

## 1. EXECUTIVE SUMMARY

In order to make use of the large supply of milk available and address the malnutrition among the poor children the GoK has initiated “Ksheerabhagya Yojane” from 1<sup>st</sup> August 2013. The Ksheerabhagya Scheme (KBS) is being implemented under the aegis of departments of Education, Women and Child Welfare (WCD) and Karnataka Milk Federation.

### **Scope of the Study**

The evaluation study covered all four revenue divisions. Two districts from each division namely Bengaluru Urban, Chitradurga, Mysuru, Udupi, Belagavi, Haveri, Kalaburgi and Koppal have been included in the study as per the ToR. A total of 56 schools and AWCs spread across 16 taluks and 24 villages have been selected based on the criteria mentioned in the ToR. Height and weight data was collected for a sample of 615 boys and 566 girls in sample schools and 474 boys and 532 girls in AWCs to assess their nutrition status. Interviews were conducted with teachers, students, SDMC members and mothers/parents in schools and AWC teachers and mothers of children in AWCs. In addition interviews with officials of department of Education and WCD and KMF; members of milk societies of KMF and NGOs supplying milk under KBS to schools were conducted to understand their perspective of KBS.

### **Salient Findings**

1. All stakeholder groups expressed a positive opinion about the impact of KBS on children in terms of nutrition, health, attendance in school etc. Proportion of different stakeholders perceived that giving milk under KBS improved nutrition status is given below -

#### **A. Schools**

- Teachers – 96.4%
- Students – 84.2%
- SDMC Members – 77.1%
- Mothers/Parents – 73.7%

#### **B. AWCS**

- AWC Teachers/Workers – 92.9%
- Mothers/Parents of AWC Children – 73.2%

2. Nutritional status of sample school students and AWC children as per the height and weight data obtained from school/AWC records is as follows.

A. Schools

- About 24% boys and 27.3% girls are stunted (less than 1SD of average height)
- About 17% boys and 18% girls are under weight (less than 1SD of mean weight)

An evaluation of mid-day meals was carried out by STEM in 2013. This was done before KBS has started in the state. Prevalence of malnutrition among the school children as per this study is as follows:

- About 47% boys and 52% girls were stunted.
- About 49% boys and 36.3 girls were under weight.

Hence, we may conclude that KBS has helped in reducing malnutrition among school children.

B. AWCs

- About 16% boys and 14.4% girls are stunted (less than 1SD of average height)
- About 10% boys and 11% girls are under weight (less than 1SD of mean weight)

According to the data collected from the Department of women and Child Development Malnutrition among the AWC children in 2012-13 i.e. before KBS started was 34.1%. Malnutrition in 2015-16 i.e. after 3 years of KBS is 22.4%.

Hence, it can be inferred that KBS has helped in reduction of malnutrition among AWC children in Karnataka.

3. The supply chain for schools as well as AWCs is well established and functions smoothly.

A. The trend in supply of WMP to schools SMP to AWCs indicates that there is an increase in the quantity supplied between 2013-14 and 2014-15. There is a marginal decrease between 2014-15 and 2015-16.

B. In a few occasions there was delay in submitting indents to KMF

- C. There are a few occasions of delay in supply of milk powder by KMF to school/AWCs.
- D. Shortage of milk powder was reported by 8.9% of schools and 16.1% of AWCs. Stock out was experienced by 2 sample AWCs and one NGO supplying milk under KBS.
4. In all sample schools and AWCs milk powder stored in the respective premises. Head Master in schools and AWC teacher/worker are responsible for storage of milk powder. Storage place is adequate in both schools (99.6%) and AWCs (87.5%).
  5. Milk is prepared in 45 of the 56 sample schools. In the remaining schools NGOs supply the milk. Proportion of schools supplying milk after 20 minutes of prayer is 21.4% in schools where milk is supplied by NGOs compared to 4.4% in schools where milk is prepared.
  6. Almost all children drink milk in the school.
  7. SDMCs are actively involved in monitoring and attending meetings. About 80% made at least one monitoring visit in month.
  8. About 87% teachers; 60.4% SDMC members; 77.3% students and 52.6% parents mentioned that 150 ml is adequate to improve nutrition status of children. In case of AWCs 76.8% AWC teacher/workers and 46.6% mothers mentioned that 150 ml is adequate.
  9. About 80% teachers and 68.4% parents mentioned that 150 ml milk is given in schools. In case of AWCs 72.2% AWC teachers/workers and 92.9% mothers mentioned that the children are given 150 ml milk.
  10. In 60% schools the quantity of milk powder used is 18 gms or more. In 82.2% schools 10 gms or more sugar was used in preparing milk.
  11. In all schools and AWCs milk packets are received in pilfer proof packs. Main means of testing quality of milk is by tasting. A glass or a Ladle of 150 ml is used to ensure 150 ml is served in 50% of schools and AWCs.
  12. In 11 sample schools NGOs supply milk. Out of them 7 supply hot milk. In the remaining 4 schools cold milk is supplied and children drink cold milk.
  13. Frequency of supply of milk powder in AWC is once in a month in 72% AWCs and one in three months in 25% (500 gms packets are supplied). In case 96% the milk powder is collected at AWC.

14. All the members of milk society of KMF participated in the FGDs mentioned that they keep adequate milk for consumption by children and supply only the surplus.
15. There is not much change in the frequency of drinking milk at home since introduction of KBS. About half were not drinking milk at home.
16. About 92% school teachers; 88.1% students and 86% parents responded that milk is supplied for three days. In AWCs 92.9% AWC teachers/workers and 88.7% mothers/parents mentioned that milk is given for three days.
17. Monitoring of schools
  - A. Schools located in district HQ are visited more frequently by state level officials. Schools located in Taluk HQ had no visits at all.
  - B. Higher proportion of schools in remote villages reported at least one visit by district officials. Proportion of schools reporting a visit by district officials is lowest in schools located in taluk HQ.
  - C. Proportion of schools reporting at least one visit by taluk level officials is highest in schools located in remote villages and lowest in schools located in taluk HQ and rural schools.
18. Monitoring of AWCs
  - a) Proportion of AWCs reporting at least one visit by state level officials is the highest in those located in remote villages and the lowest in taluk HQ.
  - b) Proportion of AWCs reporting at least one visit by district level officials is the higher in those located in district HQ and rural areas and the lowest in schools located in taluk HQ.
  - c) Proportion of AWCs reporting at least one visit by taluk level officials is the higher in those located in district HQ and rural areas and the lowest in schools located in taluk HQ.
19. Best Practices
  - a) Quality Certification
  - b) Real time Stock Replenishment
  - c) Frequency of Supply of Milk Powder by AWCs to Mothers
  - d) Use of Air Tight Containers by Mothers
  - e) Augmentation of taste of Milk
  - f) Incentive by Third Party
  - g) Using a Ladle with Handle
  - h) Monitoring by Bala Vikasa Salaha Committee

20. Rating of schools and AWCs was done based on 14 indicators on which the study has collected data. In both schools and AWCs, those located in District HQ scored better.
21. Adverse event like curdling of milk is negligible. Less than 2% children reported falling sick after drinking milk. No instances of diverting milk were reported by either schools or AWCs.
22. About 56% parents of school children and 50.1% parents of AWC children mentioned that they participate in monitoring of KBS. About 62% parents of school children and AWC children mentioned that they attend parents meetings.
23. Suggestions by Stakeholders
  - a) Increase number of days of milk distribution (4 to 6 days)
  - b) Mix badam powder or similar material to enhance taste
  - c) Give dairy milk instead of powder milk
  - d) NGOs should supply hot milk
  - e) Give biscuits/fruits along with milk
  - f) Mechanism for quality check of both milk powder and milk supplied need to be put in place
  - g) Detailed monitoring data needs to be uploaded by the districts (number of visits made by each category of official in a particular month, number of schools covered etc.). This data needs to be analysed at higher levels and appropriate action needs to be initiated.
  - h) KMF should batch number on inside packets also. In case of pilferage, the source can be identified
  - i) Conversion cost given to NGOs needs to be increased

### **Recommendations**

#### **A. Short Term Practicable**

1. **Frequency of distribution Milk Powder by AWCs:** AWCs can give the 500 gms milk powder packets to mothers for two and half months, instead of monthly supply. This obviates the need for weighing and giving milk powder in loose to mothers by AWCs.
2. **Storing partially opened milk packets:** Educate mothers, for the need to keep the milk powder supplied by them in air tight containers.
  - i. In about 40% schools and 25% AWCs, partially opened milk packets are tagged with rubber band. Awareness need to be created to store them in air tight

containers. Hence, awareness needs to be created for this group of stakeholders also.

3. **Using 150 Ladle with Handle:** This will ensure all children get 150 ml and also is hygienic.
4. **Parent's participation in monitoring:** About 49% parents in schools and 38% in AWC do not participate in monitoring. Parents may be encouraged to take more active part in monitoring KBS.

#### B. Long Term Practicable

1. **Milk Powder Packet Size:** KMF may consider supplying packets of 180 gms for AWCs, which the amount required to give mothers of 6 months to 3 years. This obviates the need for weighing and giving milk powder in loose to mothers by AWCs.
2. **Quality Certification of Milk Powder:** In some districts CDPOs are sending the milk powder supplied by KMF for quality check and obtain quality check. Such practices may be encouraged/ made mandatory for both education and WCD department.
3. **Quality Check for Milk Distributed:** A system of checking the quality of milk (protein and fat content) supplied under Ksheerabhagya by picking up random samples from schools and AWCs, and sending them to laboratory for analysis needs to be introduced. No such system exists at present.
4. **Lactometers:** The nutritive effect depends on the quality of milk supplied in terms of proteins, fats etc. The officials monitoring schools and /AWCs may be provided with a 'lactometer' which they can use to check the quality of milk distributed to children on random basis.
5. **Real time Stock Replenishment:** KMF may supply milk powder based on actual stock at school, instead of simply supplying the indented amount.
6. **Monitoring:** Involvement of Bala Vikasa Salaha Committee members and other similar bodies needs to be encouraged in monitoring of KBS

#### C. Requiring Policy Change

1. **Monitoring:** Needs to be strengthened. Data on visits by department officials at different levels could be uploaded on a central server, which can be accessed by higher level officials and necessary action, be taken. Appropriate technology (IT/MIS/GIS) may be used for improving monitoring.

2. **Training:** Regular training may be given to the staff of Ksheerabhagya Scheme, of education Department, Women and Child Welfare Department, Karnataka Milk Federation, Elected representatives, NGOs and others for effective implementation of project.

Figure 1.1: Systems Framework of Ksheerabhadra Scheme

