

برنامج
الأغذية
العالمي



Programme
Alimentaire
Mondial

World
Food
Programme

Programa
Mundial
de Alimentos

**Executive Board
Second Regular Session**

Rome, 14–17 November 2011

EVALUATION REPORTS

Agenda item 6

For consideration

E

Distribution: GENERAL
WFP/EB.2/2011/6-F
12 October 2011
ORIGINAL: ENGLISH

SUMMARY REPORT OF THE IMPACT EVALUATION OF SCHOOL FEEDING IN BANGLADESH

This document is printed in a limited number of copies. Executive Board documents are available on WFP's Website (<http://www.wfp.org/eb>).

NOTE TO THE EXECUTIVE BOARD

This document is submitted to the Executive Board for consideration

The Secretariat invites members of the Board who may have questions of a technical nature with regard to this document to contact the WFP staff focal points indicated below, preferably well in advance of the Board's meeting.

Officer in charge, OE*: Ms S. Burrows tel.: 066513-2519

Senior Evaluation Officer, OE: Ms J. Watts tel.: 066513-2319

Should you have any questions regarding matters of dispatch of documentation for the Executive Board, please contact Ms I. Carpitella, Administrative Assistant, Conference Servicing Unit (tel.: 066513-2645).

* Office of Evaluation

EXECUTIVE SUMMARY

This evaluation analysed the impacts of WFP's school feeding programme in Bangladesh. It is the fifth in a series of impact evaluations of school feeding commissioned by the Office of Evaluation. The evaluation assessed the outcomes and impacts associated with school feeding in Bangladesh, which uses only a micronutrient fortified biscuit modality provided to primary school children.

The evaluation was carried out between February and June 2011 by a team of independent evaluation consultants from the consulting firm Tango International. Quantitative surveys were done by the Bangladeshi research firm Mitra and Associates. The evaluation used a mixed-method approach that included a review of secondary data, a quantitative survey of 80 programme and control schools, a quantitative survey of 1,890 families in the school catchment areas and an in-depth qualitative survey of 22 schools and communities. The evaluation was conducted in two of the most food-insecure and disaster-prone areas of Bangladesh, the northwest and the southern coast, in sub-districts chosen for their high poverty and low education completion rates.

Impacts were seen on attendance and drop-out rates, transition to secondary school of children from the most vulnerable households, and motivation of children to attend school and of parents to keep children in school. No significant impacts were seen on classroom size, drop-out rate in classes 4 and 5 or transition to secondary school for children from less vulnerable households.

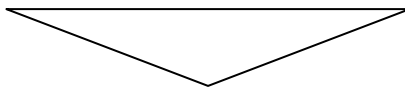
The evaluation collected data about diets of school-age children and found them deficient in micronutrients and macronutrients. Thus, the micronutrient, protein and energy content of the school biscuits contributed substantially to improving the nutrition of participating children. Parents reported that their children's hunger was reduced and parents in the northwest reported decreased morbidity.

The evaluation assessed the contribution of school biscuits to the household economy. School biscuits reduced the daily food bill by 4.4 percent and contributed 4 percent to the household annual income of the most vulnerable. Most families reported that children who are expected to receive biscuits at school, are not given breakfast at home. When the value of school biscuits is combined with the annual education stipend provided by the Government, the financial incentive for the most vulnerable families rises to 10 percent of annual income in the northwest and 8 percent of annual income in the southern coast.

School biscuits are only one input into a complex learning and livelihoods environment, and shortcomings in the educational system – such as limited contact hours, high student-to-teacher ratios and large class sizes – and economic pressure on households are likely to have significant effects on educational performance. There is need to examine the school feeding programme strategy to help offset these factors, especially for older children.

The evaluation made eight recommendations, five of which concern strategic issues such as coordination, educational quality and hand-over. Three recommendations concern more operational issues such as the micronutrient content, expanding coverage to non-formal schools and the monitoring and evaluation system.

DRAFT DECISION*



The Board takes note of “Summary Report of the Impact Evaluation of School Feeding in Bangladesh” (WFP/EB.2/2011/6-F) and the management response in WFP/EB.2/2011/6-F/Add.1 and encourages further action on the recommendations, taking into account considerations raised by the Board during its discussion.

* This is a draft decision. For the final decision adopted by the Board, please refer to the Decisions and Recommendations document issued at the end of the session.

INTRODUCTION

Evaluation Features

1. This report summarizes the results of an impact evaluation of WFP's school feeding programme in Bangladesh commissioned by the Office of Evaluation as one in a series of impact evaluations of school feeding. The school feeding programme in Bangladesh uses only a micronutrient-fortified biscuit.
2. The evaluation assessed the extent to which school feeding outcomes and impacts extend beyond primary education into secondary school, social safety nets and other areas; the factors contributing to the limited impacts that previous evaluations found in some areas; the alignment of WFP's targeting strategy and school feeding modality with Government of Bangladesh policy priorities and activities, other WFP activities in Bangladesh and the activities of other partners; and changes that could be made to the school feeding strategy and design to address the evaluation findings.
3. The evaluation was conducted by a team of four independent consultants from the consulting firm, Tango International, who carried out the inception phase from 5 to 11 February 2011 and the qualitative fieldwork from 5 to 26 April. Mitra and Associates, a Bangladeshi survey research firm, carried out the quantitative fieldwork from 3 to 23 April.

Methodological Approach

4. The evaluation used a mixed-method approach to assess the factors that affect learning outcomes – including children's physical status, and the school, household and community environments – and explored how decisions about education are made, and their effects. It was conducted in two of the most food-insecure and disaster-prone areas of Bangladesh, the northwest (NW) and the southern coast, in sub-districts chosen for their high poverty and low education completion rates. Data collection methods included:
 - i) a systematic review and analysis of secondary data;
 - ii) a quantitative survey of 80 programme and control schools in similar socio-economic contexts;
 - iii) a quantitative survey of 1,890 families in the catchment areas of the sampled schools;¹ and
 - iv) an in-depth qualitative appraisal of 22 schools and communities in programme and control areas, purposively selected to represent a cross-section of schools, geographic areas and livelihood pursuits.
5. Limitations to the evaluation included the lack of baseline data against which to compare the data collected in the evaluation, although control areas were carefully selected to match programme intervention areas in terms of vulnerability.² Two consecutive pipeline breaks

¹ The sample included 943 families in the NW (473 intervention and 470 control) and 947 families in the southern coast (471 intervention and 476 control).

² Based on vulnerability analysis and mapping (VAM) vulnerability classifications.

disrupted the flow of biscuits to schools immediately preceding and during the evaluation,³ which limited the ability to assess the biscuits' contribution to body mass index (BMI) and observe biscuit distribution and consumption.

Context

6. Since the mid-1990s, Bangladesh has consistently experienced average annual growth of approximately 6 percent. Despite this progress, however, approximately 49 percent of the population lives on less than US\$1.25 per person per day, and 81.3 percent on less than US\$2 per person per day. Bangladesh ranks 129th out of 169 countries in the 2010 United Nations Development Programme (UNDP) human development index.
7. The Government has improved access to primary education and virtually eliminated gender disparity in primary schools. With government initiatives such as free tuition and books, school feeding and cash stipend programmes, gross enrolment in primary school reached 101.6 percent in 2004. Primary school enrolment and attendance grew far more quickly than the supply of trained teachers or new infrastructure, while completion rates fell and learning outcomes lagged. The quality of education and the educational environment remain very low and are a major focus of concern.
8. WFP's school feeding programme targets geographic areas at the sub-district or *upazila* level, based on poverty and educational performance. The areas of highest priority are those with poverty rates greater than 33 percent and primary education completion rates less than 40 percent.
9. The NW districts of Kurigram and Gaibanda are among the poorest and most vulnerable regions in the country. The majority of the population is rural and work as landless agricultural producers. Widespread poverty is exacerbated by annual floods, which create livelihood uncertainty and instability, as large areas of agricultural land are eroded, depriving families of their land and livelihood. Most landless families migrate seasonally to other parts of Bangladesh for employment. WFP has been providing school feeding in Kurigram since 2002 and in Gaibanda since 2008.
10. The southern coastal division of Barisal is subject to periodic cyclones, river surges and annual flooding. Most poor rural inhabitants are landless and pursue mixed livelihood strategies that include agricultural production, agricultural labour, fishing and casual labour. Two powerful cyclones struck this region over the last five years, resulting in a major emergency relief effort, of which school feeding was a component.
11. Precarious livelihoods contribute to poor health and nutrition, and malnutrition rates in Bangladesh remain among the highest in the world. Nearly half of all children under 5 are stunted and there are high rates of anaemia, at 68 percent, and micronutrient deficiencies among this age group. A quarter of Bangladeshi households consume nutritionally inadequate diets that are deficient in energy.

³ The first was in November–December 2010, when WFP suspended distribution owing to quality concerns after some biscuits were reported to be contaminated. The second was in January–April 2011, when the delivery of biscuits manufactured in India was delayed while import issues were addressed with the Government of Bangladesh. An uninterrupted supply of biscuits had not been available in some schools since November 2010 and in others since January 2011.

Key Findings

⇒ *Livelihoods*

12. The variability of household livelihoods affects the outcomes and impact of school feeding. To capture this variation, households were grouped into four vulnerability categories, from the most vulnerable to the least, based on their incomes, food consumption scores and assets. The evaluation then analysed how vulnerability correlates with education, nutrition and social protection outcomes. The NW and southern coast areas and their respective control areas were analysed separately.
13. As shown in Table 1, level of vulnerability is relative in Bangladesh, with even those classified as least vulnerable earning a monthly income of US\$45. The income of the more vulnerable households barely covers the minimum estimated costs of food.

TABLE 1: VULNERABILITY INDICATORS, BY VULNERABILITY GROUP AND REGION					
		Least vulnerable	On the edge	Vulnerable	Most vulnerable
Northwest					
Household monthly income from all sources	<i>taka</i>	3 260.3	1 425.8	1 062.2	783
	US\$ equivalent ¹	45.2	19.8	14.7	10.9
Minimum monthly household food cost	<i>taka</i>	633	633	633	633
Total asset value	<i>taka</i>	169 098	72 391	33 528	15 799
Own agricultural land	decimals ²	160.1	70	24.9	10.1
Southern coast					
Household monthly income from all sources	<i>taka</i>	3 433.1	1 597.9	1 151.2	782.7
	US\$ equivalent	47.6	22.1	16.0	10.8
Minimum household monthly food cost	<i>taka</i>	633	633	633	633
Total asset value	<i>taka</i>	143 527	54 994	26 027	14 697
Own agricultural land	decimals	254.8	59	22.8	10.8

¹ As of April 2011, using the official United Nations exchange rate.

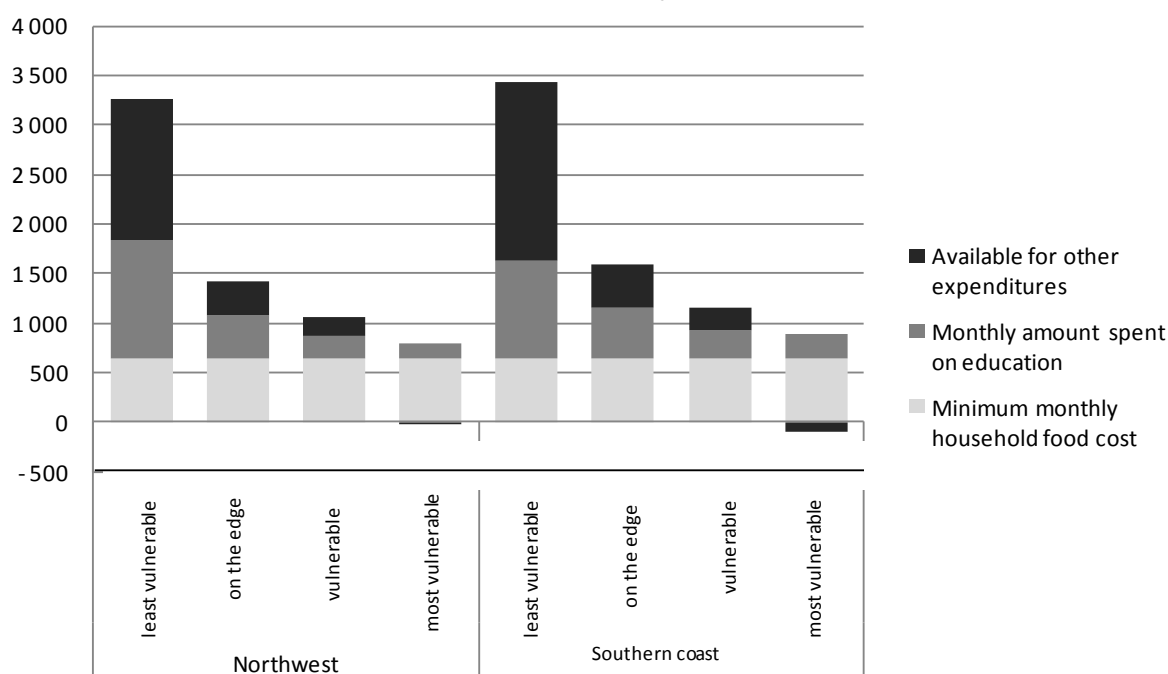
² 1 decimal is equivalent to 0.01 acres or 0.004047 ha.

14. As shown in Table 2, most families, including approximately 40 percent of the most vulnerable, pay for private tutoring as a way of addressing problems with the quality of education received in school.

TABLE 2: EDUCATION COSTS, BY VULNERABILITY GROUP AND REGION					
		Least vulnerable	On the edge	Vulnerable	Most vulnerable
Northwest					
Monthly amount spent on education	taka	1 207.9	439.2	227.3	156.9
Households undertaking tutoring costs	% of total	78	61	56	39
Monthly tutoring costs	taka	581	212	121	126
Southern coast					
Monthly amount spent on education	taka	993.8	512.9	296.8	252.7
Households undertaking tutoring costs	% of total	80	63	55	43
Monthly tutoring costs	taka	518	249	174	186

15. Given these additional investments, the share of household income required to cover the combined costs of food and education is approximately 25 percent for the least vulnerable households, but exceeds total income for the most vulnerable, in both the NW and the southern coast. For these households, food costs leave little per capita monthly income for investing in education. The shares of monthly income spent on education and food costs by different vulnerability groups are shown in Figure 1.

**Figure 1: Monthly expenditure, by vulnerability group and region
(as share of monthly income, in taka)**



⇒ *Educational Outcomes*

16. Overall, primary school attendance rates are high. However, in the NW, attendance rates in programme schools are 6 to 8 percentage points higher than in control schools. In the southern coast, overall attendance in programme schools is nearly 10 percent higher than in control schools, while the equivalent figure for girls' attendance is even higher in some

grades. Attendance rates do not vary significantly by type of school. In 2010, the ratios of girls to boys were 1.06 in programme schools and 1.01 in control areas.

17. In the NW, class 1 enrolments have increased since 1990, in both programme and control schools, while class 4 and class 5 enrolments have decreased, and at higher rates in programme areas. In the most vulnerable households of the NW, only 80 percent of children aged 5–18 years are in school, compared with almost 97 percent in the least vulnerable households. In the NW, 5 percent of households had no school-age children in school, mainly in the most vulnerable groups.
18. In the southern coast, enrolment is higher, and vulnerability has no apparent impact on whether or not children are in school. In southern schools, class 1 enrolment increased and, since 2008, the overall drop-out rates in programme schools have been lower than those in control schools. However, average enrolment in class 5 was about one-third less than in class 4. In the southern coast, the drop-out rate for girls diminished after school biscuits were introduced, to 49 percent in 2010 in programme schools, compared with 63 percent in control schools.
19. An uninterrupted normal progression through grades was achieved by fewer than half of primary school students. In the NW, only 43 percent of children aged 6–12 years in programme areas had age-appropriate normal progression through school, compared with 42 percent in control areas. In the southern coast, the equivalent figures were 47 percent in programme areas and 33 percent in control areas. However, data suggest that children are following a more normal progression than their older family members did.
20. Table 3 shows the percentages of parents reporting factors that affect the decision to keep children in school.

	NW	Southern coast
Parental encouragement	50%	60%
Child's learning ability/interest	25%	20%
Quality of school learning environment	12%	10%
Presence of food at school (programme schools only)	23%	18%

21. In the NW, more than 80 percent of the children who have never attended school are in the two highest vulnerability classes. In the southern coast, household vulnerability is less of a factor. Among households surveyed, 55 percent of those in the NW and 45 percent in the southern coast cited economic reasons and the need to send children to work as reasons for children leaving or never enrolling in school.
22. Completion rates decreased between 2008 and 2010 in all school types, in both programme and control areas in the NW and in control areas in the southern coast; 45–50 percent of children who begin class 1 do not complete class 5. Children who fail to complete primary school are concentrated in the most vulnerable households.
23. Religious schools and ethnic minority schools enrol the poorest children and those who may be discriminated against in the formal system. This population is the most vulnerable, both nutritionally and educationally, but is not currently included in the school biscuit programme.
24. Respondents reported that when children from poor families become old enough to earn a living, they go to work. Many work in the households of wealthier families, in restaurants

or tea shops or even in hazardous employment in welding shops, car garages and rock quarries. Families who migrate seasonally in search of wage labour may bring their children with them, in the hope that they also can gain employment if they are old enough.

25. Transition rates to secondary school for children who complete primary education are very high. Transition to and success in secondary school are strongly influenced by two factors: the education level of the household head, and the household's vulnerability status. Few of the most vulnerable households have a member who has completed secondary school; interviews suggest that the financial burden of secondary school is a serious obstacle.

⇒ *Nutrition Outcomes*

26. Micronutrient deficiencies increase the risk of mortality from diarrhoea, measles, malaria and pneumonia,⁴ and are responsible for a large proportion of infections, poor physical and mental development and excess mortality in the developing world. Studies have shown that micronutrient-fortified biscuits can significantly improve the micronutrient status of primary schoolchildren, reduce the prevalence of anaemia, and enhance the effect of deworming.⁵ Previous studies of WFP's school feeding intervention in Bangladesh⁶ found significant improvements in the nutrition status of beneficiaries in comparison with control groups, in terms of BMI, energy intake, anaemia, underweight and worm infestation.
27. The evaluation collected evidence about the diets of school-age children from 24-hour dietary recall and anthropometric information, interpreted using BMI-for-age. As shown in Table 4, the diets of most primary school-age children in the programme areas were found to be deficient in energy, vitamins A, B1 and B2, and iron.

⁴ Black, R., Allen, L., Bhutta, Z., Caulfield, L., de Onis, M., Ezzati, M., Mathers, C. and Rivera, J. 2008. Maternal and child undernutrition: Global and regional exposures and health consequences. *The Lancet*, 371(9608): 243–260.

⁵ Van Stuijvenberg, 1999; Nga, 2009.

⁶ Ahmed, A.U. 2004. Impact of Feeding Children in School: Evidence from Bangladesh. International Food Policy Research Institute, Washington DC; Mustafa, S. 2010. Food For Education (FFE) Activity of the World Food Programme: Outcome Survey Report. World Food Programme, Rome; van Stuijvenberg, M.E., Dhansay, M.A., Smuts, C.M., Lombard, C.J., Jogessar, V.B., and Benade, A.J.S. 2001. Long-term evaluation of a micronutrient-fortified biscuit used for addressing micronutrient deficiencies in primary school children. *Public Health Nutrition* 4: (6): 1201–1209; Nga, T.T, Winichagoon, P., Dijkhuizen, M.A., Khan, N.C., Wasantwisut, E., Furr H. and Wieringa, F. 2009. Multi-Micronutrient-Fortified Biscuits Decreased Prevalence of Anemia and Improved Micronutrient Status and Effectiveness of Deworming in Rural Vietnamese School Children. *The Jour. of Nut.*,139: pp 1013–1021.

	Vitamin A (μg retinol equivalent)	Vitamin B1, thiamine (mg)	Vitamin B2, riboflavin (mg)	Vitamin C (mg)	Iron (mg)
RNI ¹	500 ²	0.9	0.9	35	13.4
Northwest	333.6	0.55	0.34	34.2	8.5
Southern coast	328.6	0.63	0.44	43.71	10.02

¹ Recommended nutrient intakes (RNIs) for children 7–9 or 7–10 years from: WHO/FAO. 2004. Vitamin and mineral requirements in human nutrition. 2nd edition. Geneva. (Assuming that iron bioavailability is 7.5 percent.)

² For vitamin A, the figure represents recommended safe intake.

28. On the day of recall, in the NW programme areas, only 2.7 percent of children met the lowest of the range of energy requirements and 46 percent did not meet the lowest range of the protein requirements. In the southern coast, only 20 percent of children met the lowest of the range of protein requirements.⁷

	Energy (kcal)	Protein (g)	Fat (g)
Requirement	1 428–2 341	19.3–33	23–35
Northwest	730.3	24.4	17.5
Southern coast	1 147.4	40.8	28.0

29. Each pack of biscuits provides 338 kcal of energy, 7.5 g of protein, 10.5 g of fat and 66 percent of the required daily vitamins and minerals for a primary school-aged child. The biscuits would boost the energy intake of the average child in NW programme areas by 46 percent, and the protein consumption by 31 percent. In the southern coast programme area, they would increase the average child's energy consumption by 29 percent.

30. Mothers, school personnel and members of School Management Committees (SMCs) reported that the biscuits reduce hunger, lessen the incidence of skin diseases and alleviate weakness and dizziness in children, which parents believe improves the children's ability to learn. There were no significant differences in BMI-for-age between programme and control groups in either area, which may reflect the extended pipeline break and absence of biscuits in the programme areas when the measurements were taken.

⇒ *Value transfer*

31. As shown in Table 6, for the most vulnerable groups in both areas, the biscuits contribute about 4 percent of annual stated income, while for the least vulnerable group the equivalent figure is about 1 percent. Households in the two more vulnerable categories spend less on education than the value of the biscuits; for the most vulnerable group, the transfer value of the biscuits is three times as high as household education expenses. This suggests not only that the biscuits contribute to household income, but also that they do so net of the cost of education. The school biscuits provide a value transfer to poor

⁷ Diets in control areas were also deficient in micronutrients and macronutrients, but differences between control and programme groups are not reported as an impact because school biscuits would have a limited effect on the overall quality of the diet.

households of 4.4 percent of the daily food bill. When the value of the biscuits and the annual education stipend are combined, the financial incentives for sending children to school for the most vulnerable families rise to 10 percent of annual income in the NW and 8 percent in the southern coast.

TABLE 6: TRANSFER VALUE, BY VULNERABILITY GROUP AND REGION

	Least vulnerable	On the edge	Vulnerable	Most vulnerable
Northwest				
Transfer value to household (240 projected days) (<i>taka</i>)	1 407	1 429	1 539	1 499
Transfer value to household (180 projected days) (<i>taka</i>)	1 055	1 072	1 154	1 124
Transfer value (as % of annual income)	1.1	1.8	3.3	4.5
Transfer value (as % of education expenses)	26	78	135	329
Southern coast				
Transfer value to household (240 projected days) (<i>taka</i>)	1 273	1 472	1 104	1 070
Transfer value to household (180 projected days) (<i>taka</i>)	954	1 104	1 070	1 123
Transfer value (as % of annual income)	0.5	1.6	2.4	3.7
Transfer value (as % of education expenses)	37	48	72	118

32. Table 6 also shows the loss of value transfer due to pipeline breaks. The projected annual number of “biscuit days” is 240, allowing for the summer vacation and holidays. In 2010, there were 182 actual biscuit days, 75.8 percent of planned. WFP delivered 74.2 percent of its target in 2009, 91.8 percent in 2008, and 89.7 percent in 2007. The loss of value transfer will be higher in 2011 as no biscuits were available for the first term. Pipeline breaks were caused by funding shortfalls, production problems, unsubstantiated reports of quality problems and delays in finalizing school data.
33. In both regions, most households prepare less food if their children are receiving school biscuits. In both the NW and southern coast, nearly 90 percent of households stated that children receiving school biscuits do not eat breakfast at home. From the perspective of the household, school biscuits have three major advantages, as shown in Table 7.

TABLE 7: ADVANTAGES OF SCHOOL BISCUITS, AS CITED IN HOUSEHOLD SURVEYS

	NW	Southern coast
Save food and money	40%	52%
Promote the health of younger siblings (most likely by food savings or additional time for child care)	40%	22%
Save time	14%	40%

Quality of Education

34. To keep up with school enrolment goals and make up for the insufficient number of schools and teachers, almost all schools operate a double-shift system, which results in reduced classroom hours. Schools have high student-to-teacher ratios; in NW programme schools, the ratio is 58:1 compared with 44:1 for control schools; and in the southern coast, the ratios are 39:1 for programme schools and 51:1 for controls. In the NW schools

surveyed, half of the teachers are women, and in programme schools slightly more than half are women. In the southern coast, 40–45 percent are women. Teachers in government primary schools have higher credentials than those in non-government schools. Desks and benches were inadequate in most schools visited, and electricity was rarely available. Most schools have latrines, usually with separate facilities for boys and girls, and most have adequate teaching supplies and textbooks. Household surveys and interviews found that most families pay for additional tutoring outside the classroom.

35. School biscuits are a suitable modality for this context, as they are easy to transport to remote areas, to store, and to distribute and consume in crowded classrooms, without drawing teachers away from their duties or disrupting limited classroom time. Biscuits have also proved suitable for use in the natural disasters that frequently affect the country.
36. WFP is currently implementing pre-primary school feeding on a small scale and plans to expand this in the coming years. Parents and schools reported strong interest in a pre-primary school biscuit component as a means of helping to prepare children for school by introducing them to the learning environment earlier.
37. School feeding has enhanced the position of women on SMCs, increasing the proportion of women in leadership positions on food management committees to 65 percent. WFP has also developed the capacity of SMCs by organizing community mobilization workshops and training.

Alignment with National Strategies, Policies and Priorities

38. WFP's school feeding programme is well aligned with government priorities and activities for education, nutrition and poverty reduction, with its long-term aim being to hand-over to the Government. However, the education sector of the Government has limited capacity and expertise to manage school feeding, which is outside its core mandate to deliver a high-quality education. The Government is considering moving to a single-shift school day and providing hot meals; such adaptations would have a significant effect on how school feeding is carried out and make it even more costly and challenging to manage. WFP is providing support to develop the capacity of national and local government officials and SMCs, and is establishing and funding a liaison unit within the Government. The objective over the coming three years is to enable the Government to plan and manage a school feeding programme independently of WFP.
39. The pre-primary age group often falls into a coverage gap in nutrition interventions, although the National Strategy for Anaemia Prevention and Control identifies children aged 2–5 years as being at medium risk, and therefore in need of iron-folate or multiple micronutrient supplements as they are not covered by the National Nutrition Programme.

CONCLUSIONS

40. Table 8 summarizes the areas of impact found by the evaluation.

TABLE 8: AREAS OF IMPACT				
Education Impacts	NW and Southern coast			
	Reduced variation in enrolment Biscuits a motivating factor for parents to keep children in school Biscuits a motivating factor for children to go to school willingly Improved transition to secondary school for children from the most vulnerable households Some components of the Essential Package: school gardening, malaria prevention			
	<table border="1"> <thead> <tr> <th>NW</th> <th>Southern coast</th> </tr> </thead> <tbody> <tr> <td>Slight increase in enrolment Reduced drop-out, except in class 5 Higher attendance Class 5 girls' attendance well above average Some components of the Essential Package <ul style="list-style-type: none"> ➤ Nutrition education ➤ Personal hygiene education ➤ Deworming </td> <td>Drop-out reduced relative to control schools, especially for classes 3 and 4 Reduced drop-out for girls Higher attendance for boys and girls, especially girls Higher educational progression score Fewer households have no school-age children in school</td> </tr> </tbody> </table>	NW	Southern coast	Slight increase in enrolment Reduced drop-out, except in class 5 Higher attendance Class 5 girls' attendance well above average Some components of the Essential Package <ul style="list-style-type: none"> ➤ Nutrition education ➤ Personal hygiene education ➤ Deworming
NW	Southern coast			
Slight increase in enrolment Reduced drop-out, except in class 5 Higher attendance Class 5 girls' attendance well above average Some components of the Essential Package <ul style="list-style-type: none"> ➤ Nutrition education ➤ Personal hygiene education ➤ Deworming 	Drop-out reduced relative to control schools, especially for classes 3 and 4 Reduced drop-out for girls Higher attendance for boys and girls, especially girls Higher educational progression score Fewer households have no school-age children in school			
Nutrition and health	NW and Southern coast			
	66% RNI micronutrient boost Reduced hunger reported Reduced food security instability			
	<table border="1"> <thead> <tr> <th>NW</th> <th>Southern coast</th> </tr> </thead> <tbody> <tr> <td>31% protein boost 46% energy boost Reduced morbidity reported</td> <td>29% energy boost</td> </tr> </tbody> </table>	NW	Southern coast	31% protein boost 46% energy boost Reduced morbidity reported
NW	Southern coast			
31% protein boost 46% energy boost Reduced morbidity reported	29% energy boost			
Household economy	NW and Southern coast			
	Meal substitution 4.4% reduction in daily food bill 4% contribution to household annual income Time saved More food for younger siblings			
	<table border="1"> <thead> <tr> <th>NW</th> <th>Southern coast</th> </tr> </thead> <tbody> <tr> <td>10% annual income value transfer to the most vulnerable households, when combined with government stipends</td> <td>8% annual income value transfer to the most vulnerable households, when combined with government stipends</td> </tr> </tbody> </table>	NW	Southern coast	10% annual income value transfer to the most vulnerable households, when combined with government stipends
NW	Southern coast			
10% annual income value transfer to the most vulnerable households, when combined with government stipends	8% annual income value transfer to the most vulnerable households, when combined with government stipends			
School management	NW and Southern coast			
	More women on SMCs			

41. No impacts were seen on classroom size, drop-out rate in classes 4 and 5, or transition to secondary school. Evidence of deterioration in completion rates was seen in programme areas.

42. The achievement of learning outcomes arises from a complex set of interrelated factors, of which school biscuits are one input. While the evaluation showed some positive impacts on attendance and drop-out rates, there is no consistent pattern of the effect on performance in programme schools relative to control schools. This limited impact on critical education outcomes reflects shortcomings in the education system – limited contact hours, high student-to-teacher ratios, large class sizes, poor infrastructure, etc. – and economic pressures on households.
43. Parents and teachers perceive school biscuits as an important input; in addition, they help attract children in lower grades to school, provide a critical supplement to a nutritionally inadequate diet and support government policies. School biscuits also provide an important value transfer, although this is insufficient for the poorest and most marginal to offset the cost of keeping a child in school as compared to having them work. There is need to examine the school feeding programme strategy and alternative modalities to help offset these factors for older children.
44. Given the success of the primary school enrolment effort, the evaluation suggests that a priority for Bangladesh is to create the environment for enhancing the transition to secondary school, so that children are able to acquire the skills needed to improve their livelihoods.

Recommendations

45. **Recommendation 1:** The country office and its partners should continue to develop integrated and complementary programmes that target the poorest households in the school feeding areas, in alignment with WFP's country programme.
46. **Recommendation 2:** The country office should use policy dialogue to support a strategy designed by the Government and other education bodies to address the issue of quality in schools.
47. **Recommendation 3:** The country office should develop a hand-over strategy for school feeding, in cooperation with the Government.
48. **Recommendation 4:** The country office should adopt a comprehensive approach to school feeding in primary education, with targeted goals for different age groups, including pre-primary, primary and older students in classes 4 and 5.
49. **Recommendation 5:** The country office should support the Government's design of a specific strategy to assist children in the transition to secondary school; it should include a food-for-education component.
50. **Recommendation 6:** The country office should ensure that the micronutrient content of the biscuit meets the WFP objective that 70 percent of the recommended nutrient intake be provided.
51. **Recommendation 7:** The country office should work with the Government to give full consideration to expanding the provision of school biscuits to schools outside the current coverage area, including to religious schools (primarily *madrasahs*) and ethnic-minority schools.
52. **Recommendation 8:** The country office should expand its monitoring and evaluation system to focus on grade attrition in primary school and the reasons for low primary completion rate.

ACRONYMS USED IN THE DOCUMENT

BMI	body mass index
NW	Northwest
RNI	recommended nutrient intake
SMC	School Management Committee
UNDP	United Nations Development Programme
VAM	vulnerability analysis and mapping