3	Human resources	93,000	48.9	97,000	51.1
4	Office space	0	0.0	7,700	100.0
5	Training — Recurrent	0	0.0	0	0.0
6	Community mobilisation	0	0.0	0	0.0
7	Transportation	0	0.0	0	0.0
8	Office operations	0	0.0	0	0.0
	Subtotal Recurrent	93,000	47.0	104,700	53.0
	TOTAL	93,000	46.9	105,165	53.1

Table A5 AWC-level annual cost by input category in Purulia district

	Input Category	Annual Cost (Rs.)	Share of Total Cost (%)
	CAPITAL		
1	Equipment	1,128	11.5
2	Training — Non-recurrent	0	0.0
	Subtotal Capital	1,128	11.5
	RECURRENT		
3	Human resources	6,629	67.7
4	Office space	1,721	17.6
5	Training — Recurrent	0	0.0
6	Community mobilisation	0	0.0
7	Transportation	0	0.0
8	Office operations	316	3.2
	Subtotal Recurrent	8,666	88.5
	TOTAL	9,794	100.00

Table A6 AWC-level annual cost by source in Purulia district

	Input Category	Donor		Government	
		Amount (Rs.)	%	Amount (Rs.)	%
	CAPITAL				
1	Equipment	1,128	100.0	0	0.0
2	Training — Non-recurrent	0	0.0	0	0.0
	Subtotal Capital	1,128	100.0	0	0.0
	RECURRENT				
3	Human resources	0	0.0	6,629	100.0
4	Office space	0	0.0	1,721	100.0
5	Training — Recurrent	0	0.0	0	0.0
6	Community mobilisation	0	0.0	0	0.0
7	Transportation	0	0.0	0	0.0
8	Office operations	316	100.0	0	0.0
	Subtotal Recurrent	316	3.6	8,350	96.4
	TOTAL	1,444	14.7	8,350	85.3

Table A7 Annual cost by levels in Purulia district

	Input Category	District-level Annual Cost		Block-level Annual Cost (per block)		AWC-level Annual Cost (per AWC)	
		Amount (Rs.)	%	Amount (Rs.)	%	Amount (Rs.)	%
	CAPITAL						
1	Equipment	16,670	0.5	465	0.2	1,128	11.5
2	Training — Non-recurrent	186,970	5.7	0	0.0	0	0.0
	Subtotal Capital	203,640	6.2	465	0.2	1,128	11.5
	RECURRENT						
3	Human resources	469,000	14.4	190,000	95.9	6,629	67.7
4	Office space	26,400	0.8	7,700	3.9	1,721	17.6
5	Training — Recurrent	1,879,720	57.8	0	0.0	0	0.0
6	Community mobilisation	465,000	14.3	0	0.0	0	0.0
7	Transportation	117,600	3.6	0	0.0	0	0.0
8	Office operations	94,200	2.9	0	0.0	316	3.2
	Subtotal Recurrent	3,051,920	93.8	197,700	99.8	8,666	88.5
	TOTAL	3,255,560	100.0	198,165	100.0	9,794	100.0

Table A8 Total annual cost in Purulia district

	Input Category	District-level	Block-level			AWC-level			Purulia District
		Total Cost (Rs.)	Per Block Cost (Rs.)	No. of Blocks	Total Cost (Rs.)	Per AWC Cost (Rs.)	No. of AWCs	Total Cost (Rs.)	Total Cost (Rs.)
	CAPITAL								
1	Equipment	16,670	465	20	9,300	1,128	1,329	1,499,112	1,525,082
2	Training — Non-recurrent	186,970	0	20	0	0	1,329	0	186,970
	Subtotal Capital	203,640	465	20	9,300	1,128	1,329	1,499,112	1,712,052

Table A8 Total annual cost in Purulia district

	Input Category	District-level	Block-level			AWC-level			Purulia District
		Total Cost (Rs.)	Per Block Cost (Rs.)	No. of Blocks	Total Cost (Rs.)	Per AWC Cost (Rs.)	No. of AWCs	Total Cost (Rs.)	Total Cost (Rs.)
	RECURRENT								
3	Human resources	469,000	190,000	20	3,800,000	6,629	1,329	8,809,941	13,078,941
4	Office space	26,400	7,700	20	154,000	1,721	1,329	2,287,209	2,467,609
5	Training — Recurrent	1,879,720	0	0	0	0	1,329	0	1,879,720
6	Community mobilisation	465,000	0	0	0	0	1,329	0	465,000
7	Transportation	117,600	0	0	0	0	1,329	0	117,600
8	Office operations	94,200	0	0	0	316	1,329	419,964	514,164
	Subtotal Recurrent	3,051,920	19,7700	20	3,954,000	8,666	1,329	11,517,114	18,523,034
	TOTAL	3,255,560	198,165	20	3,963,300	9,794	1,329	13,016,226	20,235,086

Table A9 District-level annual cost by input category in Murshidabad district

	Input Category	Annual Cost (Rs.)	Share of Total Cost (%)
	CAPITAL		
1	Equipment	7,500	0.3
2	Training — Non-recurrent	82,770	2.4
	Subtotal Capital	90,270	2.7
	RECURRENT		
3	Human resources	393,000	11.4
4	Office space	66,000	1.9
5	Training — Recurrent	1,764,773	51.6
6	Community mobilisation	888,000	26.0
7	Transportation	117,600	3.4
8	Office operations	99,960	3.0
	Subtotal Recurrent	3,329,333	97.3
	TOTAL	3,419,603	100.0

Table A10 District-level annual cost by source in Murshidabad district

	Input Category	Donor		Government	
		Amount (Rs.)	%	Amount (Rs.)	%
	CAPITAL				
1	Equipment	3,700	49.3	3,800	50.7
2	Training — Non-recurrent	82,770	100.0	0	0.0
	Subtotal Capital	86,470	95.8	3,800	4.2
	RECURRENT				
3	Human resources	288,000	73.3	105,000	26.7
4	Office space	0	0.0	66,000	100.0
5	Training — Recurrent	1,764,773	100.0	0	0.0
6	Community mobilisation	888,000	100.0	0	0.0
7	Transportation	117,600	100.0	0	0.0
8	Office operations	99,960	100.0	0	0.0
	Subtotal Recurrent	3,158,333	94.9	171,000	5.1
	TOTAL	3,244,803	94.9	174,800	5.1

Table A11 Block-level annual cost by input category in Murshidabad district

	Input Category	Annual Cost (Rs.)	Share of Total Cost (%)
	CAPITAL		
1	Equipment	543	0.3
2	Training — Non-recurrent	0	0.0
	Subtotal Capital	543	0.3
	RECURRENT		
3	Human resources	166,500	95.3
4	Office space	7,700	4.4
5	Training — Recurrent	0	0.0
6	Community mobilisation	0	0.0
7	Transportation	0	0.0
8	Office operations	0	0.0
	Subtotal Recurrent	174,200	99.7
	TOTAL	174,743	100.0

Table A12 Block-level annual cost by source in Murshidabad district

	Input Category	Donor		Government	
		Amount (Rs.)	%	Amount (Rs.)	%
	CAPITAL				
1	Equipment	0	0.0	543	100.0
2	Training — Non-recurrent	0	0.0	0	0.0
	Subtotal Capital	0	0.0	543	100.0
	RECURRENT				
3	Human resources	84,000	50.5	82,500	49.5
4	Office space	0	0.0	7,700	100.0
5	Training — Recurrent	0	0.0	0	0.0
6	Community mobilisation	0	0.0	0	0.0
7	Transportation	0	0.0	0	0.0
8	Office operations	0	0.0	0	0.0
	Subtotal Recurrent	84,000	48.2	90,200	51.8
	TOTAL	84,000	48.1	90,743	51.9

Table A13 AWC-level annual cost by input category in Murshidabad district

	Input Category	Annual Cost (Rs.)	Share of Total Cost (%)
	CAPITAL		
1	Equipment	1,133	12.2
2	Training — Non-recurrent	0	0.0
	Subtotal Capital	1,133	12.2
	RECURRENT		
3	Human resources	6,042	65.2
4	Office space	1,760	19.0
5	Training — Recurrent	0	0.0
6	Community mobilisation	0	0.0
7	Transportation	0	0.0
8	Office operations	333	3.6
	Subtotal Recurrent	8,135	87.8
	TOTAL	9,268	100.0

Table A14 AWC-level annual cost by source in Murshidabad district

	Input Category	Donor		Government	
		Amount (Rs.)	%	Amount (Rs.)	%
	CAPITAL				
1	Equipment	1,133	100.0	0	0.0
2	Training — Non-recurrent	0	0.0	0	0.0
	Subtotal Capital	1,133	100.0	0	0.0
	RECURRENT				
3	Human resources	0	0.0	6,042	100.0
4	Office space	0	0.0	1,760	100.0
5	Training — Recurrent	0	0.0	0	0.0
6	Community mobilisation	0	0.0	0	0.0
7	Transportation	0	0.0	0	0.0
8	Office operations	333	100.0	0	0.0
	Subtotal Recurrent	333	4.1	7,802	95.9
	TOTAL	1,466	15.8	7,802	84.2

Table A15 Annual cost by levels in Murshidabad district

	Input Category	District-level Annual Cost		Block-level Annual Cost (per block)		AWC-level Annual Cost (per AWC)	
		Amount (Rs.)	%	Amount (Rs.)	%	Amount (Rs.)	%
	CAPITAL						
1	Equipment	7,500	0.2	543	0.3	1,133	12.2
2	Training — Non-recurrent	82,770	2.4	0	0.0	0	0.0
	Subtotal Capital	90,270	2.6	543	0.3	1,133	12.2
	RECURRENT						
3	Human resources	393,000	11.5	166,500	95.3	6,042	65.2
4	Office space	66,000	1.9	7,700	4.4	1,760	19.0
5	Training — Recurrent	1,764,773	51.6	0	0.0	0	0.0
6	Community mobilisation	888,000	26.0	0	0.0	0	0.0
7	Transportation	117,600	3.5	0	0.0	0	0.0
8	Office operations	99,960	2.9	0	0.0	333	3.6
	Subtotal Recurrent	3,329,333	97.4	174,200	99.7	8,135	87.8
	TOTAL	3,419,603	100.0	174,743	100.0	9,268	100.0

Table A16 Total annual cost in Murshidabad district

	Input Category	District-level	Block-level			AWC-level			Murshidabad District
		Total Cost (Rs.)	Per Block Cost (Rs.)	No. of Block	Total Cost (Rs.)	Per AWC Cost (Rs.)	No. of AWC	Total Cost (Rs.)	Total Cost (Rs.)
CAPITAL									
1	Equipment	7,500	543	7	3,801	1,133	1,018	1,153,394	1,164,695
2	Training — Non-recurrent	82,770	0	7	0	0	1,018	0	82,770
	Subtotal Capital	90,270	543	7	3,801	1,133	1,018	1,153,394	12,47,465
RECURRENT									
3	Human resources	393,000	166,500	7	1,165,500	6042	1,018	6,150,756	7,709,256
4	Office space	66,000	7700	7	53,900	1,760	1,018	1,791,680	1,911,580
5	Training — Recurrent	1,764,773	0	7	0	0	1,018	0	1,764,773
6	Community mobilisation	888,000	0	7	0	0	1,018	0	888,000
7	Transportation	117,600	0	7	0	0	1,018	0	117,600
8	Office operations	99,960	0	7	0	333	1,018	338,994	438,954
	Subtotal Recurrent	3,329,333	174,200	7	1,219,400	8135	1,018	8,281,430	12,830,163
	TOTAL	3,419,603	174,743	7	1,223,201	9268	1,018	9,434,824	14,077,628

Table A17 Total cost for implementing positive deviance approach in a district by input category

	Input Category	Total Cost in Purulia District		Total Cost in Murshidabad District		Total Cost Per District (Average TC)	
		Amount (Rs.)	%	Amount (Rs.)	%	Amount (Rs.)	%
	CAPITAL						
1	Equipment	1,525,082	7.6	1,164,695	8.3	1,344,889	7.8
2	Training — Non-recurrent	186,970	0.9	82,770	0.6	134,870	0.8
	Subtotal Capital	1,712,052	8.5	1,247,465	8.9	1,479,759	8.6
	RECURRENT						
3	Human resources	13,078,941	64.6	7,709,256	54.8	10,394,099	60.6
4	Office space	2,467,609	12.2	1,911,580	13.6	2,189,595	12.8
5	Training — Recurrent	1,879,720	9.3	1,764,773	12.5	1,822,247	10.6
6	Community mobilisation	465,000	2.3	888,000	6.3	676,500	3.9
7	Transportation	117,600	0.6	117,600	0.8	117,600	0.7
8	Office operations	514,164	2.5	438,954	3.1	476,559	2.8
	Subtotal Recurrent	18,523,034	91.5	12,830,163	91.1	15,676,599	91.4
	TOTAL	20,235,086	100.0	14,077,628	100.0	17,156,358	100.0

Table A18 Total cost for implementing positive deviance approach in a district by source

	Input Category	Total Cost in Purulia District (Rs.)		Total Cost in Murshidabad District (Rs.)		Total Cost Per District (Rs.)	
		Donor	Government	Donor	Government	Donor	Government
	CAPITAL						
1	Equipment	1,512,612	1,2470	1,157,094	7,601	1,334,853	10,036
2	Training — Non-recurrent	186,970	0	82,770	0	134,870	0
	Subtotal Capital	1,699,582	1,2470	1,239,864	7,601	1,469,723	10,036
	RECURRENT						
3	Human resources	2,220,000	10,858,941	876,000	6,833,256	1,548,000	8,846,099
4	Office space	0	2,467,609	0	1,911,580	0	2,189,595
5	Training — Recurrent	1,879,720	0	1,764,773	0	1,822,247	0
6	Community mobilisation	465,000	0	888,000	0	676,500	0
7	Transportation	117,600	0	117,600	0	117,600	0
8	Office operations	514,164	0	438,954	0	476,559	0
	Subtotal Recurrent	5,196,484	13,326,550	4,085,327	8,744,836	4,640,906	11,035,693
	TOTAL	6,896,066	13,339,020	5,325,191	8,752,437	6,110,629	11,045,729

Table A19 Per beneficiary cost of implementing positive deviance approach by input category

	Input Category	Per Beneficiary Cost in Purulia District		Per Beneficiary Cost in Murshidabad District		Average Per Beneficiary Cost	
		Amount (Rs.)	%	Amount (Rs.)	%	Amount (Rs.)	%
	CAPITAL						
1	Equipment	114.7	7.6	98.1	8.3	106.4	7.9
2	Training — Non-recurrent	14.1	0.9	7.0	0.6	10.5	0.8
	Subtotal Capital	128.8	8.5	105.1	8.9	116.9	8.7
	RECURRENT						
3	Human resources	984.1	64.6	649.6	54.8	816.9	59.7
4	Office space	185.7	12.2	161.1	13.6	173.4	12.9
5	Training — Recurrent	141.4	9.3	148.7	12.5	145.1	10.9
6	Community mobilisation	35.0	2.3	74.8	6.3	54.9	4.3
7	Transportation	8.8	0.6	9.9	0.8	9.4	0.7
8	Office operations	38.7	2.5	37.0	3.1	37.8	2.8
	Subtotal Recurrent	1,393.8	91.5	1,081.1	91.1	1,237.5	91.3
	TOTAL	1,522.6	100.0	1,186.2	100.0	1,354.4	100.0

Table A20 Per beneficiary cost for implementing positive deviance approach by source

	Input Category	Per Beneficiary Cost in Purulia District (Rs.)		Per Beneficiary Cost in Murshidabad District (Rs.)		Per Beneficiary Cost (Rs.)	
		Donor	Government	Donor	Government	Donor	Government
	CAPITAL						
1	Equipment	113.8	0.9	97.5	0.6	105.7	0.8
2	Training — Non-recurrent	14.1	0.0	7.0	0.0	10.5	0.0
	Subtotal Capital	127.9	0.9	104.5	0.6	116.2	0.8
	RECURRENT						
3	Human resources	167.0	817.1	73.8	575.8	120.4	696.4
4	Office space	0.0	185.7	0.0	161.0	0.0	173.4
5	Training — Recurrent	141.4	0.0	148.7	0.0	145.1	0.0
6	Community mobilisation	35.0	0.0	74.8	0.0	54.9	0.0
7	Transportation	8.8	0.0	9.9	0.0	9.4	0.0
8	Office operations	38.7	0.0	37.0	0.0	37.8	0.0
	Subtotal Recurrent	390.9	1,002.8	344.2	736.8	367.6	869.8
	TOTAL	518.8	1,003.7	448.7	737.4	483.8	870.6

Annex B: Study Tools

Cost analysis of positive deviance approach in West Bengal: District-level cost estimation tool

General information

	Information Sought	Details
1	Name of District	
2	Number of Blocks	
3	Number of Positive Deviance Blocks	
4	Number of Gram Panchayats	
5	Respondent(s)	

I. Human resources

	Category of Personnel	Funded by	Unit	Person-months	Unit Cost - Gross Monthly Remuneration (Rs.)	Annual Cost (Rs.)
1	District Coordinator					
2	MIS Data Analyst/Monitoring Assistant					
3	District Programme Officer of ICDS					
4	Additional District Magistrate (General)					
5	Others (Specify)					
6						
7						
8						
	TOTAL					

II. Office space

	Description	Funded by	Area (Sq. Ft)	Equivalent Monthly Rent (Rs.)	Equivalent Annual Rent (Rs.)	Furnishing @ 10% of Annual Rent (Rs.)	Annual Cost (Rs.)
1	Office of District PD Unit						
	TOTAL						

III. Equipment/furniture

	Item	Funded by	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)	Useful Life (Years)	Annual Cost (Rs.)
1	Computer						
2	Printer						
3	Office Table						
4	Computer Table						
5	Chair						
6	Drawers						
7	Almira (Armoire)						
8	Shelves						
9	Fans						
10	Phone						
11	Others (Specify)						
	TOTAL						

IV. Transportation

	Item	Funded by	Unit	Quantity	Unit Cost (Rs.)	Annual Cost (Rs.)
1	Car Rental for Programme Monitoring Work (15 days per month)					
2	Train (round trip to Kolkata and other districts)					
3	Food and Lodging during Travel					
4						
5						
6						
	TOTAL					

V. Training/workshop

	Type of Training	Funded by	Location	No. of Participants	Annual Cost (Rs.)
1	District-level Sensitisation Workshop				
2	Block-level Sensitisation Workshop				
3	Training of Trainers on Community Mobilisation				
4	Training of AWWs on Community Mobilisation				
5	Training of Trainers on PD				
6	Training of AWWs on PD				
7	Training of SHG Members				
8	Training of VHCs				
9	Others (Specify)				
10					
	TOTAL				

VI. Community mobilisation

	Particulars	Funded by	Unit	Quantity	Unit Cost (Rs.)	Annual Cost (Rs.)
1	IEC/BCC Activities					
2	Interactive Sessions with Mothers					
3	Sachetan Mela					
4						
5						
6						
	TOTAL					

VII. Office operations costs

	Particulars	Funded by	Annual Cost (Rs.)
1	Stationery		
2	Communication		
3	Photocopy		
4	Books/Periodicals/Journals		
5	Process Documentation (printing of reporting formats)		
6	Annual Review Meeting		
7	Others (specify)		
	TOTAL		

Cost analysis of positive deviance approach in West Bengal: block-level cost estimation tool

General information

	Particulars	Response
1	Name of District	
2	Name of Block	
3	No. of Total AWCs	
4	No. of PD AWCs	
5	Respondent(s)	

I. Human resources

	Category of Personnel	Funded by	Unit	Quantity in Person-months	Unit Cost - Gross Monthly Remuneration (Rs.)	Annual Cost (Rs.)
1	Block Facilitators (including mobility support)					
2	CDPOs					
3	ACDPOs					
4	Supervisors					
5	Others (Specify)					
	TOTAL					

Time calculation for CDPO and Supervisor will be done in the next sheet.

Calculation of time allocation of CDPO and supervisor in positive deviance activities (in days) annually

	Activity	CDPO	Supervisor
1	Baseline survey on current practices		
2	Baseline weighing of children aged 0-3 years		
3	Social map and community growth chart		
4	Community mobilisation and VHC formation		
5	VHC training		
6	PD enquiry (home visits to cover three malnourished children and three normal children and compare)		
7	FGD with four groups: grandmother, mother, father and father-in-law, sibling		
8	PD enquiry and FGD documentation		
9	Sharing meeting		
10	NCCS counseling at the AWC: 12 sessions at AWC/1 hour per session		
11	NCCS home visit three days in a month x 12 months		
12	SHG training		
13	AWW community mobilisation training		
14	AWW PD approach training		
15	Block-level Mela		
16	Block-level review meeting		
17	Interactive sessions with mothers		
	Total (use this calculation to complete the earlier sheet)		

II. Office space

	Particulars	Funded by	Area (Sq. Ft)	Equivalent Monthly Rent (Rs.)	Equivalent Annual Rent (Rs.)	Furnishing @ 10% of Annual Rent (Rs.)	Annual Cost (Rs.)
1	Office space for PD Block Facilitator						
	TOTAL						

III. Equipment/furniture

	Particulars	Funded by	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)	Working Life (Yrs)	Annual Cost (Rs.)
1	Office Table						
2	Chair						
3	Armoire						
4	Others (Specify)						
5							
	TOTAL						

Cost analysis of positive deviance approach in West Bengal: AWC-level cost estimation tool

General information

	Particulars	Response
1	Name of District	
2	Name of Block	
3	Name of AWC	
4	Name of AWW	
5	Respondent(s)	

I. Human resources

	Category of Personnel	Funded by	Unit	Quantity in Person-Months	Unit Cost - Gross Monthly Remuneration (Rs.)	Annual Cost (Rs.)
1	AWW					
2	Helper					
3	Supervisor					
4	Others (Specify)					
	TOTAL					

Time calculation for AWW and Helper will be done at the next sheet.

Calculation of time allocation of AWW and helper in positive deviance activities (in days) annually

	Activity	CDPO	Supervisor
1	Baseline survey on current practices		
2	Baseline weighting of children aged 0-3 years		
3	Social map and community growth chart		
4	Community mobilisation and VHC formation		
5	VHC training		
6	PD enquiry (home visits to cover three malnourished children and three normal children and compare		
7	FGD with four groups: grandmother, mother, father and father-in-law, sibling		
8	PD enquiry and FGD documentation		
9	Sharing meeting		
10	NCCS sessions at AWC: 12 sessions at AWC/1 hr per session		
11	NCCS home visit three days in a month x 12 months		
12	SHG training		
13	AWW community mobilisation training		
14	AWW PD approach training		
15	Block-level Mela		
16	Block-level review meeting		
17	Interactive sessions with mothers		
	TOTAL (use this calculation to complete the earlier sheet)		

II. Office space

	Particulars	Funded by	Area (Sq. Ft)	Equivalent Monthly Rent (Rs.)	Equivalent Annual Rent (Rs.)	Furnishing @ 10% of Annual Rent (Rs.)	Annual Cost (Rs.)
1	Office space for AWC						
	TOTAL						

III. Equipment/tools

	Particulars	Funded by	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)	Working Life (Yrs)	Annual Cost (Rs.)
1	Community growth chart						
2	Community-level social map						
3	Cohort register						
4	Mother and child protection card						
5	Scale 5 kg						
6	Scale 25 kg						
	TOTAL						

IV. Office operations costs

	Particulars	Funded by	Annual Cost (Rs.)
1	Register		
2	Pen/Pencil/Marker		
3	*Bindis*		
4	VHC members		
5	Interactive sessions with mothers		
6	Others (specify)		
	TOTAL		

Annex C: List of Stakeholders Interviewed

	Name and Affiliation of the Stakeholders Interviewed
1	Ms. Minakshi Singh, Nutrition Specialist, UNICEF, Kolkata
2	Mr. Sanjay Dey, UNICEF, Kolkata
3	Mr. Shantanu Basu, District Magistrate, Purulia
4	Mr. R. N. Basu Roy Choudhary, Additional District Magistrate, Purulia
5	Ms. Swati Dutta, District Coordinator, PD Cell, Purulia
6	Mr. Debangsu Acharya, District Programme Officer, ICDS, Purulia
7	Mr. Sandip Paramanik, CDPO, Hura, Purulia
8	Ms. Anandamoyee Mukherjee, Additional CDPO, Hura, Purulia
9	Ms. Sikha Banerjee, Supervisor, ICDS, Hura, Purulia
10	Mr. Iswar Murmu, CDPO, Arsha Purulia
11	Mr. Partha Chakraborty, MIS Coordinator, PD Cell, Murshidabad
12	Ms. Lata Mondal, Block Facilitator, Hura, Purulia
13	Mr. Kanti Bilas Majhi, Block Facilitator, Arsha, Purulia
14	Ms. Rituparna Singh Roy, Block Facilitator, Beldanga I, Murshidabad
15	Ms. Somita Das, Supervisor, Beldanga I, Murshidabad
16	Mr. Sagar Banerjee, Block Facilitator, Nawda, Murshidabad
17	Ms. Sikha Sil, Supervisor, Nawda, Murshidabad
18	Ms. Sadhana Mahato, Supervisor, Arsha, Purulia
19	Ms. Mamtaz Begum, AWW, AWC No. 203 Benadaha Mandalpada, Murshidabad
20	Ms. Purnima Biswas, AWW, Daugapada Muslim Pada, Murshidabad

The USAID-supported Vistaar Project assists the Government of India and State Governments of Uttar Pradesh and Jharkhand in taking knowledge to practice for improved maternal, newborn and child health and nutrition. The Vistaar Project is led by IntraHealth International Inc., along with partner agencies – Abt Associates, Catholic Relief Services, Child in Need Institute, Ekjut, MAMTA Health Institute for Mother and Child, and Vikas Bharti Bishunpur.

For more information: Email: **infovistaar@intrahealth.org;** Website: **www.intrahealth.org**

Delhi:
The Vistaar Project
A-2/35 Safdarjung Enclave
New Delhi-110029, India
Tel.:+91-11-46019999
Fax: +91-11-46019950

Jharkhand:
The Vistaar Project
250-C, Road No. 1D,
Ashok Nagar, Ranchi-83400
Tel: +91-651-2244844/+91-09234369217
Fax: +91-651-2244844-23

Uttar Pradesh:
The Vistaar Project
1/55 A, Vipul Khand, Gomti Nagar
Lucknow-226 010, Uttar Pradesh
Tel.:+91-522-4027805
Fax: +91-522-2302416

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