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Government of India

Ministry of Human Resource Development

Department of School Education & Literacy



**मध्याह्न भोजन योजना
Mid Day Meal Scheme**

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**Report of 5th Joint Review Mission on
Mid Day Meal Scheme**

ASSAM

(11th November - 19st November, 2013)

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Acknowledgement:

The Mission would like to thank the Government of Assam for all the support rendered in organizing the logistics as well as in providing much required programmatic information that facilitated the Mission to meet the terms of reference developed by the Government of India.

The Mission also values the hospitality and support extended by the Education Department of Assam, school teachers, MDM kitchen staff in schools; the SMC members, members of mothers' group of the schools in districts of Nagaon and Kamrup and finally, the students and the village community more importantly.

The team has strived to capture the entire range of discussions and observations at various levels with all the officials and key stakeholders earnestly. It sincerely hopes that the recommendations that have emerged through interactions with the officials, experts, implementers and the stakeholders, would be of help to the State Government in strengthening the implementation of the Mid-Day Meal Scheme and ensure the right to nutritional food security of school going children of Assam.

The JRM Team

19th November, 2013
Guwahati, Assam

List of abbreviation used:

SSA- Sarva Shiksha Abhiyan

NCLP- National Child Labour Programme

GoI- Government of India

MHRD- Ministry of Human Resource Development

MME- Management, Monitoring and Evaluation

JRM- Joint Review Mission

MDM- Mid Day Meal

PAB- Programme Approval Board

TA- Transportation Assistance

CCH- Cook cum helpers

SMC- School Management Committee

DEEO- District Elementary Education Officer

BEEO- District Elementary Education Officer

BRC-Block Resource Coordinator

I/S- Inspector of schools

MI- Monitoring Institutes

TA- Transport Assistance

FCI- Food Corporation of India

SHP- School Health Programme

IVRS –Interactive Voice Response System

1. Executive Summary

The Fifth Joint Review Mission on MDM for Assam interacted with various stakeholders of the MDM programme during 11th- 19st November 2013 in Nagaon and Kamrup districts.

This, being one of the flagship programmes of the Government of India addressing hunger among all Government, Government Aided, Local Body, NCLP schools, Madrasas/Maqtabs serves hot cooked meal to children that helps them come to the formal education system, concentrate on classroom activities and receive nutritional support and break the social barriers of caste discrimination.

The Mission while interacting with stakeholders to review this national programme of MDM in schools observed that although the MDM encouraged the children to attend school, the goal of full coverage and regularity in serving of meals in the State has been a challenge. There is a need for dedicated management structure for implementation of the scheme with clear roles and responsibilities which will help in better monitoring of the scheme right from top to bottom. Flow of fund and food grains need to be strengthened further. Emphasis has to be laid on safety and hygiene, creation of awareness and preparation of nutritionally balanced meals. Convergence with department of health for school health programme requires strengthening. The mission appreciates some of the technological interventions made by the district authorities which will go a long way in improving the implementation of the scheme.



1.1 Background

The National Programme of Nutritional Support to Primary Education (**NP-NSPE**) popularly known as Mid Day Meal Scheme, is a flagship Scheme of Ministry of Human Resource Development. The programme was launched on 15th August, 1995 in Government, Government aided and Local Body Schools to enhance enrolment, attendance and retention of primary class school children and to mitigate their class room hunger through nutritional support. Since its inception the scheme has undergone many changes in its coverage and content. Provision of dry ration in the initial phase has been replaced by hot cooked meals. Presently, the scheme is being implemented in Primary and Upper Primary classes of Government, Government aided, Local body Schools, National Child Labour Project Schools, Madrasas and Maqtabas supported under SSA.

The basic objectives of the Mid-Day-Meal scheme include prevention of malnutrition among children, achieve universalization of Elementary Education by increasing enrolment, retention and attendance of students and thereby reducing dropout rate and improve the nutritional status of children.

Article 21 A provides Right to Children for free and compulsory education. This has been ensured through the enactment of Right to Education Act 2009, which came into force on 1st April 2010. SSA has been designated as the vehicle to realize the provisions of RTE Act, 2009. Chapter 4, Para 21 of RTE Act, 2009 stipulates that preference will be given to disadvantaged groups and weaker sections while nominating the representatives for the School Management Committee. The Act further states that all schools should have all weather building consisting of a kitchen-cum-stores to cook Mid Day meal in the school by 2012-13. The model rules under RTE Act also provide that School Management Committee will monitor the implementation of the Mid Day Meal in the school.

1.2 Key Issues identified during JRM

1. Lack of dedicated management structure for implementation of scheme.
2. Non-appointment of cook-cum-helpers as per the norms in 29% of schools.
3. Delay in payment of honorarium to cook-cum-helpers. It was also observed that cook-cum-helpers were getting only center share i.e. Rs. 900 / month, whereas there was delay of 5-6 months in payment of state share(Rs. 100).
4. Schools have not been notified about the revision of cooking cost i.e. Rs. 3.34 for Primary and Rs. 5.00 for Upper Primary from 1st July, 2013.
5. Provision of cooking cost as per the Primary norms instead of Upper Primary norms to the children of NCLP schools.
6. Disruption in serving of meals due to mismatch in release of food grains and cooking cost to the schools till second quarter of 2013-14 in Nagaon.
7. In most of the schools unhygienic kitchens are major issues of concern.
8. Teachers as well as cook cum helpers are not aware about the guide lines of tasting MDM cooked in their kitchen. Hence there is no maintenance of register on food tasting.
9. MDM supplied in the schools were not nutritionally balanced in terms of micro nutrients
10. No proper guideline and notification from the district authorities regarding the medical emergency plan.
11. Non delivery of food grains to the school doorstep in Nagaon and few schools in Kamrup.
12. Non display of MDM logo in most of the schools in Nagaon and entitlement of children covered under MDMS in both the districts leading to lack of awareness among the community.
13. Use of firewood as a mode of cooking which may lead to health hazards for the cooks.
14. Slow progress of data entry into MDM-MIS portal.
15. Lack of effective grievance redressal mechanism.
16. Poor inspection of MDMS by the District/Block officers.
17. Poor convergence with school health programme.

2. Joint Review Mission

2.1 JRM Context

Government of India constituted Review Missions (RM) in 2009 to review the implementation of the scheme as per the defined Terms of Reference (ToR) in various States across the country.

2.1.1 Objectives

The objectives of the Review Mission are as under:-

- (i)** To review the performance of the scheme in the selected State in the light of the Guidelines of the Mid Day Meal Scheme.
- (ii)** To suggest policy measures for effective implementation of the scheme in the State.

The State of Assam was selected and the 5th Review Mission visited the State from 11th- 19th November, 2013 to see the implementation of the scheme in the State and assess the nutritional status of the children.

2.1.2 Terms of Reference of the JRM

Implementation Aspects

1. Review the system of fund flow from State Government to schools/cooking agency and the time taken in this process.
2. Review the management and monitoring of the scheme from state to school level.
3. Review the implementation of the scheme with reference to availability of food grains, quality of MDM, regularity in serving MDM as per approved norms and mode of cooking.
4. Role of teachers.
5. Convergence with School Health Programme (SHP) for supplementation of micronutrients and health checkups and supply of spectacles to children suffering from refractive errors.
6. Creation of capital assets through kitchen-cum-store/kitchen devices
7. Appointment of Cook-cum –Helpers for preparation and serving of meal to the children.
8. Availability of dedicated staff for MDM at various levels.
9. Review the maintenance of records at the level of school/cooking agency.
10. Review the availability of infrastructure, its adequacy and source of funding.
11. Review of payment of cost of food grains to FCI by the districts.

12. Review the involvement of NGO's/Trust/Centralized kitchens by States/UTs Government in implementation of the scheme.
13. Management of Information System (MIS) from school to block, district and State level to collect the information and disseminate it to other stakeholders.
14. Assess the involvement of community in implementation of MDM Scheme.
15. Review of status of MIS integration with IVRS for monitoring of the scheme.
16. Review of the status of tasting of the meal by at least one teacher.
17. Review of status of safe storage and proper supply of ingredients to schools.
18. Review of the status of awareness about Mid- Day Meal Scheme.
19. Review of status of convening of Monitoring Committee under the Chairmanship of Member of Parliament.
20. Review of convening of regular review meetings at district level.
21. Review of the status of testing of food samples by reputed institute.
22. Review of the status of Emergency Medical Plan
23. And give suggestions for improvement in the implementation of the programme.

Nutritional Aspects:

1. To measure the anthropometric measurements of a sample of children availing MDM.
 - i. Height
 - ii. Weight
 - iii. Mid arm Circumference
2. To Calculate the Body Mass Index (BMI) on the basis of measurement of Height and weight.
3. To identify the children who are undernourished and over nourished.
4. To assess the pattern of food provided in the visited schools under MDM.
5. To review the quality and quantity of the served MDM.
6. To review the satisfaction of the children parents and community on the served meal under MDM in respect of quality and quantity.
7. To suggest some nutritionally balance region specific recipes.
8. To assess the ways for better convergence with School Health Programme

The recommendations of the Review Mission are based on the evidences collected and the information gathered during the review of implementation of the scheme in Nagaon and Kamrup districts.

2.2 Composition of JRM

1. Dr. Pranati Das, Principal Scientist (Foods, Science & Nutrition), Assam Agriculture University Jorhat.
2. Sh. B.D. Shivani, Deputy Secretary, MHRD, Govt. of India
3. Sh. Deepak Kumar Sarma, Deputy Director, Elementary Education, Govt. of Assam
4. Dr. Daisy Bora Talukdar, Prof., Deptt. of Education, Dibrugarh University
5. Sh. Jonki Pegu, Representative of Office of Supreme Court Commissioner.
6. Ms. Pramila Manoharan, Education Specialist, UNICEF, Assam.

Co- team members:

1. Sh. Rajat Gupta, Sr. Consultant, NSG- MDM, Ed.CIL, Ministry of Human Resource Development, Govt. of India.
2. Sh. Dinesh Pradhan, Consultant, NSG- MDM, Ed.CIL, Ministry of Human Resource Development, Govt. of India.
3. Mrs. Moloya Gogoi, Subject Matter Specialist, KVK, Assam Agricultural University, Tinsukia
4. Ms. Jubismita Goswami, PHD Scholar, Dept. of Food Science & Nutrition, Assam Agriculture University, Jorhat.
5. Ms. Khumanthem Manjushree Devi, PHD Scholar, Dept. of Food Science & Nutrition, Assam Agriculture University, Jorhat.
6. Ms. Nishad Kayfa, Research Assistant, Avinashilingam Deemed University, Coimbatore, Tamil Nadu

2.3 Methodology

2.3.1 Planning & preparation

A. Implementation

The Joint Review Mission visited two districts in the State of Assam. Out of the two districts, one district Nagaon was selected by Government of India on the basis of poor coverage against enrolment (86% in Primary and 68% in Upper Primary) and Kamrup was selected by the State Government. List of all Primary and Upper Primary schools were collected from the Department. A sample of 20 schools from Nagaon and 28 schools from the Kamrup districts were selected for the study. The detail list of the visited schools is attached in the Annexure.

The JRM team was divided into two groups to examine the various issues relating to implementation of Mid Day Meal. A set questionnaire, observations, perceptions and

measurements were taken as tools. The teams have also interacted with teachers, students, cook-cum-helpers, members of SMCs and local people to understand the reality of MDM implementation at the field level.

The Review Mission followed a methodology to capture the intricacies involved in the implementation of the programme. Instead of selecting a large sample, the review mission emphasized for a greater in depth study in selected samples to see the details in their entirety.

- i. The documents available with the implementing agencies were carefully studied and analyzed. Detailed discussions were held with State, District, Block and School level functionaries
- ii. Interview with stakeholders, observations, focused group discussions and record based inquiry methodology was followed to capture the information on the performance of the scheme during the visits.

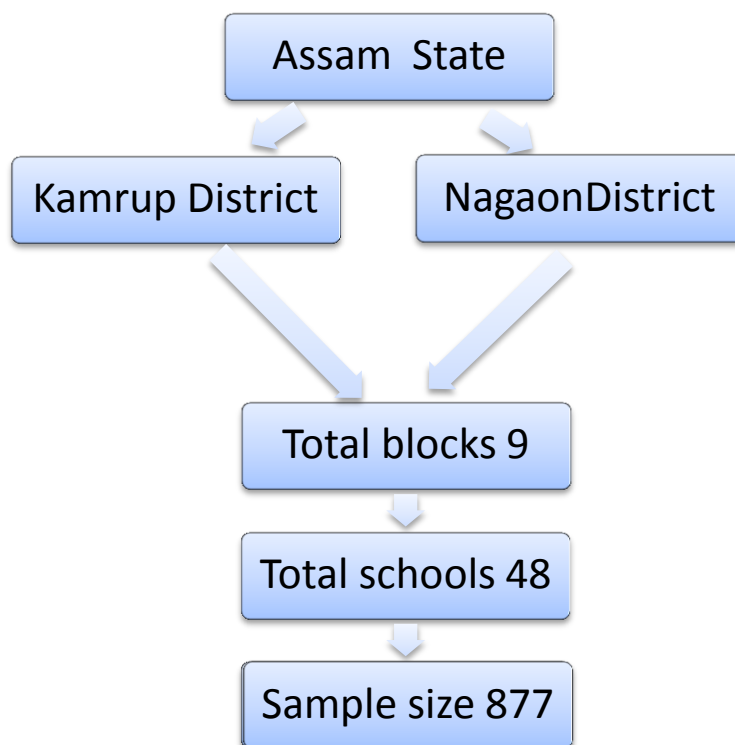
Finally, the report of the JRM (MDM) was prepared and presented as per the terms and conditions.

B. Nutritional Assessment

As per the term of reference to assess the nutritional status the following methodology was observed.

Sample selection

Two districts i.e. Kamrup Rural and Nagaon were selected as the study area. Out of these two districts, 48 schools were taken which had total enrolment of 6435 children. Sub sample of school children comprised of 429 boys and 448 girls which amount to 13.62 per cent of total enrolment. To assess the nutritional status of the children the information was collected on anthropometric measurements, clinical assessments and dietary pattern of children.



Anthropometric assessment

Measurements of anthropometric parameters viz. body weight, height, mid upper arm circumference (MUAC), were recorded for school children as per the following methods.

Body weight

Body weight (kg) indicates the body mass and is a composite of all body constituents like water, minerals, fat, protein, bone etc. For the present study, body weight (kg) was taken by personal weighing machine with the maximum capacity of 120 kg and the minimum division of 0.5 kg. The following precautions were taken to measure body weight (kg). The school children were instructed to be without shoes. All the school children were in the school uniform. School children were asked not to lean against or hold any support, while the weight (kg) was being recorded (Gibson, 1990).

Height

Height (cm) of the school children was taken by anthropometric rod. School children were asked to stand erect on a leveled surface, without shoes, looking straight with heels together and toes apart. The anthropometric rod was placed behind the school children in the centre of the heels perpendicular to the ground. The investigator standing on left side of the school children held firmly the chin of the school children with his/her left hand and the occiput of the school children with his right little finger to maintain the Frankfurt plane horizontal (an imaginary line joining the tragus of the ear and infra orbital margin of the eye). The moving head piece of the anthropometric rod was placed in the sagittal plane over the head of the subject applying a slight pressure to reduce the thickness of hair. The readings were taken when the anthropometric rod was still in position (Gibson, 1990).

Mid upper arm circumference (MUAC)

MUAC (cm) indicates the status of muscle development. For the present investigation, MUAC was taken using fiber glass tape with minimum count of 0.1 cm. The mid-point between the tip of the acromion of scapula and the tip of the olecranon process of the (fore arm bone) ulna, with the arm flexed at the elbow at right angle; was marked with a marker pen. Arm of subject was hanged freely and the fiber glass tape was gently, but firmly placed embracing the arm without exerting too much pressure on the soft tissues. The reading was taken to the nearest millimeter, with the tape still in position (Gibson, 1990).

BMI

Body Mass Index was calculated using weight in Kg dividing it by height in meter square. The nutritional status of children was assessed on the basis of BMI Z-score classification given by WHO:

\geq Median -2SD to $+< 1$ SD : Normal

Median < -2 SD TO > -3 SD : Moderate undernutrition

$>$ Median -3SD : Severe Undernutrition

Median $\geq +1$ SD to $< +3$ SD : Overweight

$\geq +3$ SD : Obesity

Clinical survey

Clinical survey was conducted to observe clear cut visible signs of B complex deficiency, ascorbic acid deficiency and iron deficiency anaemia. Initial stages of dental fluorosis were observed in about 3 % each of the boys and girls surveyed in Nagaon district.

Diet pattern

The students were asked for their dietary pattern that is they informed about what they have taken in the morning before coming to school during the school and after the school till they sleep. A 24 hour dietary recall method was employed for the previous day. The information was further placed as general dietary pattern and food items consumed.

Calculation of nutritive value of MDM meal

One serving of MDM meal was collected, weighed and converted to raw ingredients to determine the nutritive value, using “Nutritive Value of Indian Foods” an Indian Council of Medical Research publication.

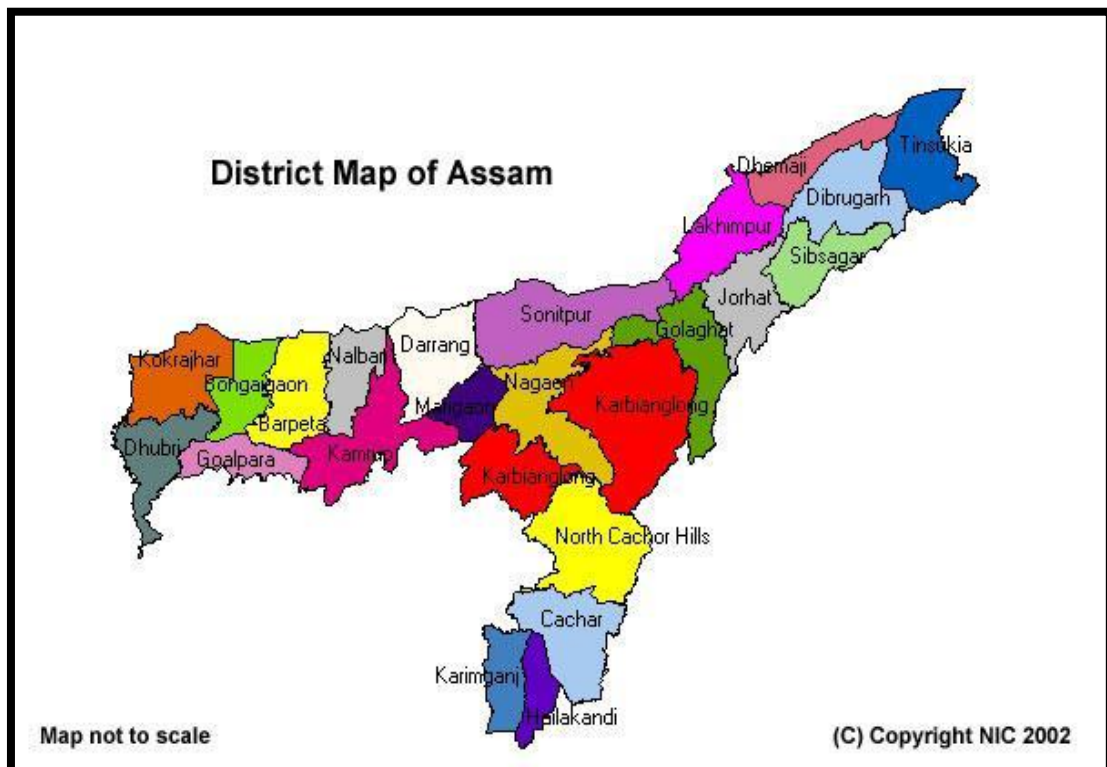
2.3.2 Visit schedule

Date	Place	Activity
11. 11. 2013	Guwahati	Briefing session by State Government on implementation of the MDMS in the State
12.11.2013-13.11.2013	District: Nagaon	Field visit to schools
13.11.2013	District: Nagaon	Briefing meeting with District Magistrate, Nagaon
14.11.2013	District: Kamrup	Meeting with District Magistrate, Kamrup
14.11.2013-15.11.2013	District: Kamrup	Field visit to schools
15.11.2013	District: Kamrup	Briefing meeting with District Magistrate, Kamrup
16.11.2013- 18.11.2013	Guwahati	Report writing
19.11.2013	Guwahati	Report presentation to the State

3. Mid Day Meal in Assam

3.1 State Profile

The biggest of states among the ‘Seven Sisters’ in the north-east India, is the land of the red river and blue hills, Assam. The state of Assam derived its name from the word ‘Asom’ which means unequal or unrivalled. Its capital is Dispur. The State of Assam has over 3.11 crore (approx.) inhabitants spread over 78438 sq. km.



ASSAM AT A GLANCE

Particulars	Data
Geographical Area	78,438 Sq. Kms.
Districts	27
Autonomous councils	3
Sub- Divisions	56
Blocks	
a. Community	219
b. Education	137
Village (Revenue)	26395
Towns	214
Population	3,11,69,272
c. Male	1,59,54,927
d. Female	22,06,219
Capital	Dispur
Population of Age group (0-6)	45,11,307
Literacy Rate	73.18
e. Male	78.81
f. Female	67.27

Data Source: As per 2011 census

Institutions serving MDM

Sl. No.	Type	No. of Institutions	Enrolment
1	Primary	43180	3445133
2	Upper Primary	12583	1620485
3	NCLP	254	14574
	Total	56017	5080192

3.2 District Profile

NAGAON DISTRICT:

The Central Assam District of Nagaon is one of the largest districts of Assam. It sprawls across almost 4000 sq. kms. of fertile alluvial plains and thickly forested hills. River Brahmaputra flows along the northern periphery of the district. In the North the district is bounded by Sonitpur district & the Brahmaputra river, south is bounded by West Karbi Anglong and North Cachar Hills, East is bounded by East Karbi Anglong and Golaghat districts.

Description	2011
Actual Population	2,823,768
Male	1,439,112
Female	1,384,656
Population Growth	22.00%
Area Sq. Km	3,973
Density/km2	711
Proportion to Assam Population	9.05%
Sex Ratio (Per 1000)	962
Average Literacy	72.37
Male	76.51
Female	68.07
Total Child Population (0-6 Age)	459,940
Male Population (0-6 Age)	234,203
Female Population (0-6 Age)	225,737
Literates	1,710,716
Male Literates	921,850
Female Literates	788,866
Child Proportion (0-6 Age)	16.29%



- Sub Divisions - 3
- Education Blocks - 11
- Rural Blocks - 10
- Urban Bocks - 1
- Villages - 1396
- Development Blocks – 18
- Wards - 94
- Gram Panchayat – 240

Institutions serving MDM

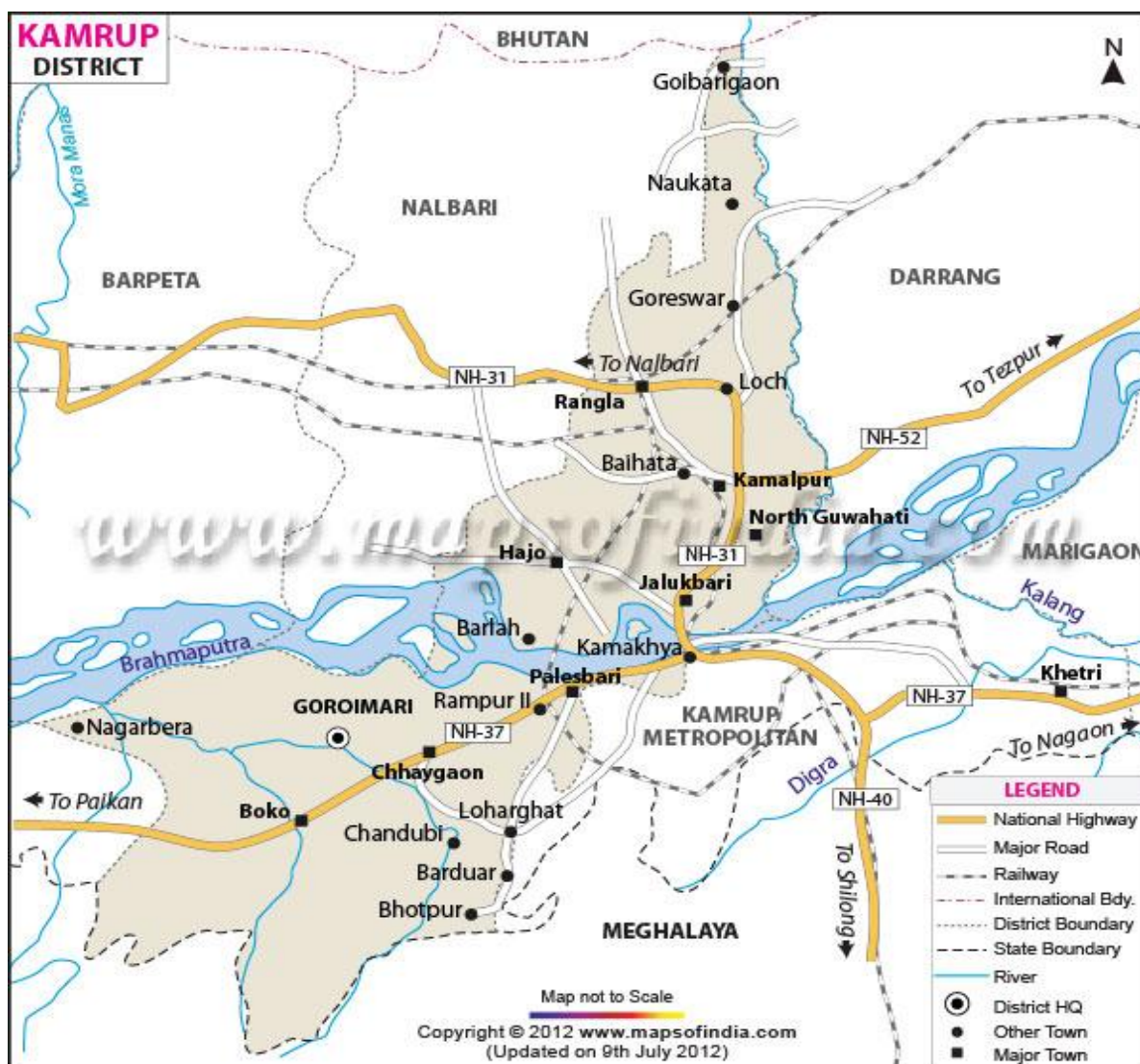
Sl. No.	Type	No. of Institutions	Enrolment
1	Primary	3031	351809
2	Upper Primary	971	153323
3	NCLP	199	9727
	Total	4201	514859

KAMRUP DISTRICT:

Kamrup Rural district is an administrative district in the state of Assam in India formed by bifurcation of Kamrup district in 2003, named after Kamarupa, by which present Assam state and its adjoining areas were known in ancient times. The district, along with Nalbari and Barpeta that together formed the Undivided Kamrup district of the 1980s, a part of Western Assam, has a unique culture and language.

Description	2011	2001
Actual Population	1,517,542	1,311,698
Male	778,461	678,310
Female	739,081	633,388
Population Growth	15.69%	14.97%
Area Sq. Km	3,105	3,105
Density/km ²	489	382
Proportion to Assam Population	4.86%	4.92%
Sex Ratio (Per 1000)	949	934
Child Sex Ratio (0-6 Age)	967	964
Average Literacy	75.55	67.73
Male Literacy	81.30	75.89
Female Literacy	69.47	58.95
Total Child Population (0-6 Age)	200,061	204,843
Male Population (0-6 Age)	101,716	104,324
Female Population (0-6 Age)	98,345	100,519
Literates	995,319	9,267,515
Male Literates	550,219	5,088,530
Female Literates	445,100	4,178,984
Child Proportion (0-6 Age)	13.18%	15.62%

Description	2011	2001
Boys Proportion (0-6 Age)	13.07%	15.38%
Girls Proportion (0-6 Age)	13.31%	15.87%



- Sub Divisions – 2
- Revenue circle – 8 under guwahati division, 3 under rangia division
- Education Blocks - 11
- Rural Blocks - 9
- Urban Bocks - 2
- Villages - 1422
- Development Blocks – 15
- Gram Panchayat – 162

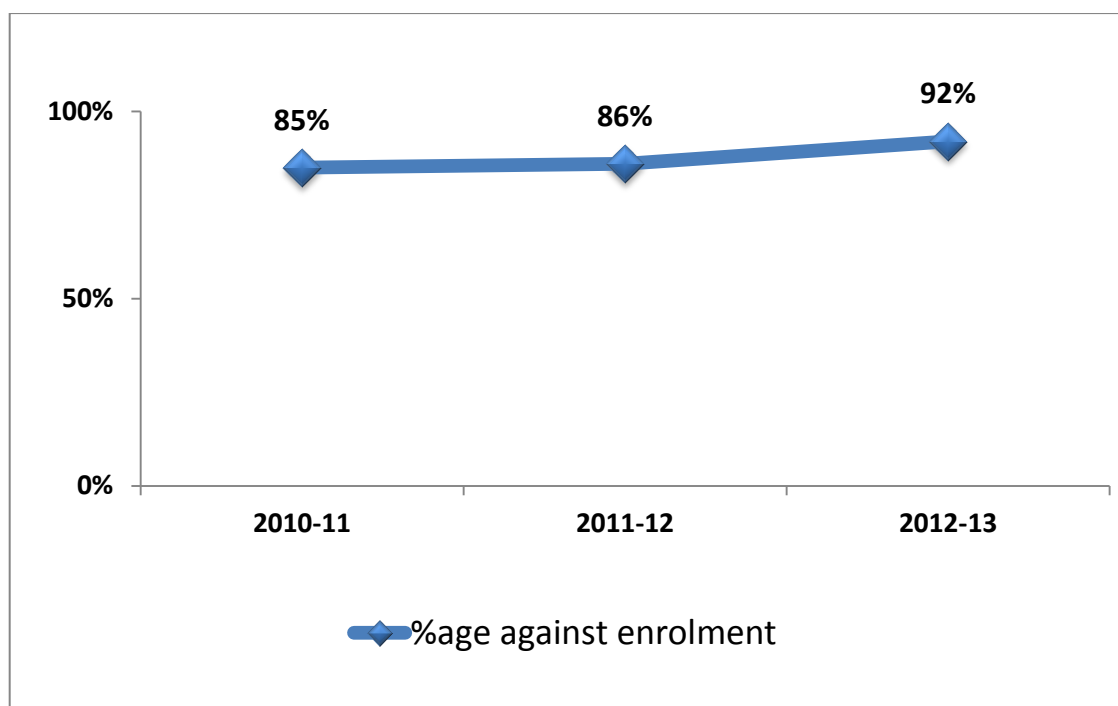
Institutions serving MDM

Sl. No.	Type	No. of Institutions	Enrolment
1	Primary	1871	127520
2	Upper Primary	595	65812
	Total	4201	514859

3.3 Performance of the State during last 3 financial years

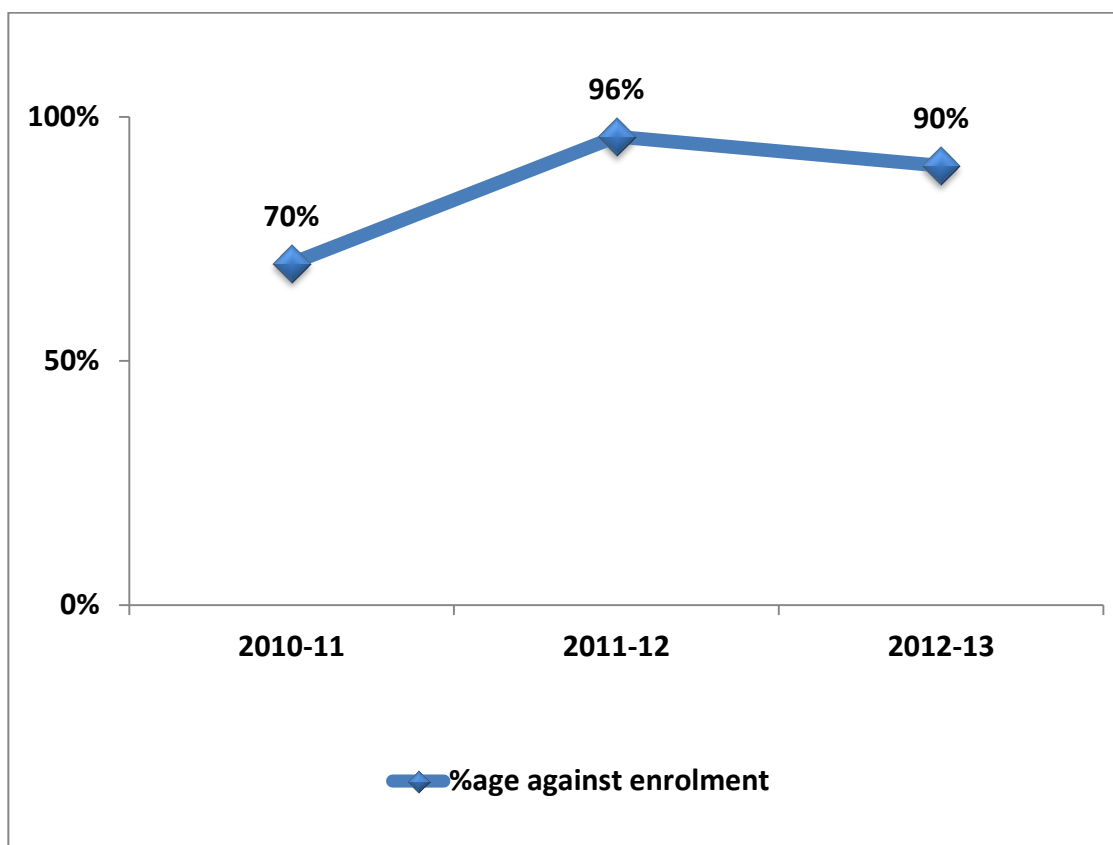
3.3.1. Coverage of children against enrolment (Primary and Upper Primary) :

The coverage of children against enrolment in Primary for the last three financial years has been shown in the following graph:-



The above graph shows that the percentage coverage of children during the last three financial years is increasing over the period of time. It has increased from 85% in 2010-11 to 86% during 2011-12 and further increased to 92% during 2012-13. Within the three year the improvement in coverage of the children by 7% has been observed from 2010-11 to 2012-13 which is quite appreciable.

The following graph depicts the percentage coverage of children at upper primary stage.

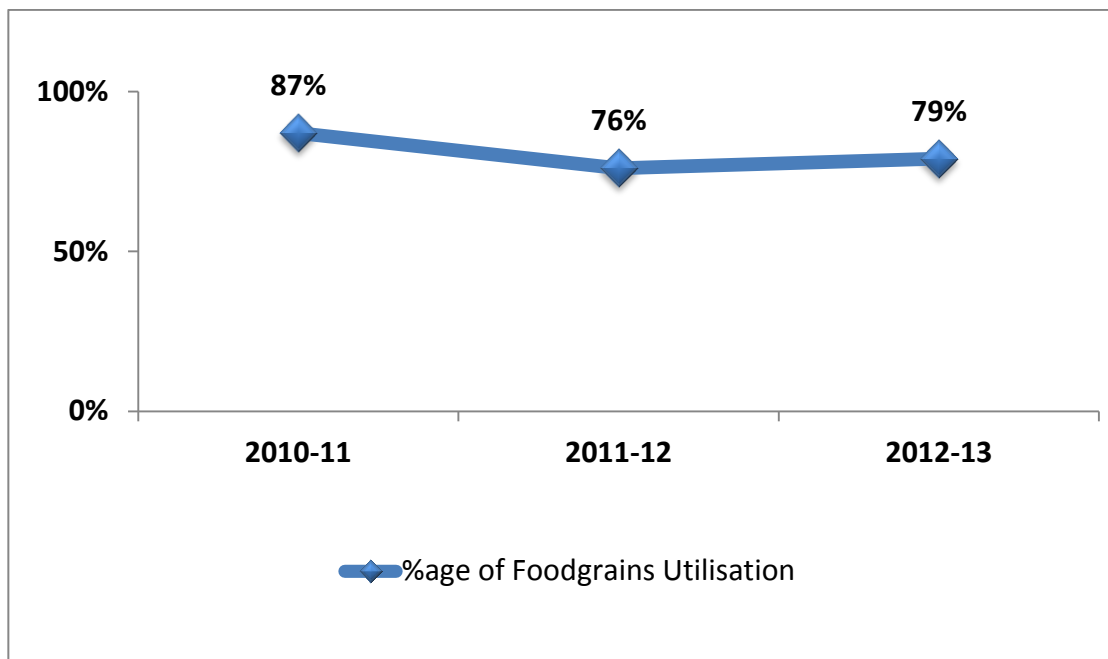


The above graph shows that the percentage coverage of children in Upper Primary category during the last three financial years shows quite satisfactory. The coverage of children was 70% against the enrolment during 2010-11 and drastically improved to 96% during 2011-12 whereas during 2012-13 came down to 90%. In a nutshell the coverage increased by 20% over the span of 3 years.

3.3.2. Food grain utilization

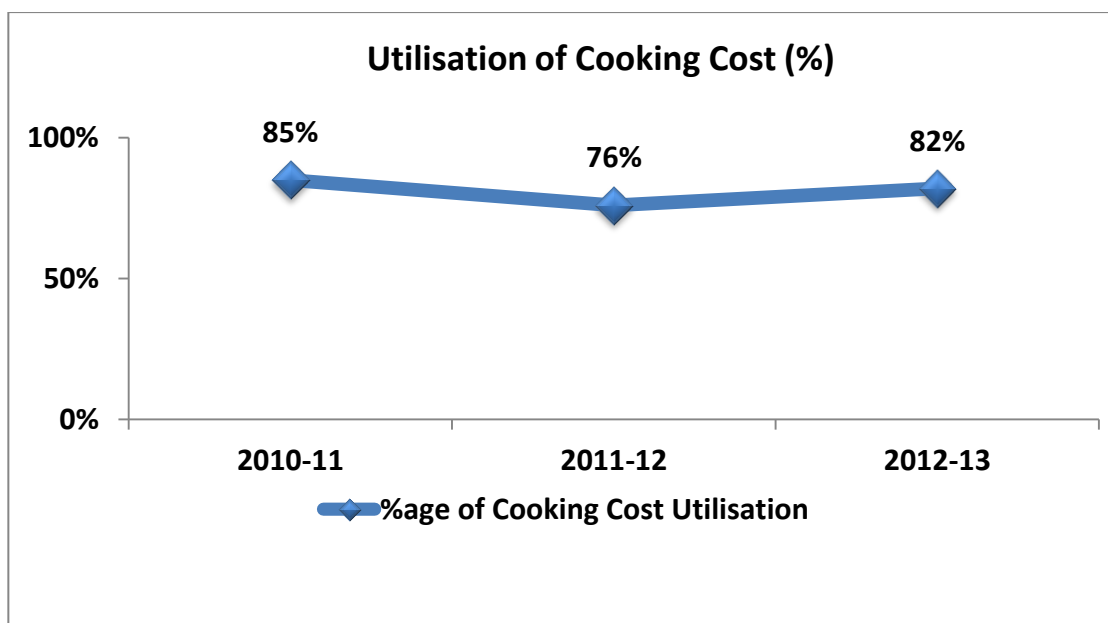
Utilization of food grains is an important indicator to understand the performance of implementation of the MDMS in the State. As per the available data of last three financial years, it is found that the food grain utilization has decreased from 87% in 2010-11 to 76%

during 2011-12 and during 2012-13 slight increase to 79%. There has been an overall decrease of 8% in the span of three years. The graphical representation is shown below.



3.3.3. Utilization of cooking cost

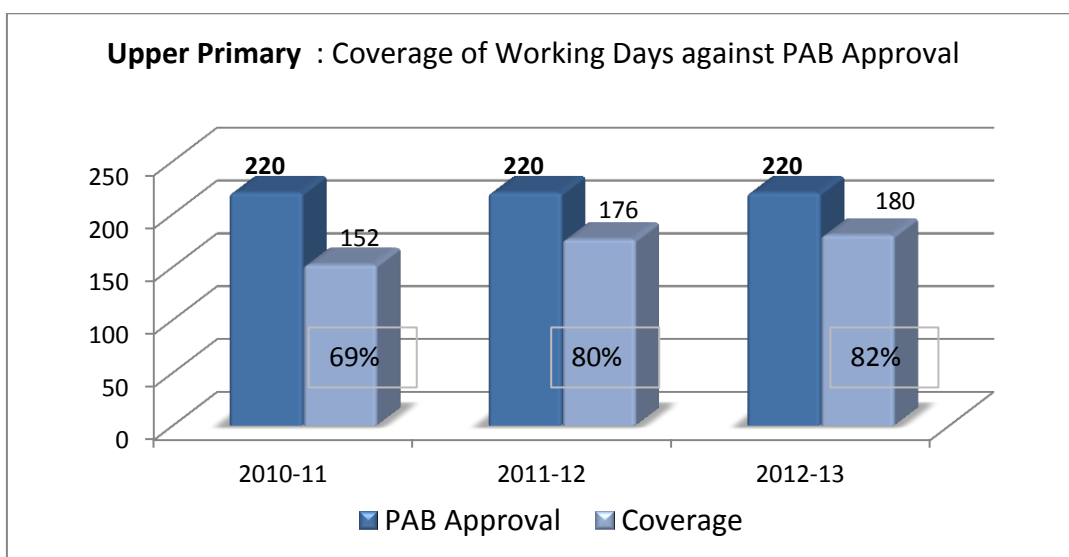
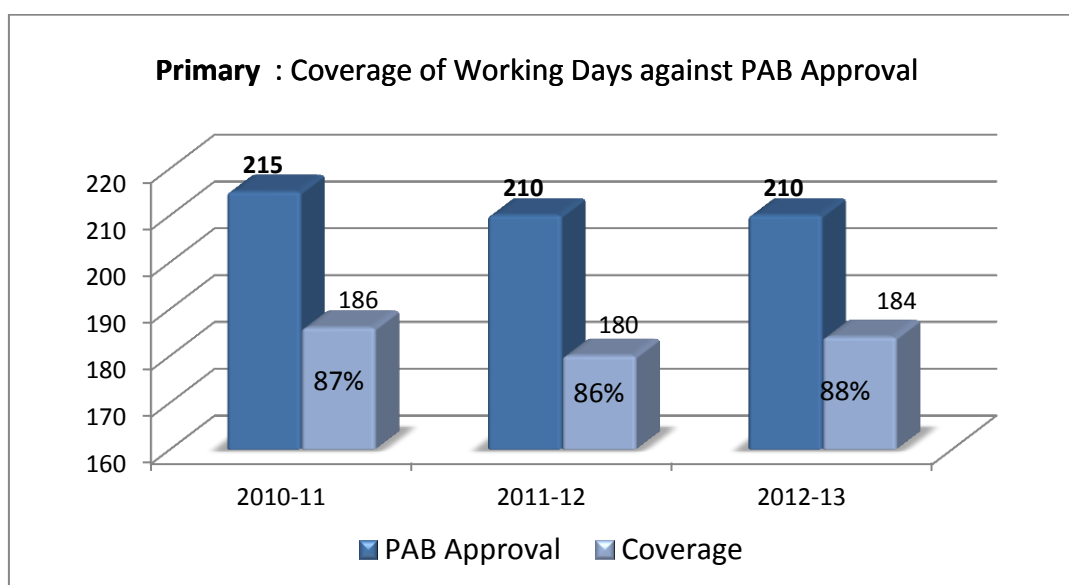
The utilization of cooking cost against allocation for the last three financial years has been shown in the following graph.



It is evident from the above figure that the cooking cost utilization has decreased from 85% in 2010-11 to 76% in 2011-12 and slight increase during 2012-13 to 82%. It has shown the utilization of cooking cost decreased by 3% from 2010-11 to 2012-13 which is in synchronization with the utilization of food grain.

3.3.4. Coverage of working days over the past three years

Coverage of working days is very important parameter which indicates the regularity in serving of meals. Coverage of working days during the last three days during last three years is as follows:

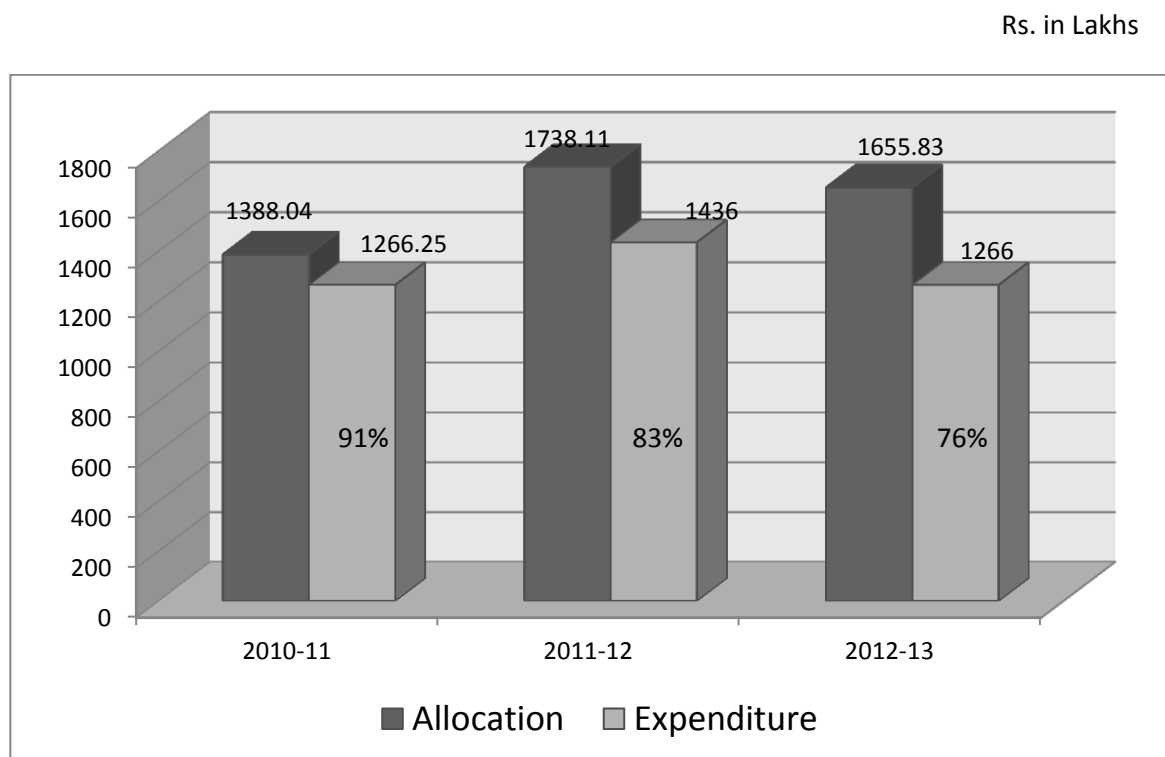


Above graphs show the coverage of working days during past three year against the PAB approval. It is clearly visible that the coverage of working days is 88% at Primary stage and 82%at Upper Primary stage though it has improved in past three years at the Primary level.

It is evident that there is an irregularity in serving the meals in both Primary and Upper Primary Level.

3.3.5. Utilization of Transportation Assistance

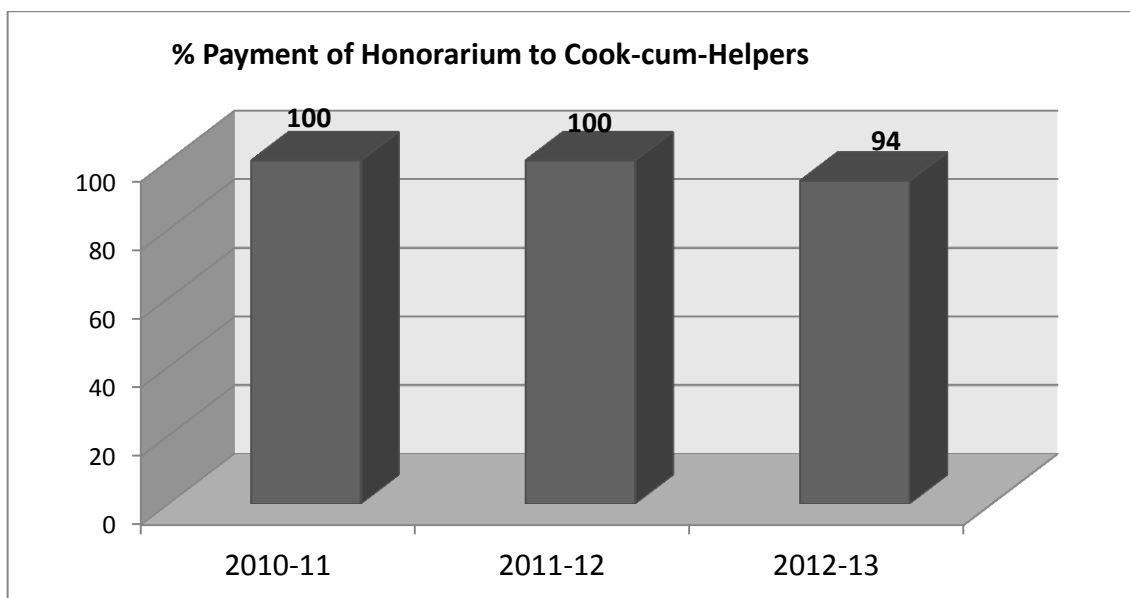
The allocated food grains should be delivered to the school doorstep in timely manner for regular serving of the meal. The expenditure incurred on the transportation is borne by the Central Govt. The lifting agencies should be paid in timely manner against the food grains lifted by them. Following graphs shows the expenditure against the allocated amount of transportation assistance for the last three years.



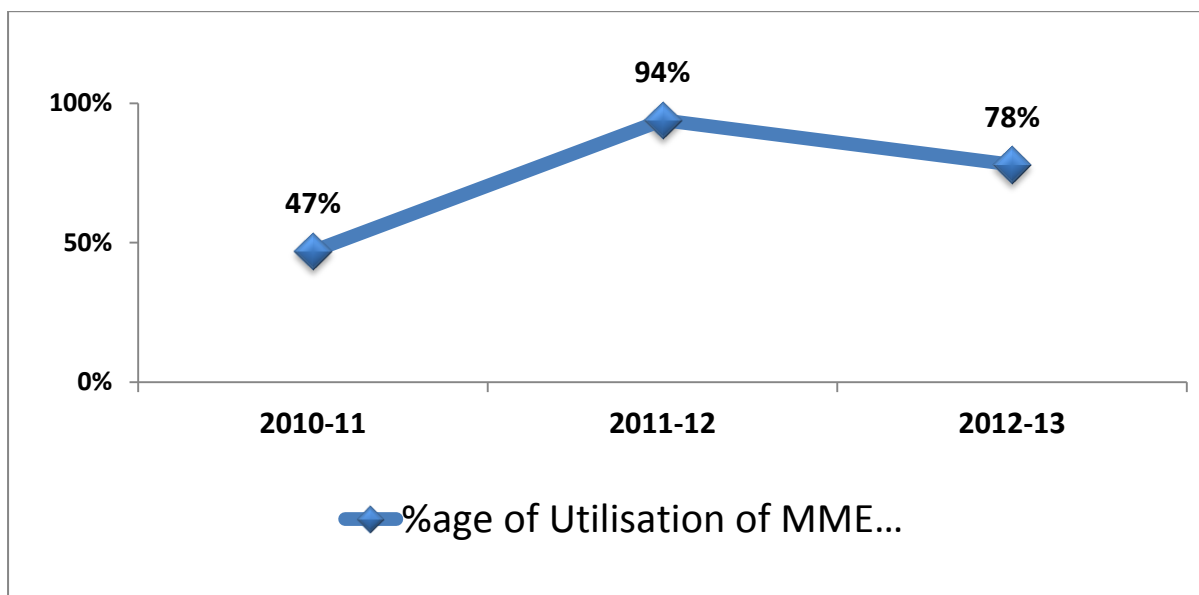
The above graphs depicts that there is continuous decline in TA utilization during 2010-11 to 2012-13. This indicates that huge amount of bills is pending for payment to the lifting agencies.

3.3.6. Payment of Honorarium to Cook-cum-Helpers:-

The payment of honorarium to cook-cum-helpers is to be made on monthly basis. While analyzing the same over past 3 years, it is observed that in 2010-11 and 2011-12 payment of honorarium to Cook-cum-Helpers have made 100% whereas during the year 2012-13 only 94% payment has been made by the State Government.

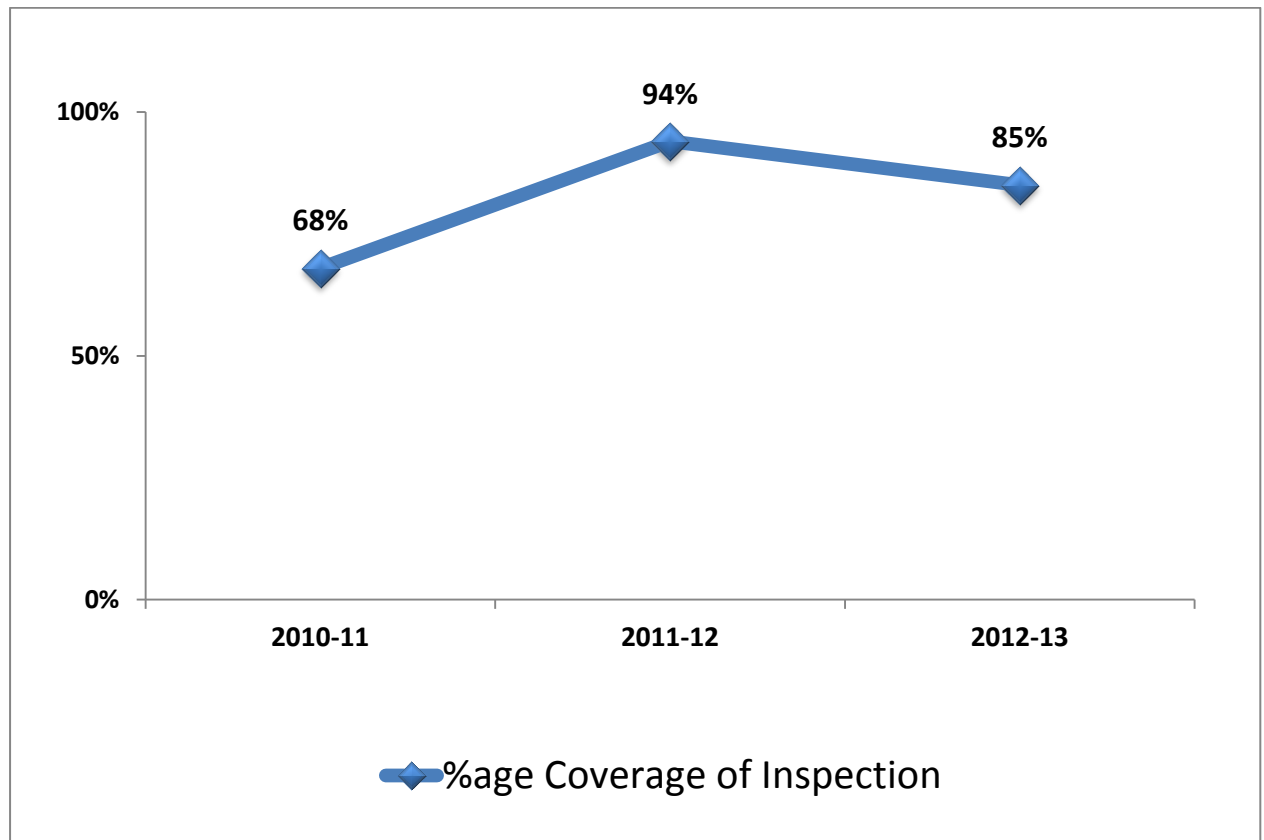


3.3.7. Utilisation of MME:



The above data depicts the fact that though there has been a drastic improvement in utilization of MME fund from 47% in 2010-11 to 94% in the year 2011-12 but the same has decreased to 78% in the year 2012-13.

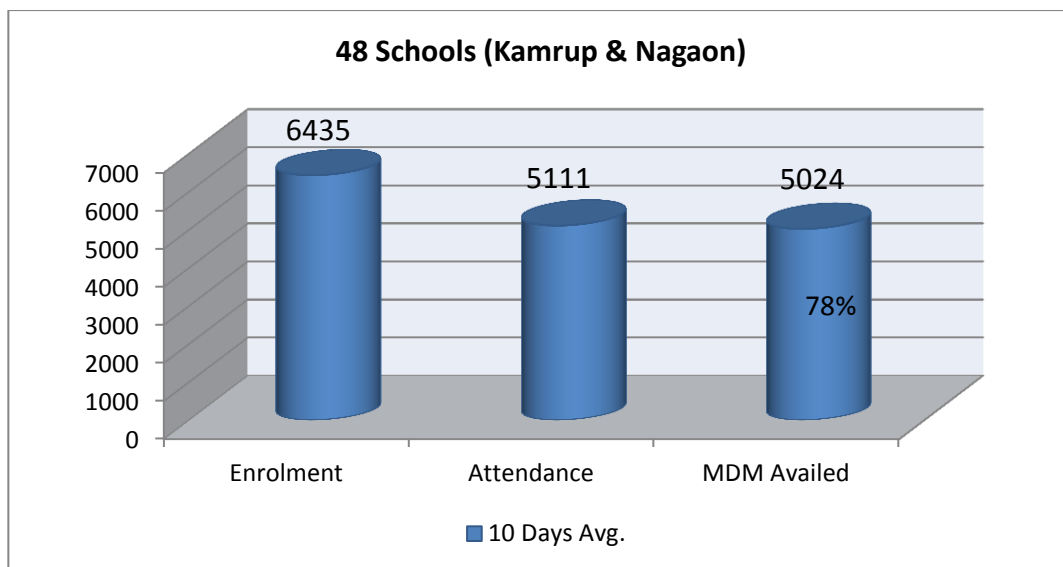
The corresponding data on inspection of schools has been shown below.



Clearly, the data on inspection of schools is in accordance with the utilization of MME. The inspection of schools has improved from 2010-11 to 2011-12 but reduced in the year 2012-13.

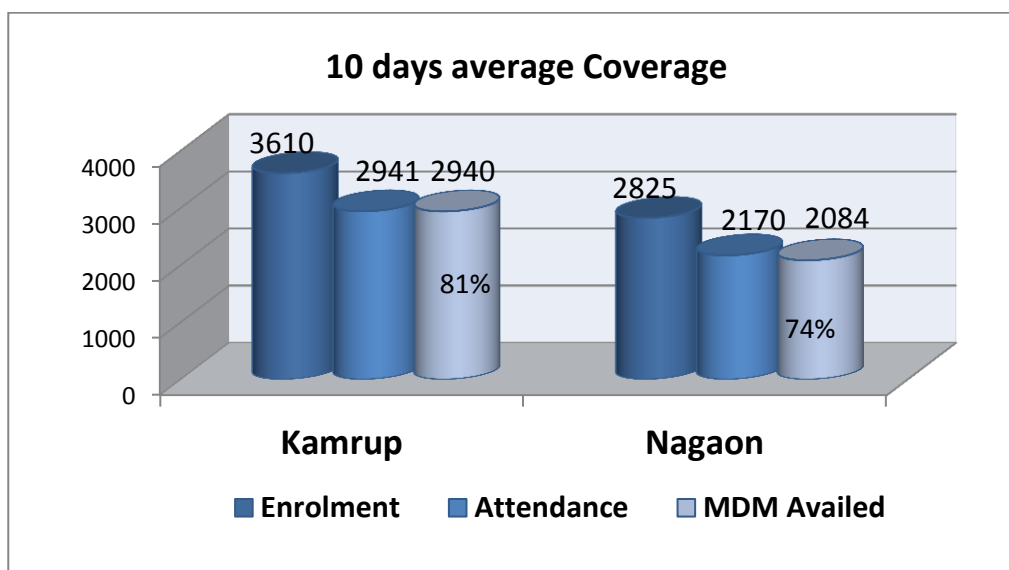
4. Observations:

The team visited 48 schools in two districts viz. Kamrup and Nagaon and collected the data on enrolment, attendance and number of children availing MDM during the last 10 days from the day of the visit.



It was observed that on an average 78% of the children were availing MDM against enrolment of 6435. However 98% of children who attended the schools were availing MDM. The team discussed the reasons for less coverage of children. It was informed by the school and district authorities that major reasons for quite less attendance were festival and local strike call by the different organization.

Following graphs depicts the coverage against enrolment in Kamrup & Nagaon District:-

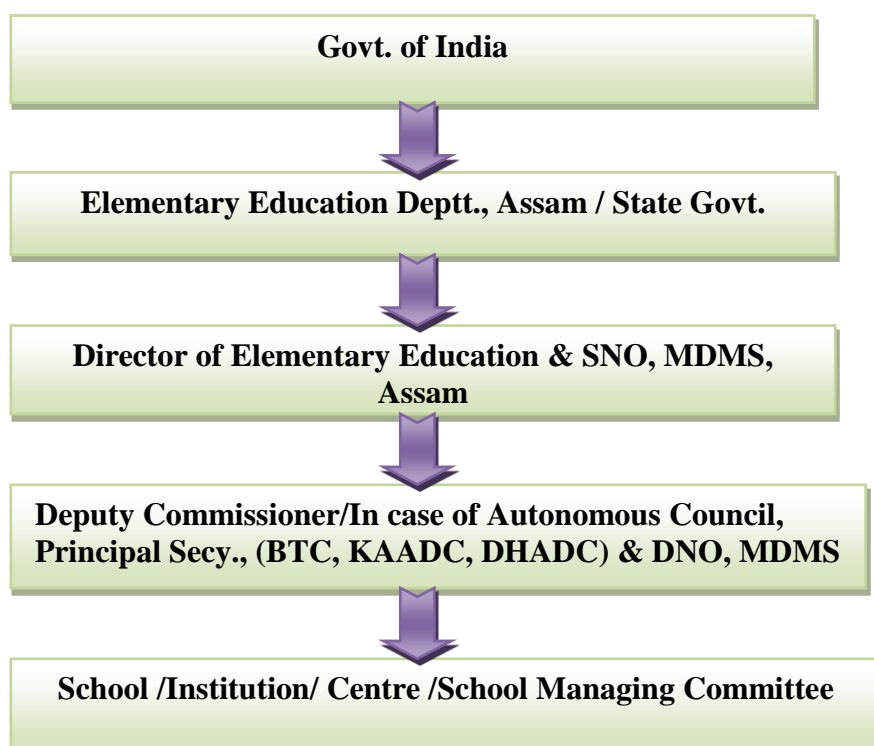


In Kamrup district 81% coverage has been observed during the 10 days average attendance against the enrolment whereas in Nagaon (74%) quite less coverage has been observed against the enrolment.

4.1 Observations on MDM implementation

4.1.1 Fund flow from State Government to Schools/cooking agency and the time taken in this process.

The existing system of fund flow from the Finance Department to the school level involves the following stages:



The State Govt. releases the fund to SNO, MDM & Director of Elementary Education, Assam after receiving the concurrence from State Finance Department. The Director of Elementary Education, Assam presents the bill of the sanctioned amount to the Treasury office. The State Nodal Officer (SNO), MDM after receiving the fund from treasury releases the same to the District Nodal Officer (DNO), MDM. Finally, the DNO, MDM releases the fund to the SMC (School Managing Committee).

The actual time taken in transfer of funds from State to districts has been shown in the following table:

(2013-14)					
Components	Date of fund received by the State from GOI	Date of fund received by the State (state share)	Date of fund release by State to directorate	Gap(No of days) between funds receiving and releasing	Reason for delay if any
Cooking cost	22/4/2013	20/4/2013	22/8/2013	Four months	
MME	22/4/2013	22/4/2013	22/8/2013	Four months	
Transportation	22/4/2013	22/4/2013	22/8/2013	Four months	

It is evident from the above table that the State Finance Department received the adhoc instalment of fund of 2013-14 on 22nd April, 2013 and it took around 4 months to release the fund from State Finance Department to the Directorate. It is worthwhile to mention that the Directorate has not yet released the said instalment to the District authorities.

Government of India also released the 1st instalment on 19th July, 2013 to the State Government. However, the same has not yet released by the State Finance Department to the Directorate.

It is relevant to mention that the State released the closing balance of the financial year 2012-13 to the districts after getting the same revalidated from GoI.

Nagaon

Components	Date of fund received by the district(Nagaon) from State	Date of fund release by District to Block	Gap(No of days) between funds receiving and releasing	Reason for delay if any
Cooking cost	30-05-2013	13-06-2013	43 Days	Official work load
Transportation	29-05-2013	--	--	

District Nagaon has received the fund (revalidated closing balance of the FY 2012-13) from the State on 30.05.2013. The same has been released to blocks on 13.06.2013. It is evident that it took around 43 days for the District to release the fund to blocks.

Kamrup

Components	Date of fund received by the district from state	Date of fund release by District to Block	Gap(No of days) between funds receiving and releasing
Cooking cost	25/4/13	18/7/13	83 days
Transportation	25/4/13	19/7/13	84 days

District Kamrup has received the fund (revalidated closing balance of the FY 2012-13) from the State on 24.04.2013. The same has been released to blocks on 18.07.2013. It is evident that it took around 83 days for the District to release the fund to blocks which is quite lengthy.

It is clearly evident from above that the flow of fund in the State of Assam is not upto the mark and requires a significant improvement.

Observation: It was observed that out of 48 schools visited, record was maintained in most of the visited schools. In 22 out the 48 visited schools (46%) found that irregularity of supply of cooking cost. Out of the visited schools in Kamrup only 14% schools were not getting cooking cost regularly.

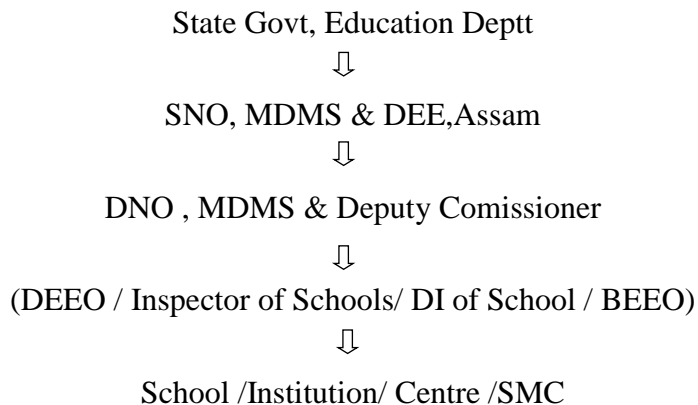
Out of the visited school of Nagaon 90% schools were not getting cooking cost regularly as per the records of past 1 year. The JRM team found that the cooking cost is being utilized as per the old rate i.e. Rs. 3.11 in Primary and Rs. 4.65 in Upper Primary even after 30th June, 2013 although same has been revised to i.e. Rs. 3.34 for Primary and Rs.5.00 for Upper Primary from 01.07.2013.

4.1.2 Management and monitoring of the scheme from state to school level, clear roles and responsibilities of officials at all levels.

- The State Govt. Education Department is the Nodal Department for implementation of MDMS and is responsible for sanctioning of funds, release of ceiling and correspondence with Govt. of India. The department is responsible for timely submission of report to the Govt. of India, overall supervision and issue of notification of Guidelines for implementation of Mid-Day Meal scheme.
- Director Elementary Education, Assam & State Nodal Officer (SNO), MDMS is responsible for withdrawal of funds against the sanction received from the Government and release of the fund to the District Nodal Officers (DNOs), MDMS. Director of Elementary Education, Assam & SNO, MDMS are also responsible for district wise allocation of rice to the DNOs, MDMS and overall supervision and monitoring of the scheme.
- Deputy Commissioner & DNOs, MDMS, responsible for sub-allocation of rice to the Gram Panchayat Samabay Samitee (GPSS) in time and timely release of cooking cost, honorarium to cook-cum-helper, transportation cost, cost of food grains to FCI. He/she is also responsible for overall supervision of scheme in the districts. The Food & Civil Supply Department is the Nodal Agency of the State for transportation of food grains. The DNOs, MDMS are also responsible for timely lifting of rice and delivery of the same to the schools, ensuring daily serving of quality, safety and hygienic cooked food to the students, District level vigilance committee meeting with active co-ordination of Civil Supply, Health, Social Welfare, Panchayat & Rural Development Deptt. & PHE Deptt.
- District Elementary Education Officer/Inspector of Schools/Deputy Inspector of Schools /Block Elementary Education Officer are responsible for regular monitoring of the scheme by ensuring serving quality, safe and hygienic food to the students under Mid-Day Meal Scheme and regular submission of inspection report.
- Headmaster and other Teachers are responsible for tasting of cooked food before serving the same to the children. The Headmasters of the schools are also responsible for maintenance of Mid-Day Meal accounts. They are also responsible for ensured serving of Mid-Day Meal in safe and hygienic condition.

- SMC/Mother Groups are also responsible for serving safe & hygienic hot cooked food to the children, maintaining the nutritional value as per the guidelines of Mid-Day Meal Scheme. One or two SMC/Mother Groups member are responsible for tasting cooked food before serving of the same to the students.

The existing management structure for implementation of the scheme has been shown in the following diagram.



Positions of State level and District level

State level (Head Quarter) :

S.No	Post	Sanctioned post	Filled Post	Vacant Post	Remark
1.	Commissioner & Secretary, Govt. of Assam, Education(Elementary) Dept.	1	1	0	
2.	Director, Elementary Education	1	1	0	
3.	Under Secretary, Govt. of Assam, Education(Elementary) Dept.	1	1	0	
4.	Deputy Director, Elementary Education	1	1	0	
5.	Assistant Director, Elementary Education	1	1	0	
6.	Research Officer	1	1	0	
7.	Evaluation Officer	1	1	0	
8.	Research Assistant	1	1	0	
9.	Statistical Assistant	2	2	0	
10.	Lower Division Assistant	1	1	0	

S.No	Post	Sanctioned post	Filled Post	Vacant Post	Remark
11.	Computer Operator(Contractual)	9	9	0	
	Total	20	20	0	

Nagaon District :

S.No	Post	Sanctioned post	Filled Post	Vacant Post	Remark
1	Deputy Commissioner	1	1	0	
2	Additional Deputy Commissioner	1	1	0	
3	District Elementary Education Officer	1	1	0	
4	Inspector of Schools	1	1	0	
5	Deputy Inspector of Schools	3	3	0	
6	Operator (Contractual)	1	1	0	
7	Block Elementary Education Officer	10	10	0	
	Total	18	18	0	

Kamrup District :

S.No	Post	Sanctioned post	Filled Post	Vacant Post	Remark
1	Deputy Commissioner	1	1	0	
2	Additional Deputy Commissioner	1	1	0	
3	District Elementary Education Officer	1	1	0	
4	Inspector of Schools	1	1	0	
5	Deputy Inspector of Schools	1	1	0	
7	Block Elementary Education Officer	9	6	3	
	Total	14	11	3	

It is evident from the above that there is no dedicated structure for MDMS available at the State as well as district level though all the sanctioned posts are filled in the existing structure.

The impact of the same was clearly visible to the teams during the field visit to the schools.

Monitoring is an integral part of implementation of the MDM scheme and utilisation of Management, Monitoring and Evaluation (MME) fund shows the performance of the States/UTs in monitoring of the MDMS.

Field Observation:

There was a clear lack of monitoring especially in Nagaon District. A large no. of schools were maintaining the inspection registers. The inspection registers had the comments of the inspecting officers but there were hardly any remarks on MDM. There was no clear format available with the officers at the District and block level regarding the inspection of the MDMS. The inspection reports should also include remedial action to be taken in case any short comings like delay in food grains and cooking costs, delay in payment of cook cum helpers and any other MDM related issues, operational drinking water facility and toilets etc. However, the monitoring was a shade better in the Kamrup district.

The Review Mission proposes and recommends that a mid-day meal cell may be set-up with following structure for implementation of MDMS at State, District and Block level:-

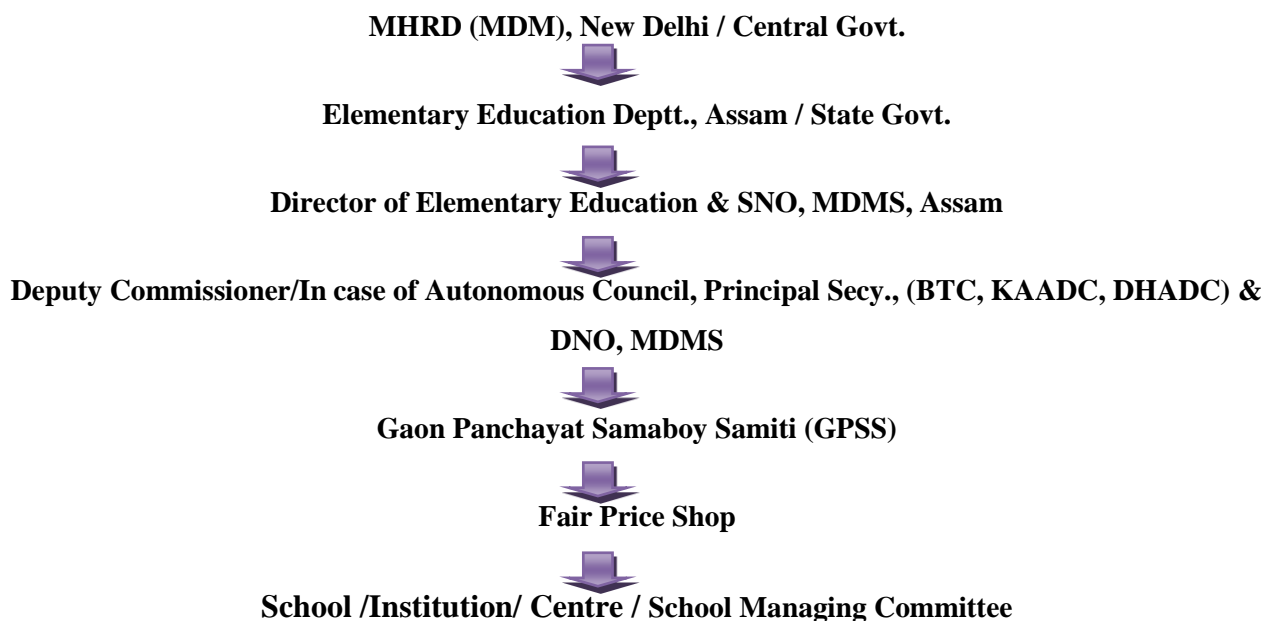
Stage	Name of the Post	Number of posts
State Level	State Coordinator	One
	Consultant	Four (One each for Planning, Monitoring & Evaluation, Finance, Nutrition and MIS)
	Operators	Already engaged
District level	District Coordinator	One for each District
	Data Entry Operators	One for each District
Block level	Block Coordinator	One for each block
	Data Entry Operator	One for each block

[Indicative structure: Can be modified on the basis of availability of MME funds]

The above posts may be filled up on deputation/contractual basis and the expenditure may be debited to funds allocated under MME component of the scheme. For effective monitoring of the scheme, the Consultants at State level and Coordinators at District level should possess MBA degree and he may be engaged on the consultancy fee. It is relevant to mention that the Government of India provides cent percent Central assistance @ of 1.8% of total admissible Central assistance of four components of the scheme viz. i) food grain cost, ii) cooking cost, iii) transportation assistance and iv) honorarium to cook cum helpers under MME component of the scheme.

4.1.3. Implementation of the scheme with reference to availability of food grains, regularity in serving MDM as per approved norms.

The existing system of food grains flow in the State is as follows:



Food grains allocation is made district wise by the SNO, MDM at State level and break up of district wise allocation of food grains is communicated to the DNOs, MDM and FCI authority. At District level, Deputy Commissioner is the Nodal Officer of MDM Scheme. The GPSS lifts rice from FCI and delivers the same to the schools directly or through their agencies.

The food grain flow from State to Districts for FY 2012-13 is shown in the following table:

Components	Date of food grains received by the State from GOI	Date of food grains release by State to Districts	Gap(No of days) between food grains receiving and releasing	Reason for delay if any
Food grains	16/02/2013	27/2/2013	11 days	-
		09/04/2013		
	27/08/2013	02/09/2013	5 days	

It is evident from the above table that the State received the food grains from GoI for 1st and 2nd quarter of 2013-14 on 16th February, 2013. The State has further released the same to Districts in two instalments i.e. for the 1st quarter on 27th February, 2013 and for 2nd quarter on 9th April, 2013. A gap of 11 days has been observed. Similarly the State has received the final instalment from GoI on 27th August, 2013 and further released the same to Districts on 2nd November, 2013. A negligible gap of 5 days has been observed.

The food grain flow details from for both the districts are shown in the following table:

S.No	Districts	Date of food grainss released by the State to District	Date of food grainss released by the District to Block	Gap of (No. Of Days) between food grains receiving and releasing	Reason for delay if any
1	2	4	5	6	7
1	Nagaon	27.02.2013, 25.05.2013	06.03.2013, 13.06.2013	8 days 18 days	official process
2	Kamrup	09.04.2013, 15.06.2013	22.04.2013, 13.05.2013, 13.06.2013, 12.08.2013	13 days	official process

It is evident from the above table that a delay of 8 days and 18 days has been observed in release of food grains from District to block level for the 1st quarter and 2nd quarter respectively in case of Nagaon. In Kamrup a delay of 13 days has been observed.

Field Observation: It has been observed by the JRM team that in most of the visited schools record of stock of food grains was maintained by the Head Master but the same was not upto to the mark in some of the schools. In Kamrup District most of the schools were getting regular supply of food grains and one month buffer stocks of food grains was also available. In some of the schools it was observed that food grains was stored in Head Master room or in class room.

Due to irregularity in supply of the food grains in Nagaon, a continuous disruption in serving of meals was observed in most of the visited schools. Disruption was mainly observed till the month of August, 2013.

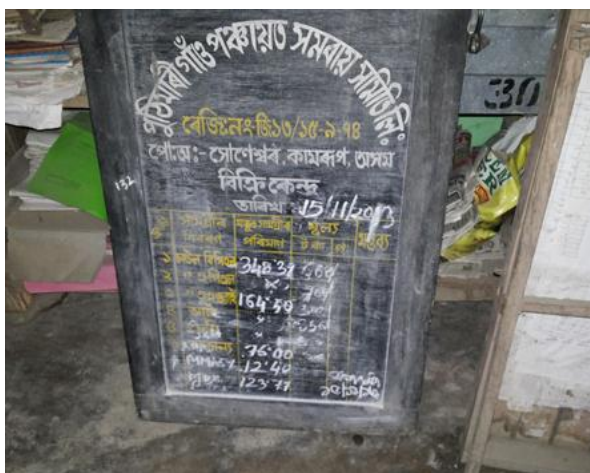
However, from September, 2013 onwards there was drastic improvement in the situation due to new initiatives taken by the District authorities of Nagaon. The JRM team appreciated the newly

developed SMS based monitoring system introduced in Nagaon in which Head Master has to send a SMS to a fixed mobile no. regarding number of children availing MDM on the particular day and whether the quality was good or not.

Delivery of food grain to school doorstep:

Observation: As per MDM Guideline, food grains should be supplied at the door steps of the schools. The JRM team inquired about the delivery of the food grains to the school doorstep. It has been found that in most of the visited schools in Nagaon District the school authorities had to lift the food grains from nearest godown. It was also informed that the expenses incurred for the same was borne by the school authorities. The team recommends that the food grains should be delivered at the school doorstep and the expenses have to be borne from the Transportation Assistance head as per the existing MDM guidelines.

In Kamrup District, the situation was much better as in most of the schools the food grains was delivered to the school doorstep except a few schools wherein the school authorities were lifting it from nearest godown and the funds were reimbursed later on.



The team also visited one of the **godown of Gram Panchayat Samabai Samiti (GPSS)** in Puthimari Gaon Panchayat, Sonaswar in District Kamrup. As per the interaction, it was informed that GPSS lifts the rice from FCI godown on the basis of allocation made by District office. There were 42 agents who lift the food grains from GPSS godown and deliver it to schools on the basis of school-wise

allocation as informed by the District authorities. The current stock availability was displayed on the notice board inside the office. The necessary records depicting the quantity lifted from the FCI godown was not available during the time of visit. However the records of the quantity lifted by the agents for the specific schools along with the signature of agents were maintained. It was noteworthy that the sample of the food grains was not maintained in the godown. It was also observed that the storage of food grain was not satisfactory. Gunny bags were kept on the floor and leakage was observed in most of the gunny bags. The same resulted into less quantity of food grain in the gunny bags.



Regularity in serving MDM

The team inspected the MDM attendance record of past one year. Continuous disruption was observed in serving of meals in most of the schools of Nagaon District. The major reason behind the same was mismatch in availability of food grains and cooking cost.

The image shows a handwritten ledger with multiple columns. The columns appear to contain dates (e.g., ২৭/৪/১৬, ২৮/৪/১৬), numerical values, and possibly school identifiers. The text is written in Assamese script. A prominent diagonal red line is drawn across the page, separating the left and right sides. There are various handwritten notes and calculations in red ink, including a large calculation on the right side that reads:

$$\frac{200 \times 200}{200} = 200$$

Other notes include "২০০০" and "৬৪০০০". The ledger is filled with data points, likely related to the Mid Day Meal Scheme's financial or operational records.

However, the situation was much better in case of Kamrup District where most of the schools were serving meal on regular basis except some of the schools where meals were not served during the examination/ evaluation days however it was clearly mentioned in the MDM calendar that the meals are to be served on evaluation days also.

The team also interacted with the members of SMCs. The SMC members also reported that the delay in supply of food grains and cooking cost was the major reason for disruption of MDM in Nagaon District. This is a great cause for concern. The said scenario is clear indication of lack of monitoring by the district/block officials. The team had a detailed discussion with District authorities regarding the reason behind irregularity in supply of food grains and cooking cost to the schools. It was informed that the food grains and cooking cost were released to the schools after collecting the utilization certificates which was a tedious and time taking process resulting into delay in releasing.

However, the situation improved drastically post August 2013, due to some technological interventions made by the District Authorities of Nagaon. One of the interventions was use SMS based monitoring of the scheme. Through this system, the school teachers have to send SMS in a pre-defined simple format showing attendance of children and quality of mid-day meal served, to a particular phone number. The same centrally captured in a server. The system automatically deducts the amount of cooking cost and rice used for the particular day from the existing stock details and shows the stock balance of rice as well as the fund balance. This system effectively ensures regularity of service and prevention of misappropriation of fund and rice. As the system shows, the daily balance of both fund /rice stock, it will be possible to replenish the stock of rice and fund as per their need if it falls below a particular reserve level.

4.4 Role of teachers

Teachers' Engagement: The involvement of teachers plays important role in overall implementation process of the MDM scheme at school level.

- It was observed that most of Head Teachers manage the both financial and logistic aspects of MDM with help of President of SMCs at school level. In two schools, the Head Teachers gave the overall charge of MDM to an Assistant Teacher.
- The role of teachers are impressive in some schools where there are instances of teachers' spending money from their own pocket in buying food commodities in times of shortage of food supply from the government. It was found that the teachers taste the MDM before serving the children but keep no records. It was also found that the teachers have never taken the pain to counsel neither the students nor the parents on the value addition of the MDM. The teachers of the school based kitchens have been found to be accountable for implementation of the scheme in contrast to the schools supplied MDM by NGO wherein they were not maintaining the MDM attendance record properly. It was found that the parents of children seldom visit the site of kitchen of the NGOs to inspect the quantity and quality of the meal to be served to the students.
- At the same time, majority of Assistant Teachers are either not aware about financial aspects of it or they were not allowed to involve in the process. In MahendraBaruah High School, Head Teacher informed that in her absence of one month, one Assistant Teacher was in-charge of MDM activities and food was also served during that month. But the Assistant Teacher

denied that during her tenure, MDM was not served, because there was no cash to procure ingredients like *lentils* and vegetables. This kind of contradictory information creates scope of doubts of miss-management MDM funds and resources.

- The teachers appealed to increase the MDM fund as the market price of ingredients like *lentils* and vegetables are very high and to improve the quality of food grains, so that serving of quality food and enough food can be ensured to every child.
- The teachers also stated that there is need of policy decision to provide financial supports for improving infra-structural facilities, especially for arrangement of proper feeding place of the children.

Students' Participation:

A focussed group discussion was held with students (girls and boys) from different classes to check on quantity, quality and appropriateness of the food served during the MDM. The issue of hand washing with soap before MDM and overall hygiene aspect were also discussed. Following are some of the summary points:

- The students of lower classes, especially students of classes I to III expressed their joy towards the foods of MDM. They said that they like the Wednesday, because egg is served on this day.
- Few students said that sometimes they do not like to eat the *lentil daal* preparation, because the cooks put lots of water into it.



There was an overall awareness about hand washing with soap before eating, but the practice greatly varied from school to school and child to child depending upon the availability of soap, functional WASH facility and habit formation. It was observed that schools with mass hand washing facility installed, the practice of hand washing was found being followed by all students, as it was convenient and all children could wash hands in less time.

4.5 Convergence with School Health Programme (SHP) for supplementation of micronutrients and health check-ups and supply of spectacles to children suffering from refractive errors

The MDMS guidelines envisage that necessary interventions like regular health Check-ups, provision for de-worming tablets and supplementation of micronutrients like Vitamin ‘A’ dosage and IFA tablets are to be provided in convergence with the National Rural Health

Assam: Joint Review Mission on Mid Day Meal Scheme

Mission (NRHM) of Ministry of Health & Family Welfare. As per the information given by the state the status of School Health Program as on 30th September, 2013 is as follows:

Health Check-up carried out		Distribution of Iron Folic Acid Tablets		Distribution of De-worming Tablets		Visually Impaired		Weight Measurement		Measurement of Height	
No. of Schools/Centres	No. of Children	No. of Schools /Centres	No. of Children	No. of Schools /Centres	No. of Children	No. of Children with refractive error	No. of Children received spectacles	No. of Schools	No. of Children	No. of Schools	No. of Children
--	--	2512	407218	2512	407218	--	--	--	--	--	--

As per the information given by the state no health checkup has been carried out in the said period. However the distribution of micronutrient tablets has been started though in quite a less number of schools.

OBSERVATION:

JRM team has found that there is an urgent need to strengthen the convergence with NRHM for the effective implementation of School Health Program especially in Nagaon district. Essential micronutrients were not provided in 50% of the visited schools in Nagaon district and 54% in Kamrup district. Health cards are provided in most of the visited school in both the districts.



It was also found that health check-up was done in most of the schools as reported by the HM, though the same was not indicated on the health cards in a large number of schools. It was also observed that the spectacles were provided in only few schools in both the Districts. It was also observed that the height and weight measurement tools were available in most of the schools in the both the Districts.

4.6 Creation of capital assets through kitchen cum store/kitchen devices and other infrastructure

As per the Central Govt. norms adequate infrastructural facilities like Kitchen-cum-Store, water supply for drinking, cooking and washing utensils; cooking devices/utensils; and containers for storage of food grains and other ingredients are to be provided to schools for serving cooked meal to the students.

Kitchen-cum-stores:

Central assistance has been released to the State for construction of 56795 kitchen-cum-stores. The State has constructed kitchen-cum-stores in 38711 (68%) schools. The construction work is in progress in 7648 (13%) schools. However, the construction in 10436 (18%) schools is yet to start. Kamrup district has been sanctioned 2730 **kitchen-cum-stores** out of which construction has been completed in 2370 (87%) schools and construction in 58 schools is yet to start.

Similarly, Nagaon district was sanctioned 3540 kitchen-cum-stores out of which construction has been completed in 2648 (75%) schools and the construction in 241 schools is yet to start.

Observation

The JRM observed that in 10 out of 48 visited schools (21%) kitchen sheds were not available. In Kamrup, 4 out of 28 schools were not having pucca kitchen sheds whereas in Nagaon 6 out of 20(30%) schools were without kitchen sheds. Cooking is being done in some temporary arrangements in these schools.



However it was observed that some of the kitchens were not having proper ventilation facilities leading to smoke.

Kitchen Devices:



Central assistance has been released to the State for procurement of **kitchen devices** for 62267 schools. Out of these, the State has procured kitchen devices for 17666 (28%) schools only. In Kamrup District the kitchen devices have been procured for 3331 schools (97%) out of 3428, whereas in Nagaon the same have been procured for 3591 (84%) schools out of 4267

sanctioned. It was also informed that an amount of Rs. 663.85 lakh received from GoI during 2010-11 for procurement of kitchen devices was not utilized due to High Court cases and an amount of Rs. 1566.20 lakh received during 2011-12 was not utilized due to pending decision on previous year's court cases.

Observation: It was observed that kitchen devices for cooking were available in almost all the visited schools in both the districts except 2 schools namely Dijubasti Centre No. 118 and Baroli Goan M V in Nagaon where the same were insufficient.



Serving plates were not available in 34 (71%) out of 48 visited schools where children brought the plates from their home.

Availability of other infrastructure facilities

- **Mode of cooking:** In both the districts, all the school were using firewood as fuel for cooking Mid day Meal. There was a lot of smoke due to these chullahs which is quite hazardous for the health of cooks and also leads to thick blackening of walls making the kitchen sight unpleasant.



Moreover, it was also observed that there was lack of proper ventilation in most of the visited kitchens. Not even a single school kitchen was found with LPG based cooking.

- **Drinking water facilities:** It was found that the drinking water facility was available in most of the schools. Source of drinking water in most of the visited schools is hand pump only.

In some of the cases visited, water was brought from a common drinking water source in the school, sometimes at a distant



location nearby a toilet. This has a potential to contaminate drinking and cooking water and needs to be addressed.

However, it was observed that in some of the schools multi pint taps were installed in the schools under the WASH programme which is a combined initiative of the State Government and UNICEF. The mission appreciated the concept and it is recommended that the similar concept should be incorporated in other schools also. JRM Team also suggests the testing of water quality where the source of water is hand Pump.

Installation of Mass Hand washing with Soap Facility

During interaction with students, it was evident in all the schools that there is high awareness level pertaining to practice of hand washing with soap before eating and after defecation. However, the practice greatly varied across all schools depending upon availability of soap, functional WASH facilities as well as involvement of teachers, SMC members and Mothers' Group members in reinforcing and observing the practice.

Mass handwashing with soap facility was observed in three elementary schools (AzaraKeotpara, Dahali, Palashbari), visited in Rampur Block, wherein mass handwashing with soap was found to be carried out by all the students within about 10-12 minutes in an effective manner. This was demonstrated as a part of partnership of SSA, UNICEF, CEE and respective schools. There is a potential of augmentation of handwashing facility to accommodate mass handwashing by investing a sum of Rs. 8,000 – Rs. 12,000/unit from the MDM untied funds and/or annual school maintenance grant (Rs. 10,000/year) provided by SSA to the SMC. The details are given in a box below.

A cross learning was also carried out during the JRM visit wherein headmaster, teacher and mothers group of Khokjhar LP School (Rampur Block) were taken to a nearby Palashbari town balika LP school (Rampur Block). The simple installation details and its benefits were explained by the head master to the visiting members. The group of Khokjhar LP school agreed to have a similar installation for which technical inputs will be provided by Palashbari LP school.

Water, Sanitation and Hygiene (WASH) in Schools:

WASH is one of the key components of the Right of Children to Free and Compulsory Education (RTE) Act, 2009. In addition to providing academic guidelines, RTE mandates good school infrastructure including the three most crucial components viz. (a) availability of safe drinking water, (b) good quality functional toilets for girls and boys, and (c) handwashing.

Functional WASH infrastructure enables children to internalize related behaviours and influence their families and communities to adopt hygiene practices. This ensures that WASH is not limited to the school environment, but also influences key practices in the community at large.

There is consistent evidence that handwashing with soap at critical times – including before eating or preparing food and after using the toilet -- can reduce diarrheal risk by about 45 per cent. Diseases such as diarrhoea, intestinal worms and respiratory infections lead to school absenteeism, increased drop-out rates and impact on children's physical and cognitive development as well as education attainment.

Addressing Handwashing with Soap

Recognising the importance of handwashing with soap in schools, in September 2012, the Commissioner & Secretary, Elementary Education, Govt. of Assam, issued a directive to all schools to use the untied funds under the Mid-Day Meal (MDM) scheme for the provision of soap. This has led to institutionalizing the practice of handwashing with soap by all children before eating and after using the toilet.

Mass Handwashing with Soap before MDM

To strengthen the practice of handwashing with soap before the Mid-Day Meal, from July 2013, SSA, UNICEF and CEE are jointly piloting a 13-month long Mass Handwashing with Soap (DHaaL) initiative in 100 schools of Rani and Rampur Blocks of Kamrup District in Assam.

Key Components

1. Augmenting handwashing facilities in 100 schools based on the principle of simple, scalable and sustainable models
2. Training and capacity-building of teachers, SMCs, Student Councils, Mothers' Group and MDM Cooks focusing on behavior change pertaining to WASH practices including handwashing.
3. Ensuring availability of soap for handwashing through ongoing government programmes.



Photographs of Mass Handwashing with soap facilities in Child Friendly Schools and Systems (CFSS) being piloted in 100 schools of Rampur and Rani Block of Kamrup (Rural) District, Assam.

L: Hazuripara LP School; R :Palashbari LP School

- **Toilet facilities:** As per the data provided by the State Government toilet facilities available in 77% of the schools. As per the observations of the JRM team the toilet facilities were available in almost all the schools. It was however observed that in 8 out of 48 schools there was a common toilet for boys and girls. The team appreciated the cleanliness and maintenance of toilets in quite a large number of schools which was as a result of WASH programme.
- **Fire extinguishers** were available in almost all the schools. However it was observed that in a large number of schools the expiry date was over.

4.7 Appointment of cook cum helpers for preparation and serving of meals to the children

The cooks cum helpers are very much instrumental in the overall execution of the daily MDM activities at school level. They are responsible for overall quality and hygiene of the food prepared.

As per PAB Approval 2012-13, the no. of cook cum helpers approved for the state were 124184. As per the information given by the State, the no. of cook cum helper engaged as on 30th June, 13 are 115529 (93%).

Status of cook-cum-helpers (State Level)

Total No of cooks engaged	Category of cooks				Total
	SC	ST	OBC	Others	
Male	1514	2685	2861	4695	11755
Female	10866	20118	30388	42402	103774
Total	12380	22803	33249	47097	115529

It is revealed from the above table that nearly 90% of the engaged cook cum helpers are females out of which 59% belong to SC/ST/OBC category.

District wise details of engagement of cook cum helpers is shown in the following table:-

Status of Cook-cum-Helpers

Name of the District	Total No of cook-cum-helpers engaged	Category of cook-cum-helpers			
		SC	ST	OBC	Others
Nagaon	8940	1484	670	1386	5300
Kamrup	5479	245	857	896	3381

As per GoI Guideline the norms for engagement of Cooks cum Helpers are as follows:-

Sl No	Enrolment	No. of Cook-cum-Helpers eligible
1	School having 1 - 25 Students	1
2	Above 26 – 100 Students	2
3	Every addition of upto 100 students	1 Additional

Observation:

- It was observed that in 14 out of 48 visited schools, i.e 29.16 % schools, less number of Cook-cum-helpers(CCH) have been engaged than the required number as per norms. In Kamrup 36% schools had engaged less no. of CCH whereas in Nagaon 10%.



- In 12 out of 28 visited schools in Kamrup, there was a delay in payment of honorarium to cook cum helper as they were paid up to March, 13 and in some cases even December, 2012. However in Nagaon, in most of the schools the honorarium was paid till the month of August, 2013. It was observed that there was a huge delay in payment of honorarium to CCH which was more than 6 months in some of the cases.
- However, in most of the school it was observed that there was delay in payment of the State share of Rs. 100/month, which is paid as an arrears.
- It is found that one among 2-4 cooks of a school has attended the training on how to improve food quality and ensure better hygiene in cooking foods, kitchen and cleaning area.

Capacity building of cooks:

Two training programmes have been recently conducted in the State of Assam for cook-cum-helpers.

1. 120 Cook-cum-helpers (40 each from 3 districts namely Nalbari, Nagaon, Dhemaji) have been trained from 7th-9th November, 2013 by the AkshayPatra Foundation. The training was provided on:
 - (a) Personal Hygiene

- (b) Sourcing of ingredients, and pre-processing
 - (c) Storage and Handling of food
 - (d) Cooking and Serving of food
 - (e) Safety and Hygiene of food
 - (f) Quality check of cooked food – sensory evaluation
 - (g) Hazard, Risk & Vulnerability Awareness
 - (h) Planning for enhancing quality of MDM
 - (i) Awareness about the basic steps in case of any medical emergency.
2. 30 Cook-cum-helpers (5 each from 6 districts) have recently (in the month of November, 2013) been trained by Institute of Hotel Management, Guwahati. All the training cost was borne by Ministry of Tourism.
 3. As per the information provided by the State Government, a training programme was also held in the year 2011-12 with help of faculty of DIETs in which a large number of CCH from all the Districts were trained

4.8 Review of the status of Awareness about Mid- Day Meal Scheme.

Display of Weekly Menu, logo & Entitlements

Display of MDM logo, weekly menu and entitlements of children on prominent place in school is mandatory to generate awareness among the community. It was observed that the MDM logo was available in most of the schools in Kamrup district whereas the same was not displayed in almost all the schools of Nagaon. Weekly menu of cooked food was printed on the calendar in almost all the schools. It is however recommended that the same should be painted on a prominent place in the school. Information regarding entitlements of the children to be covered under MDMS was not displayed in any of the schools.

It is recommended that Logo should be painted as per the guidelines. The detailed guideline regarding the design and other specifications is available on the website www.mdm.nic.in. It is also recommended that for creating awareness among stakeholders and ensuring transparency, information regarding entitlements must be displayed prominently.

Calendar

Department of Elementary Education
Mid Day Meal Scheme
Calendar 2013-14

JULY 2013

SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

AUGUST 2013

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

SEPTEMBER 2013

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

HOLIDAY LIST

MONTH	DATE & DAY	OCCASION
JULY		SUMMER VACATION
AUGUST	9	ID-UL-FITR
	15	INDEPENDENCE DAY
	28	JANMASTOMI
SEPT	7	TITHI OF SRIMANTA SANKARDEV

MENU

MON	RICE DAL SHAJI
TUE	KHOSI (SOYA, SHAJI)
WED	RICE EGG CURRY / LOCAL OPTION
THU	RICE DAL MAHES
FRI	RICE DAL LEAFY VEG
SAT	KHOSI / PULAO / LOCAL OPTION

● THE MID DAY MEAL SCHEME IS AN EFFORT TO DRIVE OUT HUNGER FROM CLASS ROOM

Published by Elementary Education Department, Assam

A Mid Day Meal calendar has been printed and distributed to all the schools in the State. The Calendar depicts MDM menu, working days and other vital information related to the scheme.

Hoardings



Hoardings have been displayed in the entire District and block offices at the prominent places depicting the major guidelines about MDM, entitlement of children, coverage of institutions under the scheme, involvement of various stakeholders.

JRM team has appreciated the state's efforts in this regard. However, the team feels that these efforts will be strengthened by running an awareness drive at the level of grass root stakeholders i.e. parents, children, teachers, & SHG members regarding their role under the scheme and the entitlements of children. The entitlements of children and MDM logo as per the specifications given in the guidelines must be displayed at the prominent places in school.

There is a need to create more awareness regarding the Contingency/Medical health plans for any occurrence of untoward incident at school level. The team recommends that the number of ambulance helpline may also be painted prominently in all the schools. Also in accordance with

the instructions issued by the State Govt. mentioned above the contact numbers of PHC/ Community Health Centres should be made available to the school authorities.

It is also recommended that November may be observed as MDM month to see the preparedness and availability of food grains & funds at various levels. The State may use the two films on MDM prepared by Ministry of HRD as a part of the strategy for creating awareness.

4.9 Review of the maintenance of records at the level of schools /cooking agency

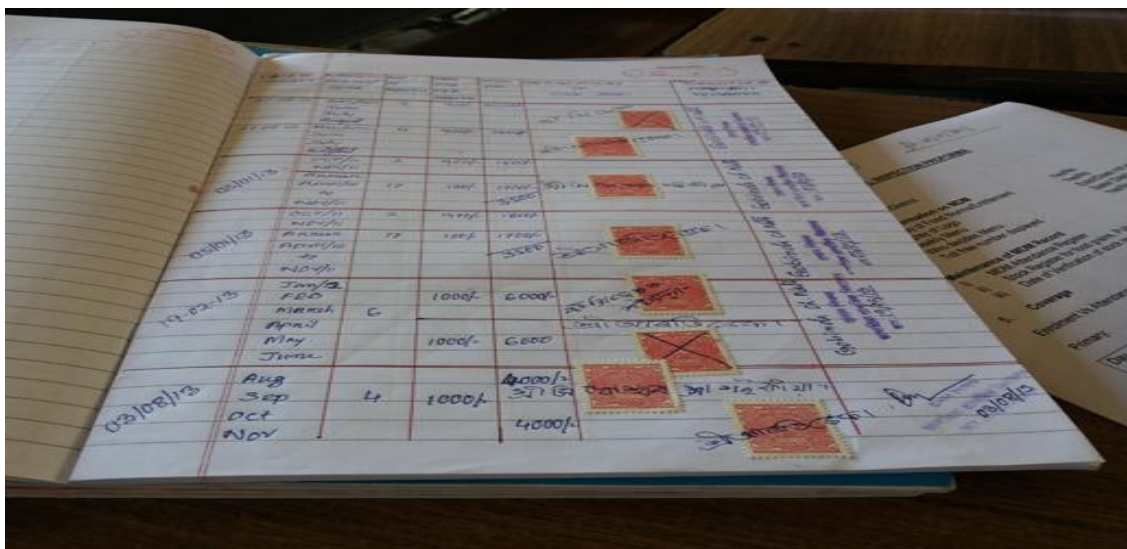
The team during its visits to the schools located in two districts checked various records related to MDM. It was observed that most of the records like attendance register (children availing meals), stock register of food grains, cash book, bank pass book, SMC formation/proceeding register, register for recording honorarium to cook-cum-helpers etc. were available in most of the schools. They were retaining the vouchers for the purchase of ingredients from the local shops.

In Sonaswar LP School, Kamalpur Block, Kamrup district the attendance on the day of the visit was 37 and rest of the month it was showing 49 which seems to be unfair. The inspectors/CRCC/BRCC did not check this kindly of record during their visit.

RECEIPT		EXPENDITURE	
Date & Month	Sanction Order No. & Date	Bank Draft/DOA/ Bankers Cheque No. & Date	Amount
1/10/13			13628.42
2/10/13			12407.61
3/10/13			12427.71
4/10/13			12394.81
5/10/13			12561.69
6/10/13			12235.57
7/10/13			11922.34
8/10/13			11637.11
9/10/13			11467.88
10/10/13			11159.98
11/10/13			10925.83
12/10/13			10661.48
13/10/13			10397.13
14/10/13			10129.67
15/10/13			9868.43
16/10/13			9604.08
17/10/13			9342.84
18/10/13			9075.38

Fund available Rs. 13628.42
 Expenditure Rs. 4553.04
 Signature Instructor: _____
 Signature Headmaster: _____

However, it was observed that food tasting register was not being maintained in most of the schools in both the Districts. It was observed that in some of the schools, the register depicting the utilization of food grains, cooking cost was not updated on daily basis.



4.10 Payment of cost of food grain to FCI

As per guidelines issued by the MHRD, GOI, timely payment of cost of lifted food grains has to be made to FCI. The status of payment of food grains to FCI for the FY 2012-13 is shown below:

Status of payment of cost of food grains to FCI:

	Year	Total (Rs. in crores)
Bills raised	2010-11	50.40
	2011-12	57.28
	2012-13	54.62
	2013-14	18.66
	Total	180.96
Bills Paid	2010-11	49.27
	2011-12	55.40
	2012-13	44.75
	2013-14	2.05
	Total	151.47
Outstanding	2010-11	1.13
	2011-12	1.88
	2012-13	9.88
	2013-14	16.61
	Total	29.50

The above table depicts that the FCI raised the bills for Rs. 180.96 crores starting from FY 2010-11 to 2013-14 against which the State Government has paid an amount of Rs. 151.47crores. It is evident that the State Government has paid 84% of the bills raised by FCI. It is also evident that

there is pendency of bill payment for the years 2010-11, 2011-12 and 2013-14. The bills for Rs. 29.50 crores are still pending. It is recommended that the pending bills of FCI should be paid as early as possible.

4.11 Review the Involvement of NGOs in Implementation of the Scheme

The team visited one of the NGO based centralized kitchen catering to the schools in Kamrup (Metro) and Kamrup (Rural). As per the information provided by the NGO, 50% of the expenditure on the meals is borne by the NGO. In Assam its operation started from 19th February 2010 at Kamrup Metro and Kamrup Rural districts in 590 number of Govt. schools and presently feeding 48,445 children. The NGO has provided eating plates to all the schools served by their kitchen.

The NGO starts cooking at 5 a.m. in the morning and distributes the MDM by 11.30 a.m. to all schools with 28 vehicles. There are 800 cooks are engaged by the NGO for preparation of MDM. During the visit, good quality food materials were found with all the major ingredients Agmark certified.



The team also visited some of the schools and interacted with the children of the schools served by NGO. It was informed that though the meals are served regularly, some of the children were not satisfied with the taste of the food served to them. The effect of the same was also visible in the schools as the no. of children availing meals was quite less. Few students also mentioned that the food was monotonous, sometimes it does not remain warm (esp. in remote schools). However, children expressed their liking for Pulao (provided on Wednesday as a substitute of egg) and Kheer (on Saturday). The team feels that the menu and the recipe of the food prepared by the

NGO should be revisited and improved as per the local taste. Quality of raw materials more specifically quantity of vegetables should be carefully monitored before preparation. The team sought the inspection records of the District/Block level officers inspecting the kitchen, it was however informed by the NGO authorities that inspite of several requests, no remarks are offered by them. Since the operations are being run in PPP mode, there should active participation from both Government officials as well as community.

It was also observed that there is lack of proper composting system for the waste materials. But in this regards, NGO officers said that, they are trying to modify the waste management system as soon as possible.

Food menu of Akshay Patra (NGO) is as follows:-

1. Rice, Dal or curry & vegetable
2. Once a week Kichidi and Kheer
3. Pulav and Desichanna/Kabuli Channasabji is provided once a week
4. As a value addition chakli and pickle is provided by Akshaypatra

The team also visited one of the NCLP schools namely Sadou Assam Gramya Puthibhoral Sanstha in Koliabar block in Nagaon district, the NGO supplied food grains, other necessary cooking ingredients and honorarium to cook-cum-helpers to the school. Interruption was found in the supply of food grains. It was informed that the teacher had to pay from his own pocket in order to avoid disruption is serving the meals.

4.12 Involvement of the community in implementation of the MDMS program

During school visits, the team members of Joint Review Mission interacted with teachers, students, parents, mothers, SMC members, community people and cooks cum helpers and on the basis of the gathered facts and information, the report is structured.

The involvement of guardians and parents is really discouraging in some of the schools as they don't have the time neither to devote to the parents meetings nor have the time to monitor and taste the MDM. It was found that there is average involvement of community people in the implementation of the MDM. They are not aware of the norms of MDM due to which they visit the schools very rarely. Whereas the community people in some schools are initiating steps to set

up kitchen gardens and maintaining the MDM service a regular phenomenon. Matriguts (Mother group) are active in participating in the implementation of MDM in daily basis. Further, mother groups also help in serving the cooked food to the children. Two to three members of Matriguts make their presence regularly in the school where they assist the cooks and ensure cleanliness of the environment. The Matriguts of the schools which are supplied MDM by NGOs are not monitoring the quality and aspects as they are relying on them (NGOs) and confident of good service of the same.

Involvement of School Management Committees (SMCs): The school management committees play a significant role in the proper implementation of MDM and guide in improving the educational environment of the school. As per the norms of RTE Act, 2009, the SMC of each school has to monitor the proper utilization of the grants including Mid Day Meal fund received from the appropriate government or local authority or any other source; perform such functions as they are and act like bridge the gap between the school, community and block/district authorities by representing the school at various platforms. The team analyzed the role of SMCs in implementation of the scheme. 48 schools were reviewed in the districts of Nagaon and Kamrup. During school visits, from the interactions held with SMC members and community people, it was found that:

Most of the schools visited had active SMC members, who participated in monitoring of the quality of MDM. However, the engagement was found to be of varying degrees depending upon the involvement and ownership by the SMC members. It was also observed that SMCs were not formally oriented on their roles and responsibilities in monitoring MDM scheme including checking of quality of grains, condition of MDM kitchen sheds and WASH facilities, hygiene practices adopted by MDM cooks during cooking and by students before eating. As a result the SMC members were not aware of the norms of MDM and selection criteria of NGOs for MDM implementation by the government.

In some of the schools it was observed that SMC meetings were held irregularly. In some schools it was observed that in a period of one and half years, only two to three issues of MDM were raised in SMC meetings. Major issues raised were: stealing of cooking utensils of MDM kitchen, opening separate/new bank accounts for MDM, fund and food grains utilization and management.

In Dhapaguri Kaloni Basti Junior Basic School of Batadraba block, the Head Master cum Member Secretary of SMC, with prior approval from SMC generated funds by selling cotton produced from Simal plants of the school campus. These funds were used to procure serving dishes for the MDM food. This initiative of the Head Master and the SMC of the school is really appreciable.

- The SMC of 143 No. Naam Dumdumia LP School of Batadraba block took a bold step by deciding not to cook or use around 211 kg rice, which were no more in edible condition due to storage for long time and could not be cooked/served to children, as there was no cash for procuring ingredients, *lentil daal* and vegetables during the month of Nov-Dec 2012. So, SMC decided to dispose that amount of rice. The authorities associated with MDM scheme, may be awaked from this type of experience that the improper fund releasing system of MDM can cause loss or waste of both resources and funds.
- In 143 No. NaamDumdumia LP School of Batadraba block, the SMC conducted audit of MDM fund for the year of 2012-2013 through SMC meeting, get it approved and submitted to the respective authority.
- SMC members and community members are not aware how to follow up with block and district level authorities if any issue occurred related to MDM, for example, issues like non-receipt of cash or food grain for long time.
- In a few schools it is reported that SMC meeting is held only when financial support comes to the school.
- There is lack of transparency in utilizing the cash received against procuring cooking ingredients and vegetables. In most of the schools, the Head Teacher, President of SMC and one or two members of Mothers' Group are found to engage in the procuring process. A school based mechanism to utilize the cash amount should be developed with proper guidelines from higher authorities.

Involvement of Mothers' Group (MG): Mothers are recognized as primary care-givers for children, accountable and responsible to the school through the formation of *Matri Guts* (Mothers' Group) at the school level. The *Matri Guts* present in the schools have been involving directly not only with the classroom teaching-learning process, but also with the administrative and management aspects of various flagship programmes of the school.

- In general all the schools visited found to have an active and functional Mothers' Groups. They undertake activities like: cleaning of classroom and school campus, purchase of MDM, helping cooks of MDM in cooking, cleaning of feeding place, distribution of foods and drinking water and cleaning of serving dishes and place after feeding. Furthermore, they ensure and monitor hygienic behaviours among children especially availability of soap, practice of hand washing among children and cleaning of serving dishes before taking food. In one of the visited school it was observed that the Matri Gut even maintained a nutrition garden in the school campus which is appreciable.
- However, it was also observed that Mothers' group have not received any formal orientation on MDM scheme and their roles and responsibilities. The engagement of Mothers' group was found to be voluntary and the engagement was dependent to the interest of the respective mothers' group.

Involvement of Parents-Guardians: Parental involvement can be of four types: parents as educators, parents as partners, parents as decision-makers and parents as care takers. The RTE Act envisions parents to get involved as all four mentioned roles with an objective to make teachers more accountable for better health and better learning outcomes of students. If parents become actively involved in school, then they would also be encouraged to get involved as educators, partners, decision makers and care takers. During interaction with few of parent and guardian members of schools, it is found that:

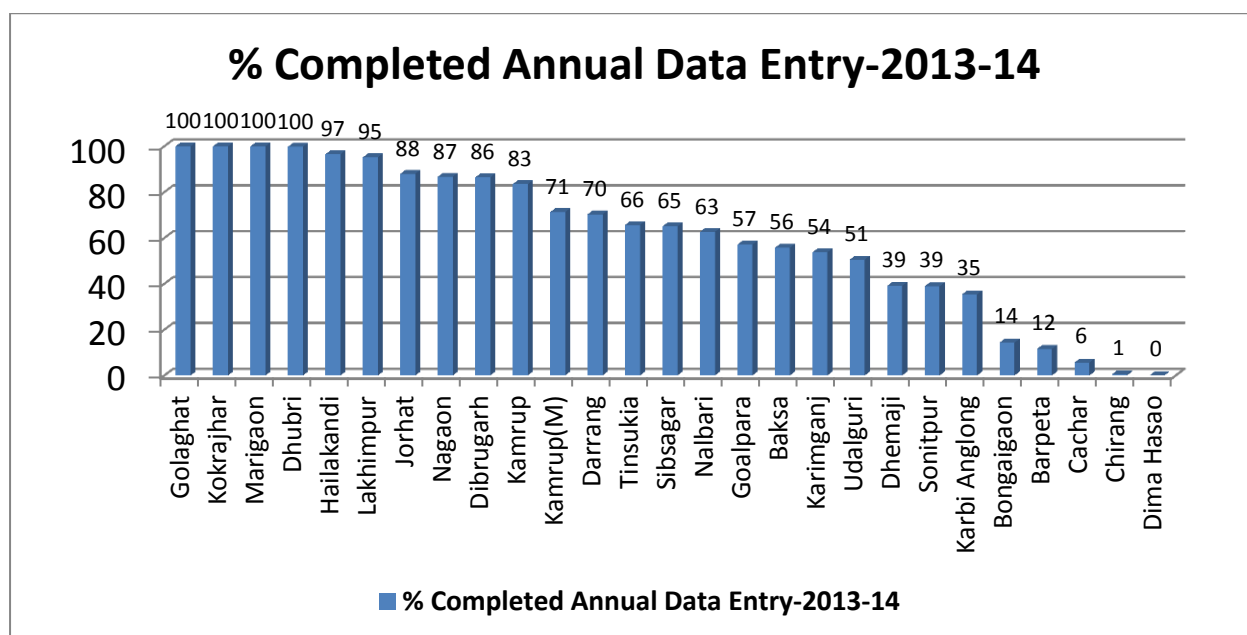
- Parents play an important role in day to day functioning of school, quality of education and MDM, however, only about five out of 25 schools visited in Kamrup (R) and Nagaon Districts found to have active engagement of parents, except the ones representing the mothers' group and SMCs.

- During interaction with few parents on why some children do not eat MDM at school, some of the reasons cited were: (1) the feeding place is not hygienic(2) food grain quality is below standard and (3) menu - taste of cooked food are not like home, so their children do not like to have MDM at schools

Few mothers (non-member of MG) also raised that they have never tasted the cooked food of MDM. In fact, they are not aware about the fact that they have the right to taste the food.

4.13 Management Information system

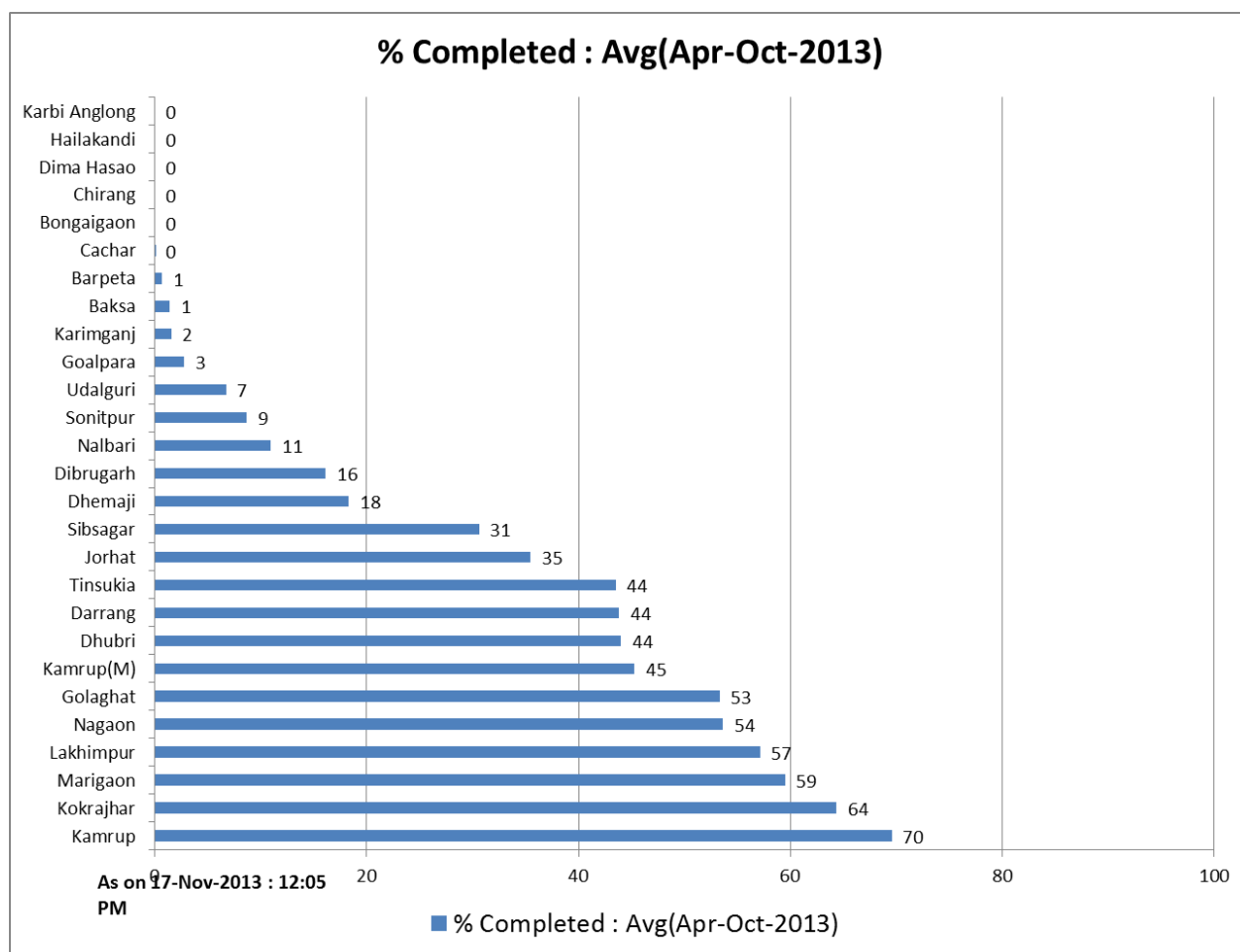
MIS is an important management tool for monitoring the implementation of the scheme. It is relevant to mention the Govt. of India had launched MDM-MIS portal in collaboration with NIC. In this connection various orientations as well as hands-on training sessions have been conducted at regular intervals. The State has completed Annual Data Entry for 99.9% of the schools in the financial year 2012-13. So far as Annual Data Entry for the financial year 2013-14 is concerned, the State has completed the same for only 64% of the schools. District wise data entry progress for the year 2013-14 is given below:-



In some of the districts like Dima Hasao, Chirang, Cachar, Barpeta, Bongaigaon, the annual data entry position for the FY 2013-14 is not satisfactory. The Annual Data Entry on the MIS system is

very important and the Govt. of Assam has to pay attention to complete 100% as early as possible.

As far as monthly data entry in concerned, the State has completed the same for 41% of the schools in the month of April, 2013 though the same has reduced to 38% in the month of May, 2013. During October, 2013 only 8% data entry has been completed. The monthly data entries have to be completed on 10th day of every successive month. The district wise data entry status has been given below:-



The above graph shows the average monthly data entered from April to October, 2013.

In Kamrup district, the average monthly data entry is 70%. However in Nagaon District the same has been completed only 54% of Schools. But districts viz. Karbi Anglong, Hailakandi, DimaHasao, Chirang, Bongaigaon and Cachar did not even start the monthly data entry for the year 2013-2014. The data entry position in these districts should be closely monitored and the same should be completed before submission of AWP&B 2014-15.

The team appreciated that the State has printed the formats for filling up the school annual and monthly data and the same were available in most of the schools.

4.14 Review of status of Safe storage/hygiene and proper supply of ingredients to schools.

The team checked the storage facility for food grains and other ingredients in the kitchen-cum-stores. It was observed that food grain was stored in gunny bags kept on wooden planks. However, in none of the schools, storage bins were available for the food grains.

As per the recent guidelines issued in respect of quality, safety and hygiene by the Government of India vide its letter 1-4/2013-Desk (MDM) dated 22nd July, 2013 to all States/UTs all the major ingredients i.e. cooking oil, spices other condiments should be of Agmark certified.

It was observed that almost all the schools were using packed oil and spices, however in a large number of schools the ingredients were not Agmark certified. It is noteworthy that the all the major ingredients were Agmark certified in the NGO based kitchen. It was also observed in a large number of schools, the ingredients were purchased on daily basis, hence it was difficult to ascertain the quality. Purchase in small quantity increases the cost of the food as well. However, storage of food items in MDM kitchens was a cause of concern.

It is recommended that the State Government should ensure strict compliance of the guidelines issued in this regard. The sufficient storage facilities/bins should be made available to the schools and also all the major ingredients including cooking oil should be Agmark certified.

4.15 Review of status of convening of Monitoring Committee under the Chairmanship of Member of Parliament.

The instructions were issued to the States/UTs vide letter referred to above to convene the meetings of the District level Vigilance and Monitoring Committee at least at the quarterly intervals under the chairmanship of the Member of Parliament of the district to review the Mid Day Meal Scheme. The minutes of meeting along with the Action taken Note should be circulated to all the members.

The State Government issued necessary instructions in this regard to all the Deputy Commissioners and DNOs of all the Districts vide its letter number EPM.47/2013/6 dated 23rd July 2013. It was however informed that though the same has been constituted, the meeting has been held in only one district i.e. Golaghat.

It is recommended that the meeting should be held at least quarterly in all the districts.

4.16 Review of the convening of regular review meetings at District level.

As per the information provided by the State Government, 54 meetings of district level steering cum monitoring committee have been held till September 2013 in all the districts. The State Government informed that the meeting are held once in each quarter in the District. The team was also informed that regular review meeting were held in both the visited districts i.e. Nagaon and Kamrup.

It was informed by the District authorities in Kamrup that a review meeting is held under the chairmanship of Deputy Collector specifically on the implementation of the MDM scheme each month. The team appreciated that discussion on various implementational aspects on MDMS like ensuring regularity in serving of meals, record keeping, ensuring safety and hygiene etc.

Further, it is reiterated that as per the guidelines issued on 22 July, 2013 such meetings should be held on a fixed date of each month in all the districts. The State Government should ensure that the meetings should be held regularly as per the prescribed schedule and minutes of the said meeting should also be shared with the State Government.

4.17 Review of the status of tasting of the meal by at least one teacher.

In pursuance to the guidelines dated 22nd July, 2013 issued by Govt. of India, the State Govt. has issued necessary instructions to the Deputy Commissioners & District Nodal Officers of all the Districts for tasting of the meals by a teacher before serving to the children and prescribed maintenance of register for recording this fact. State Govt, has also suggested that the same should be further strengthened by ensuring that one of the member from the SMC and Mother's Group should also taste the food on rotation basis.

Observation: The team observed that the tasting register was not being maintained in most of the schools. However, it was informed that the food is tasted by one of the teacher before serving the same to the children but they were not aware of maintaining the record for the same. The team observed that in some of the visited schools the mothers' roster was being maintained and remarks on the quality of food were also written by the members of Mother's Group.

4.18 Review of the status of testing of food samples by reputed institute

As per the guidelines issued on 22 July, 2013 by Govt. of India, it was suggested that the State Government may consider engaging CSIR institutes/National Accreditation board of laboratories on lines of testing done by Sriram Institute for Industrial Research in Govt. of NCT of Delhi to collect the samples from fields on random basis and test the samples on the parameters such as microbiological presence or absence of e-coli, chemical parameters such as moisture content, fats, proteins and calorific value of the meal. The same would ensure quality meal to the children. It was however informed that the State Govt. has not initiated the same due to non-availability of NABL laboratories in the State.

4.19 Review of the status of Emergency Medical Plan

In accordance with the guidelines issued on 22nd July, 2013 by Govt. of India, the State Government has issued necessary instruction to Deputy Commissioners and DNOs to take steps to avoid any untoward incident in the school. As per the instructions issued, if any such incident occurs, the same should be reported to Head Teacher/District Education Officer/District Health Officer/ District Collector. Necessary instructions should also be issued at district level to ensure immediate treatment of students at Primary Health Centre/Community Health Centre. District officer should ensure the facility of immediate treatment to the students in the nearby or the task of treatment in the school should be entrusted to a doctor.

Observation: Team inquired during the visit to the schools about the action required to be taken by the school authorities in case of occurrence of any untoward incident. A large number of schools in both the district were not provided any instruction in this regard by the District/ Block officers. However, in some of the schools, teachers especially in the Kamrup District were aware of the ambulance helpline no. (108). The team recommends that the necessary instructions should be given to the school authorities for painting the number of ambulance helpline prominently in all the schools. Also in accordance with the instructions issued by the State Govt. mentioned above the contact numbers of PHC/ Community Health Centres should be made available to the school authorities.

4.20 Grievance Redressal Mechanism:

The State is not having any toll free number for registering the complaints. However, the State has printed the office number 0361-2383832 on the hoardings outside the District and block offices. However, it was observed that the same was not painted in any of the visited schools. It was informed by the State Government that as on date 10 written complaints have been received out of which 9 have been addressed. Mission feels that there is no forum for various stakeholders to register their complaints.

The Mission recommends that the Grievance Redressal mechanism up to grass root levels may be set up and a toll free number should be displayed at a prominent place in the schools in order to address the genuine complaints of all stakeholders etc., and to make the scheme more responsive to the stakeholders.

4.21 Best Practices:

- In Assam Mid-Day Meal Scheme has been implemented with the active participation of Mothers Group. Mothers Group comprises of the Mothers of the children who are enrolled in the schools. The Mothers Group helps in better implementation of the scheme at the school level.
- Recently the State Govt. has issued notification vide letter No. PMA/MDM-Cell/7/2012/12-A dtd. Dispur, 20th June, 2013 wherein a ten-women Self Help Group (SHG) comprising of mother of the children of the school will be constituted. The Programme will be run through this Mothers group. SMC will place the food-grains, cooking cost and honorarium of cook-cum-helper at the disposal of the SHGs so that the teachers can be relieved of the day-to-day intricacies of running the Programme. An amount of Rs.10,000/- per annum may be paid to the SHG from the State Budget as a token of appreciation of their services.
- The team appreciated that the State has printed the formats for filling up the school annual and monthly data entry into MDM-MIS portal and copy of the same was available in most of the schools.

- SMS base monitoring has been recently introduced in Nagoan District for real time monitoring of the scheme. Through this system, the school teachers have to send SMS in a pre-defined simple format showing attendance of children and quality of mid-day meal served, to a particular phone number. The same centrally captured in a server. The system automatically deducts the amount of cooking cost and rice used for the particular day from the existing stock details and shows the stock balance of rice as well as the fund balance. This system effectively ensures regularity of service and prevention of misappropriation of fund and rice. As the system shows, the daily balance of both fund /rice stock, it will be possible to replenish the stock of rice and fund as per their need if it falls below a particular reserve level. As informed by the District authorities of Kamrup, similar system will also be implemented shortly in the Kamrup District as well.
- Mass hand washing with soap facility was observed in several schools in Kamrup District. This was demonstrated as a part of partnership of SSA, UNICEF, CEE and respective schools. Mutipoint low cost taps were installed in the schools wherein several children can wash their hands simultaneously.

4.2 Observation on Nutritional Assessment

i. Determination of nutritional anthropometry

The mean anthropometric measurements of boys and girls from primary and upper primary schools visited are presented in table 1 to table 6.

Table 1. Mean anthropometric measurements of boys from Kamrup Rural

Age	Height (cm)	Weight (kg)	BMI	MUAC (cm)
6 yrs	112.83 ± 7.23	17.55 ± 2.15	13.79 ± 1.29	15.53 ± 1.25
7 yrs	118.76 ± 4.79	19.31 ± 2.06	13.66 ± 1.39	15.55 ± 1.51
8 yrs	122.68 ± 8.80	21.25 ± 2.57	14.22 ± 2.12	16.33 ± 1.63
9 yrs	130.70 ± 5.80	25.07 ± 4.04	14.63 ± 1.73	17.40 ± 2.20
10 yrs	135.50 ± 6.14	29.80 ± 8.23	16.16 ± 4.07	18.56 ± 2.99
11 yrs	141.58 ± 11.45	33.21 ± 11.41	16.14 ± 3.53	19.63 ± 2.73
12 yrs	140.98 ± 9.54	33.67 ± 7.39	17.04 ± 4.21	20.02 ± 2.37
13 yrs	152.06 ± 8.44	40.02 ± 8.03	17.23 ± 3.13	21.58 ± 2.74

Table 2. Mean anthropometric measurements of girls from Kamrup Rural

Age	Height (cm)	Weight (kg)	BMI	MUAC (cm)
6 yrs	111.09 ± 6.67	17.04 ± 2.08	13.86 ± 1.53	15.45 ± 1.28
7 yrs	116.32 ± 5.60	18.39 ± 3.20	13.59 ± 2.15	15.93 ± 1.99
8 yrs	124.08 ± 7.85	20.85 ± 3.53	13.50 ± 1.49	16.52 ± 2.20
9 yrs	127.11 ± 6.24	22.70 ± 3.94	14.00 ± 1.98	17.25 ± 1.54
10 yrs	134.81 ± 6.99	28.53 ± 9.17	15.48 ± 3.72	18.51 ± 3.36
11 yrs	137.02 ± 10.21	29.62 ± 7.17	15.60 ± 2.68	19.05 ± 2.33
12 yrs	147.30 ± 6.47	37.43 ± 8.29	20.91 ± 2.07	17.11 ± 2.89
13 yrs	150.86 ± 7.03	40.76 ± 6.87	17.85 ± 2.46	21.05 ± 2.15

Table 3. Mean anthropometric measurements of boys from Nagaon

Age	Height (cm)	Weight (kg)	BMI	MUAC (cm)
6 yrs	113.30 ± 6.34	17.26 ± 2.19	13.44 ± 1.19	16.00 ± 1.22
7 yrs	127.14 ± 8.14	24.03 ± 6.26	14.97 ± 4.77	16.57 ± 1.41
8 yrs	128.25 ± 7.75	23.39 ± 5.25	14.08 ± 1.77	17.43 ± 2.16
9 yrs	131.05 ± 5.64	24.60 ± 4.65	14.26 ± 2.08	18.25 ± 1.89
10 yrs	136.46 ± 7.66	26.80 ± 4.51	14.32 ± 1.40	18.67 ± 2.45
11 yrs	145.86 ± 9.68	34.26 ± 7.49	15.94 ± 2.19	19.45 ± 2.78
12 yrs	153.00 ± 0.00	42.00 ± 0.00	17.94 ± 0.00	23.50 ± 0.00
13 yrs	148.92 ± 6.11	36.08 ± 4.00	16.22 ± 0.77	20.50 ± 0.83
14 yrs	149.78 ± 3.31	39.18 ± 2.34	18.99 ± 3.13	22.73 ± 2.48

Table 4. Mean anthropometric measurements of girls from Nagaon

Age	Height (cm)	Weight (kg)	BMI	MUAC (cm)
6 yrs	109.86 ± 7.31	16.26 ± 2.90	13.43 ± 1.21	15.88 ± 1.10
7 yrs	120.14 ± 5.47	19.30 ± 2.78	13.32 ± 1.29	16.22 ± 1.01
8 yrs	126.13 ± 9.28	23.19 ± 6.05	14.34 ± 1.95	17.52 ± 2.36
9 yrs	126.13 ± 9.28	23.19 ± 6.05	14.34 ± 1.95	17.52 ± 2.36
10 yrs	136.62 ± 7.66	28.37 ± 6.38	15.04 ± 2.18	19.26 ± 2.60
11 yrs	137.49 ± 8.09	30.92 ± 6.48	16.37 ± 3.46	19.50 ± 3.06
12 yrs	143.29 ± 4.53	34.08 ± 5.85	16.55 ± 2.44	20.26 ± 1.79
13 yrs	143.61 ± 6.96	37.38 ± 5.38	18.20 ± 2.93	19.68 ± 0.77
14 yrs	146.45 ± 2.32	37.61 ± 0.99	18.21 ± 5.13	21.65 ± 3.00

Table 5. Mean anthropometric measurements of boys of Kamrup Rural and Nagaon districts

Age	Height (cm)	Weight (kg)	BMI	MUAC (cm)
6 yrs	113.06 ± 0.33	17.40 ± 0.20	13.61 ± 0.24	15.76 ± 0.33
7 yrs	122.95 ± 5.92	21.67 ± 3.33	14.30 ± 0.90	16.06 ± 0.72
8 yrs	125.46 ± 3.93	23.32 ± 1.51	14.15 ± 0.98	16.88 ± 0.77
9 yrs	130.88 ± 0.24	24.83 ± 0.33	14.44 ± 0.26	17.82 ± 0.60
10 yrs	135.98 ± 0.67	28.30 ± 2.12	15.24 ± 1.30	18.61 ± 0.77
11 yrs	143.72 ± 3.02	33.73 ± 0.74	16.04 ± 0.14	19.54 ± 0.12
12 yrs	146.99 ± 8.49	37.83 ± 5.89	17.49 ± 0.63	21.76 ± 2.46
13 yrs	146.61 ± 3.98	35.08 ± 1.41	16.38 ± 0.23	20.38 ± 0.16

Table 6. Mean anthropometric measurements of *girls* of Kamrup Rural and Nagaon districts

Age	Height (cm)	Weight (kg)	BMI	MUAC (cm)
6 yrs	110.48 ± 0.86	16.65 ± 0.55	13.59 ± 0.38	15.83 ± 0.54
7 yrs	118.23 ± 2.70	18.84 ± 0.64	13.45 ± 0.19	16.07 ± 0.20
8 yrs	125.10 ± 1.44	22.02 ± 1.65	13.92 ± 0.59	17.02 ± 0.70
9 yrs	126.62 ± 0.69	22.94 ± 0.34	14.17 ± 0.24	17.25 ± 1.98
10 yrs	135.72 ± 1.27	28.45 ± 0.11	15.26 ± 0.31	18.88 ± 0.53
11 yrs	137.72 ± 0.33	30.27 ± 0.91	15.98 ± 0.54	19.27 ± 0.31
12 yrs	145.30 ± 2.83	35.75 ± 2.36	18.73 ± 3.08	18.68 ± 3.08
13 yrs	147.24 ± 5.12	39.07 ± 2.39	18.02 ± 0.24	20.36 ± 0.96

The data in the table showed that heights and weights of the children of both genders showed an increasing trend with the increasing trend with the increase in age. BMI and MUAC also showed an increasing pattern which is normal and expected. BMI in boys ranged from 13.61±0.24 to 16.38±0.23 and in girls, it ranged from 13.59±0.38 to 18.73±3.08.

ii. Determination of nutritional status

Using BMI Z score prevalence of malnutrition among boys and girls from primary and upper primary school children was assessed and is presented in Table 7 to table 10 and Fig 1 to 3.

Table 7. Nutritional status of *girls* of from Kamrup Rural district

Age	Severely Malnourished		Moderately malnourished		Normal		Overweight		Obese	
	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
6yrs	2	7	4	15	20	74	1	4	0	0
7yrs	9	24	4	11	22	59	2	6	0	0
8yrs	3	10	8	27	19	63	0	0	0	0
9yrs	3	14	4	18	15	68	0	0	0	0
10yrs	3	12	6	23	14	53	0	0	3	12
11yrs	1	3	6	22	19	68	2	7	0	0
12yrs	0	0	3	13	18	78	2	9	0	0
13yrs	5	5	3	7	34	81	3	7	0	0
Total	26	11.06	38	16.17	161	68.51	10	4.25	3	1.27

Table 8. Nutritional status of boys from Kamrup Rural district

Age	Severely malnourished		Moderately malnourished		Normal		Overweight		Obese	
	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
6yrs	1	6	4	22	13	72	0	0	0	0
7yrs	3	10	11	38	15	52	0	0	0	0
8yrs	5	14	6	17	22	61	2	6	1	2
9yrs	1	5	3	15	15	75	1	5	0	0
10yrs	1	3	8	27	17	54	1	3	4	13
11yrs	3	16	4	21	8	42	3	16	1	5
12yrs	2	10	3	15	11	55	2	10	2	10
13yrs	1	4	6	25	15	63	1	4	1	4
Total	17	8.67	45	22.95	116	59.18	10	5.1	9	4.59

Table 9. Nutritional status of boys from Nagaon district

Age	Severely malnourished		Moderately malnourished		Normal		Overweight		Obese	
	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
6yrs	3	12	3	12	16	66	0	0	0	0
7yrs	0	0	5	6	30	90	1	3	0	0
8yrs	2	5	9	21	28	67	3	7	0	0
9yrs	11	17	14	22	36	56	2	3	1	2
10yrs	5	12	9	21	27	65	1	2	0	0
11yrs	0	0	0	0	0	0	0	0	0	0
12yrs	0	0	5	24	14	67	2	9	0	0
13yrs	0	0	0	0	0	0	0	0	0	0
14yrs	0	0	1	17	5	83	0	0	0	0
Total	21	9.01	46	19.74	156	66.95	9	3.86	1	0.42

Table 10. Nutritional status of *girls* from Nagaon district

Age	Severly malnourished		Moderately malnourished		Normal		Overweight		Obese	
	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
6yrs	3	14	2	9	16	76	0	0	0	0
7yrs	6	24	2	8	17	68	0	0	0	0
8yrs	5	13	8	21	22	56	4	10	0	0
9yrs	4	10	9	23	25	64	1	3	0	0
10yrs	4	11	5	14	25	67	3	8	0	0
11yrs	0	0	0	0	8	62	4	31	1	7
12yrs	0	0	0	0	0	0	0	0	0	0
13yrs	2	12	1	6	13	76	1	6	0	0
14yrs	2	9	2	9	15	68	3	14	0	0
Total	26	12.20	29	13.61	141	66.19	16	16.00	1	46.94

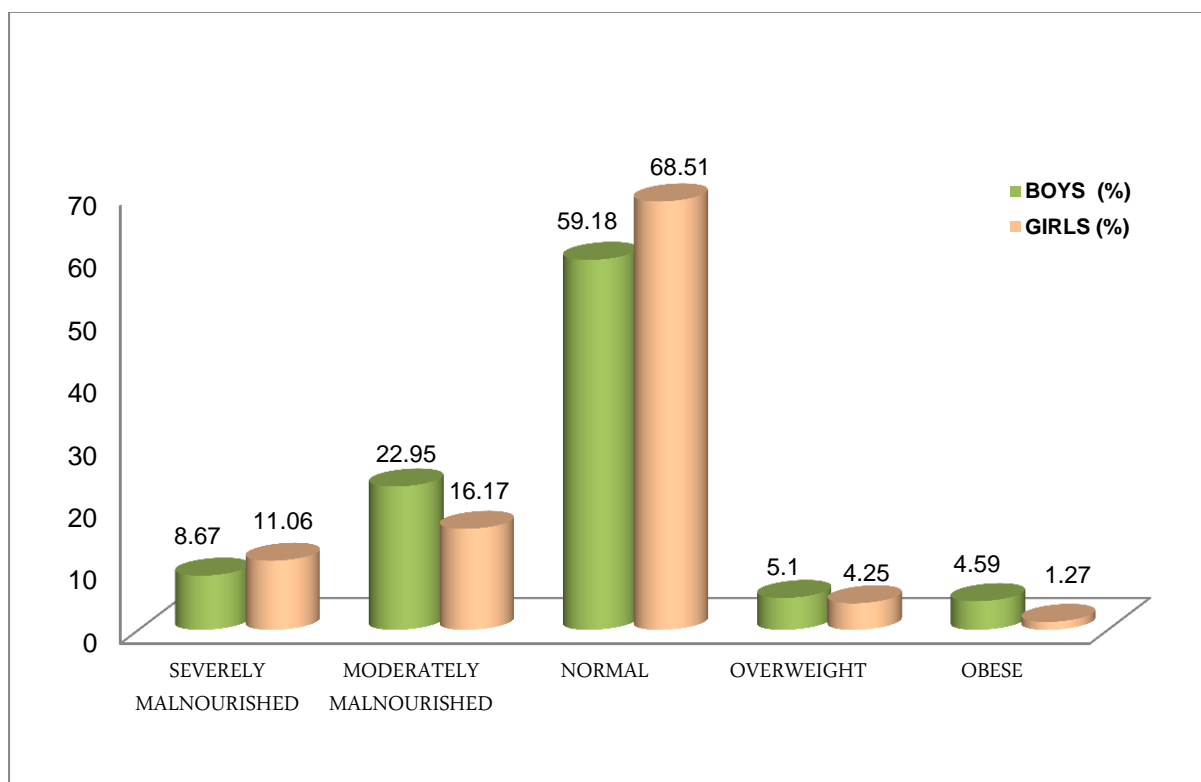


Fig 1: Nutritional status of boys and girls from Kamrup Rural district

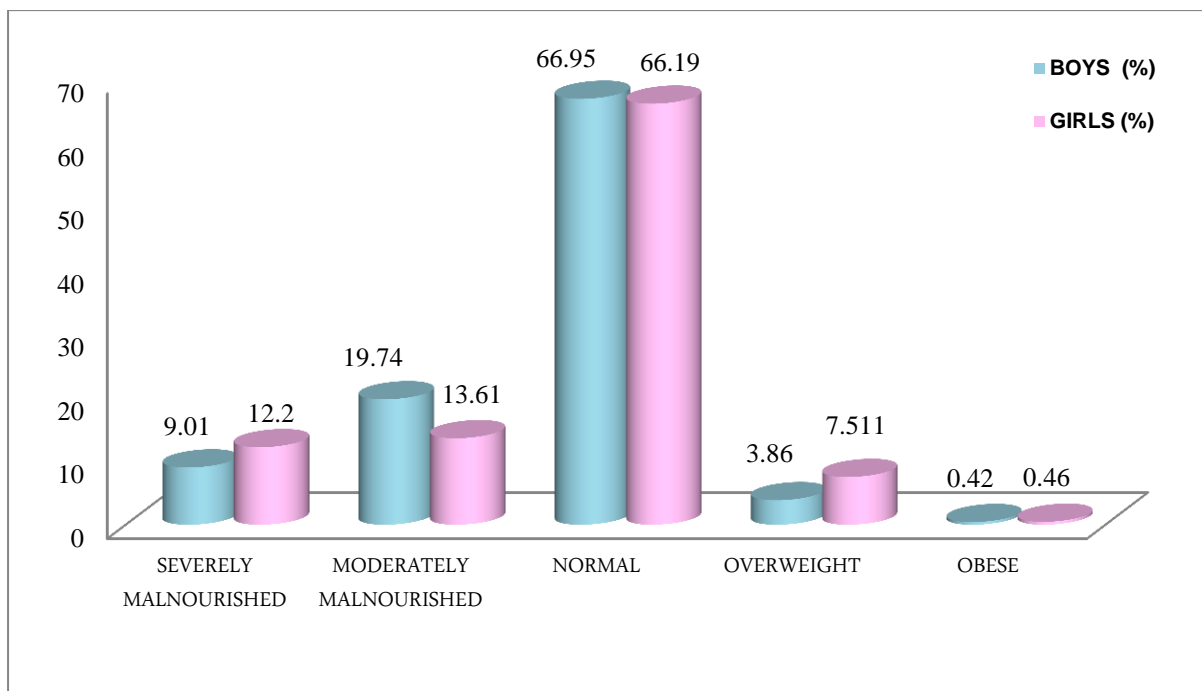


Fig 2: Nutritional status of boys and girls from Nagaon district

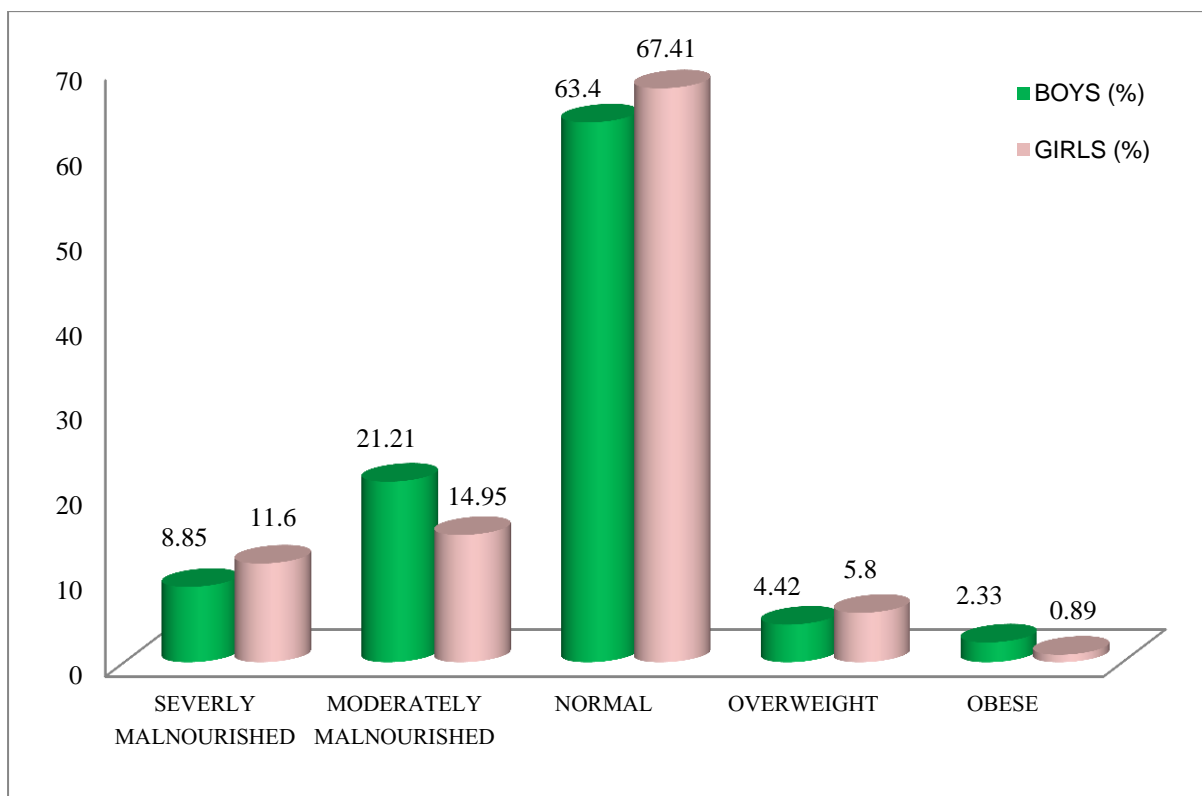


FIG 3: Nutritional status of boys and girls from Kamrup Rural and Nagaon districts

The nutritional status of the children shown in the figures clearly shows that, 63.40 per cent of boys and 67.40 per cent of girls fall in normal category. Moderate level of malnourishment was

found amongst 21 percent of the boys and 15 per cent of girls. Severe malnourishment was observed in 11.60 per cent of the girls and 8.85 per cent of the boys studied.

iii. Clinical symptoms

Observations of the assessment of clinical signs and symptoms of the children are presented in table 11 and fig 4. The study revealed the following observations:

- Mottled enamel was found in 2.55 per cent of the girls and 4.59 per cent of the boys in Kamrup Rural district. In Nagaon district 6.10 per cent of the girls and 1.70 per cent of the boys had mottled enamel.
- Bleeding gums indicative of vitamin C deficiency was found in 0.80 per cent and 1.87 per cent of the girls in Kamrup Rural and Nagaon district respectively. Two per cent and 1.71 per cent boys of Kamrup Rural and Nagaon district respectively had bleeding gums.
- Dental carries was observed in 0.46 per cent girls and 2.14 per cent of boys in Nagaon district.
- Angular stomatitis indicating B complex vitamin deficiencies was observed in children from Nagaon districts, recording 1.43 per cent in girls and 0.85 per cent boys.
- Dental fluorosis was found in 3.36 per cent girls and 3.58 percent boys in Nagaon district.

Table 11. Clinical signs and symptoms of the children

Clinical signs	Kamrup district				Nagaon district			
	Girls	%	Boys	%	Girls	%	Boys	%
Mottle enamel	6	2.55	9	4.59	13	6.10	4	1.71
Bleeding gum	2	0.85	4	2.04	4	1.87	4	1.71
Dental carries	0	0	0	0	1	0.46	5	2.14
Skin pigmentation	0	0	1	0.51	0	0	1	0.42
Easy pluck ability	0	0	0	0	1	0.46	0	0
White patches	0	0	0	0	1	0.46	2	0.85
Angular stomatitis	0	0	0	0	3	1.43	2	0.85
Pale skin	0	0	0	0	1	0.46	0	0
Pale conjunctiva	1	0.42	1	0.51	0	0	0	0
Dental Flourosis	0	0	0	0	15	3.36	16	3.58

Clinical signs

Mottle enamel



Dental fluorosis



Angular stomatitis



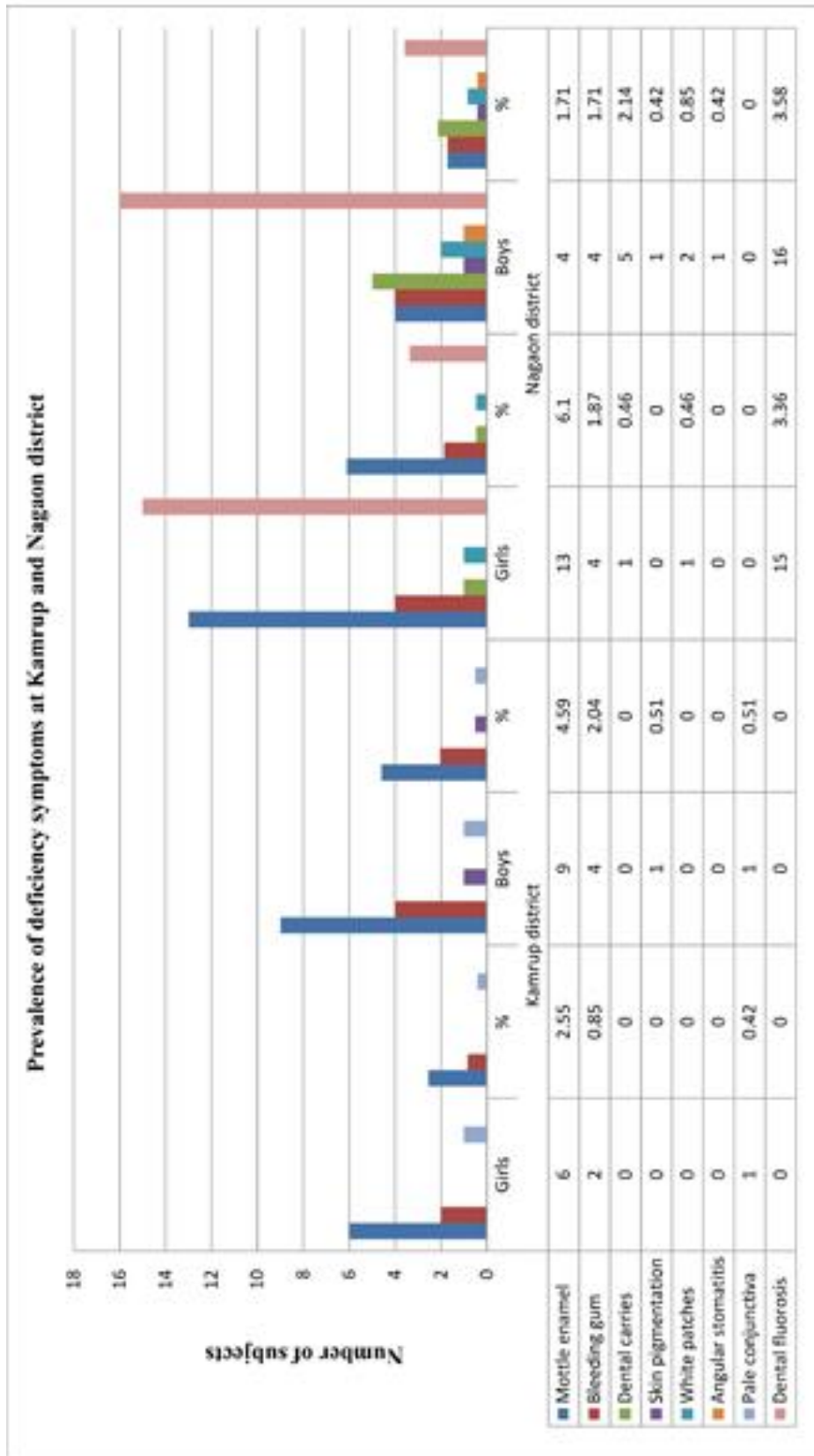


Fig 4: Prevalence of deficiency symptoms at Kamrup Rural and Nagaon districts

iv. Food consumption pattern

Food consumption pattern depicted in table no 12 and fig 4 to fig 9.

Table 12. Food Consumption Pattern of Selected Mid Day Meal (MDM) Beneficiaries

Cereals			
S.L No	Food items	No. of Subjects	(%)
1	Rice	793	90.42
2	Roti	143	16.30
3	Bread	12	1.36
4	Biscuit	206	23.48
5	Pitha	9	1.02
6	Flake rice	32	3.64
8	Others	13	1.48
Fruits			
S.L No	Food items	No. of Subjects	(%)
1	Apple	17	1.93
2	Pineapple	1	0.11
3	Banana	16	1.82
4	Gooseberries	12	1.37
5	Guava	1	0.11
6	Papaya	0	0
7	Yellow myrobalan	14	1.59
8	Olive	19	2.16
9	Coconut	4	0.45
10	Others	9	1.02
Pulses and products			
Sl. No.	Food items	No. of Subjects	(%)
1	Dal	575	65.56
2	Others	13	1.48
Meat/ fish/ poultry			
Sl. No.	Food items	No. of Subjects	(%)
1	Chicken	52	5.92
2	Beef	1	0.11
3	Fish	130	14.82
4	Mutton	3	0.34
5	Pork	0	0
6	Duck	0	0
7	Egg	78	8.89
8	Others	4	0.45
Vegetables			
Sl. No.	Food items	No. of Subjects	(%)
1	Potato	577	66.32
2	Cabbage	68	7.75
3	Squash	0	0
4	Brinjal	35	3.99

5	Bottle gourd	19	2.16
6	Cauliflower	14	1.59
7	Beans	2	0.22
8	Radish	8	0.91
9	Carrot	6	0.68
10	Tomato	20	2.28
11	Lettuce	31	3.53
12	Amaranthus	0	0
13	Spinach	19	2.16
14	Cucumber	2	
15	Colocasia	6	0.68
16	Fern	4	0.45
17	Peas	3	0.34
18	Parwal	9	1.02
19	Lofa	0	0
20	Cowpea	7	0.79
21	Others	23	2.62
Milk and milk product			
Sl. No.	Food items	No. of Subjects	(%)
1	Milk	104	11.85
2	Paneer	1	0.11
3	Curd	0	0
4	Others	0	0
Others			
Sl. No.	Food items	No. of Subjects	(%)
1	Tea	191	21.77
2	Snacks	22	2.50
3	Sweets	4	0.45
4	Pickle	2	0.22
5	Horlicks	10	1.14
6	Soyachunks	57	6.49
7	Sugar / jiggery	196	22.34
8	Fats/ oil	754	85.97
9	Nuts/oilseed	0	0

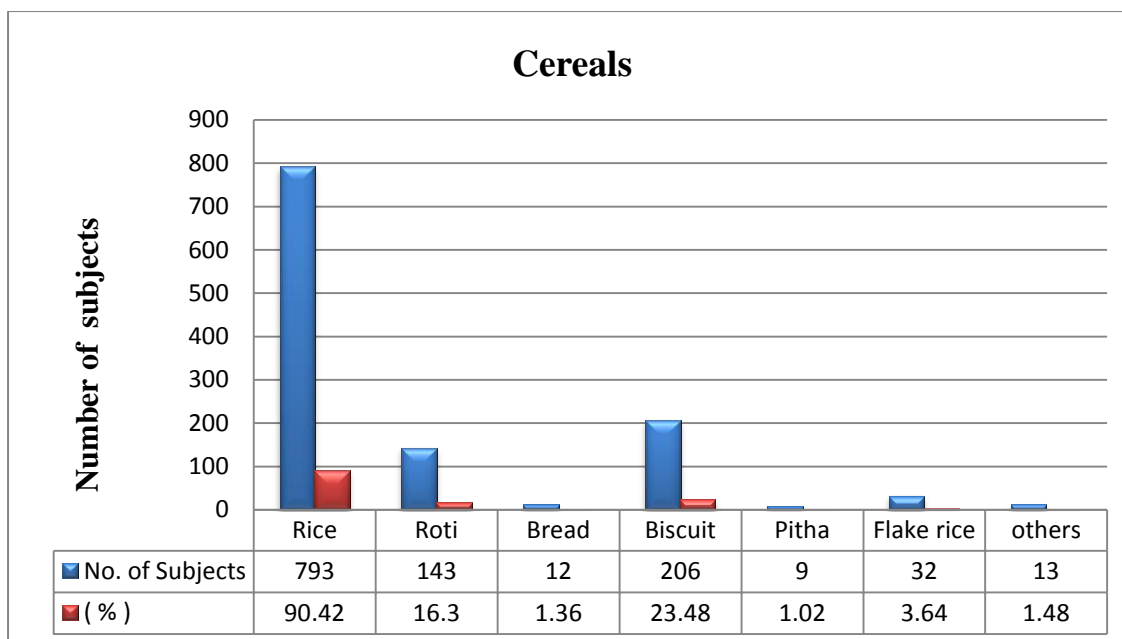


Fig 4: Percentage consumption pattern of cereals and cereals products

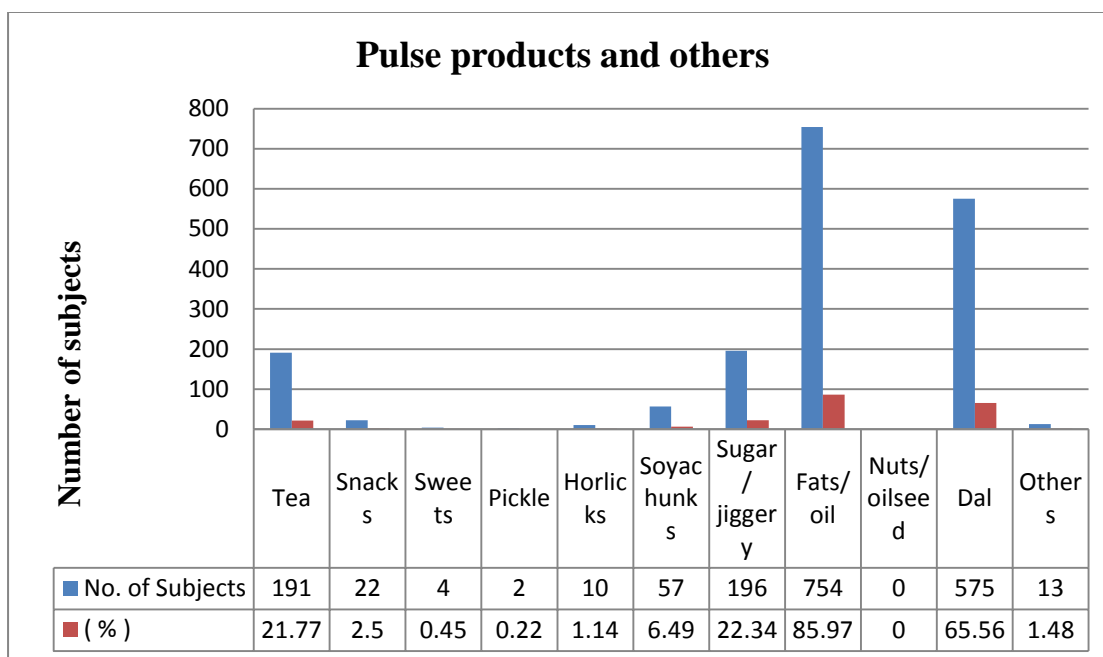


Fig 5: Percentage consumption pattern of pulse and pulse products and others

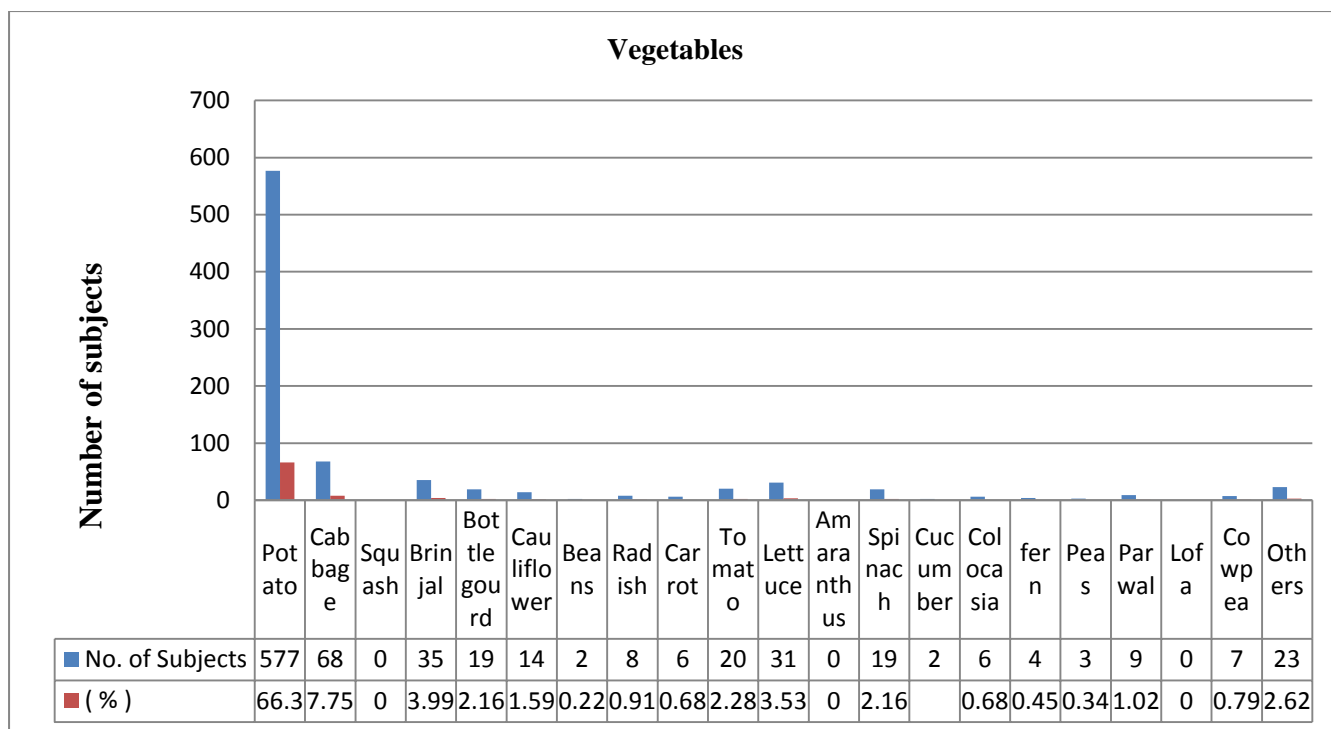


Fig 6: Percentage consumption pattern of vegetables

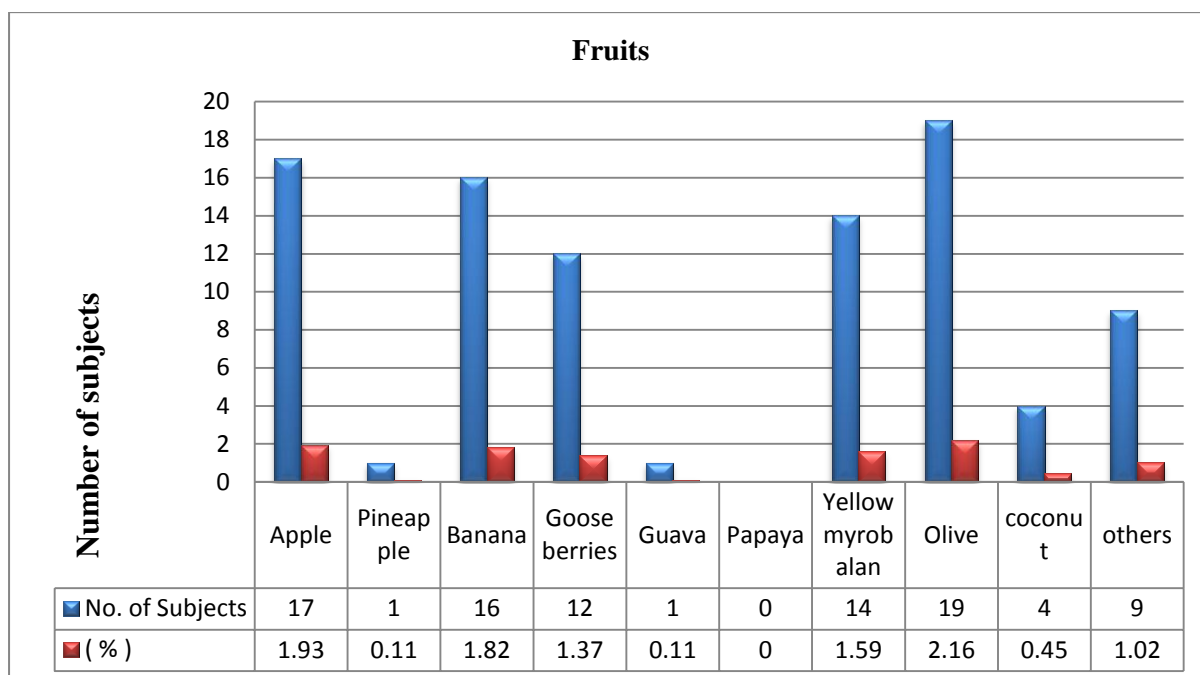


Fig 7: Percentage consumption pattern of fruits.

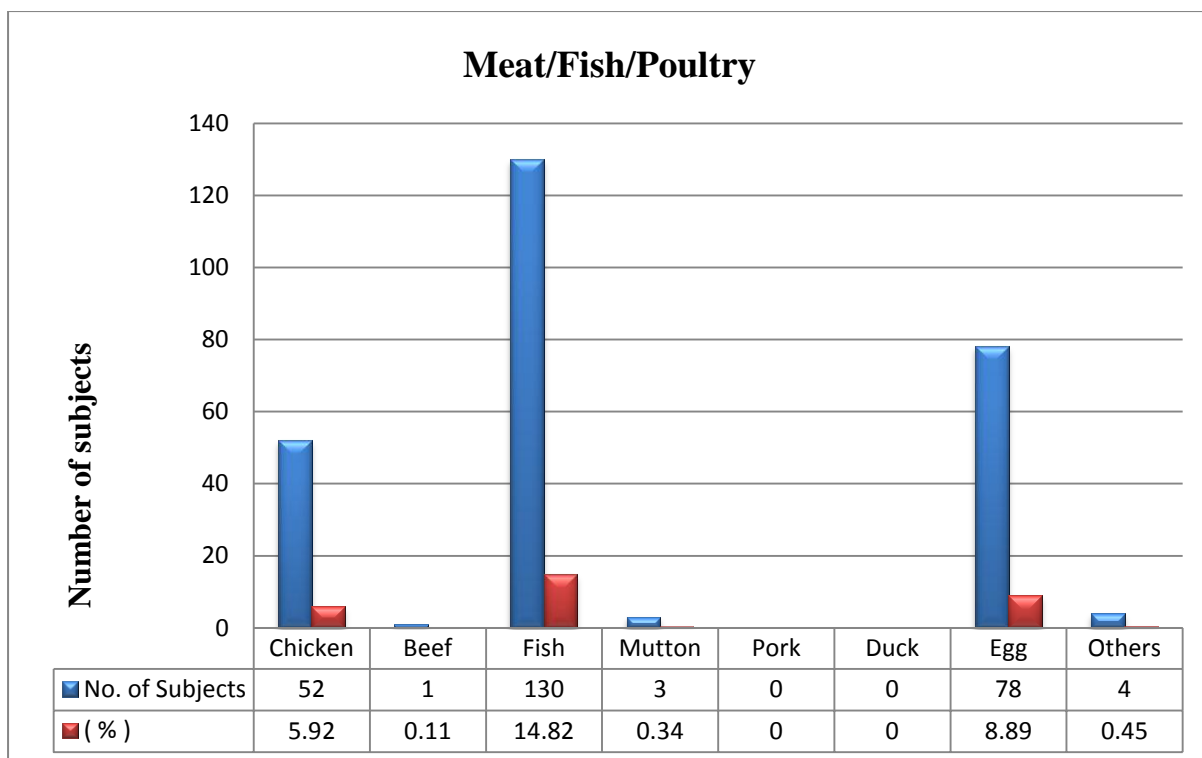


Fig 8: Percentage consumption pattern of meat/fish/poultry.

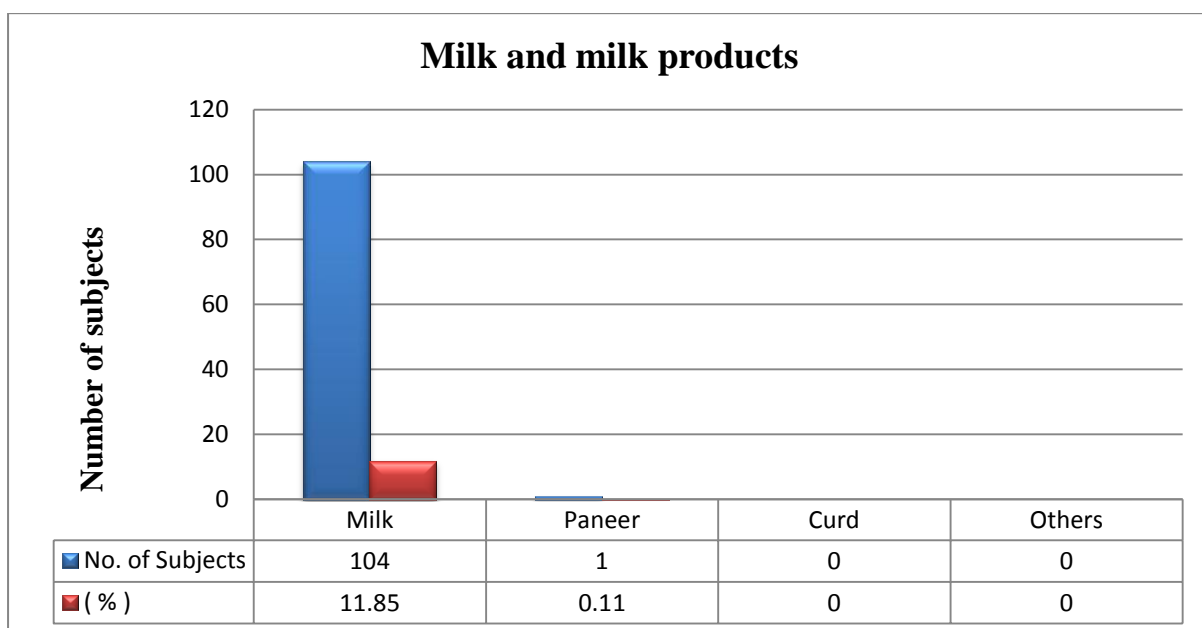


Fig 9: Percentage consumption of milk and milk products

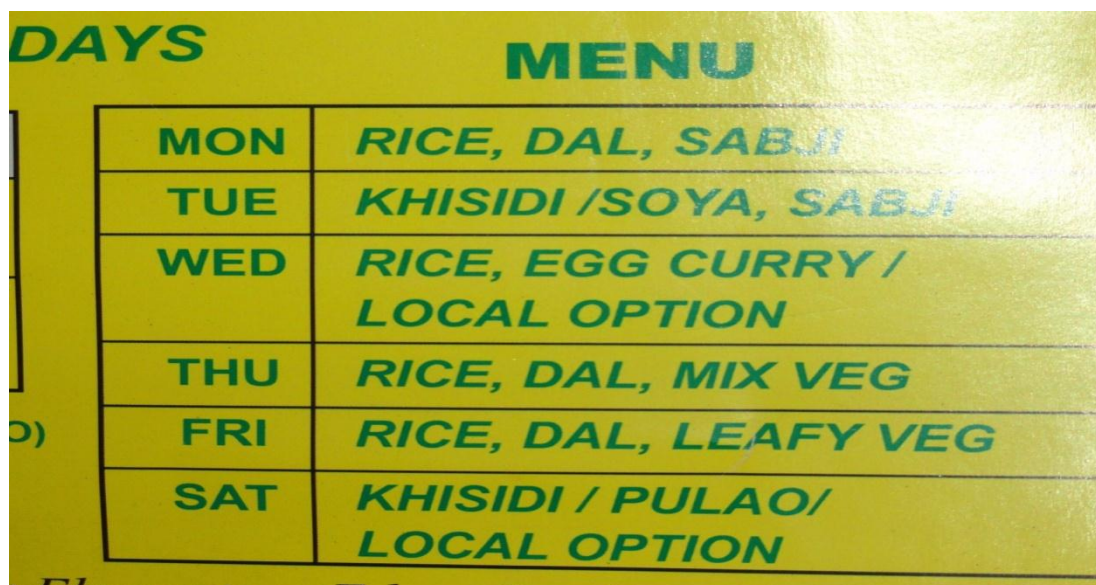
Observations are as follows:

- School children normally follow 3-4 meal patterns a day.
- Ninety percent of the children consumed rice as a main/major meal.
- 16.30 percent of children reported consuming roti followed by 3.64 percent consuming flake/puff rice and 23.48 percent reported eating biscuit.
- 65.56 percent reported consuming pulse (lentil, dry pea, bengal gram, etc) at home.
- Soya nuggets consumption have been reported by 6.49 percent.
- Vegetable consumption reported by the children revealed that 66.32 percent had potato (as a preferred vegetable).
- Four percent of the children reported consuming brassica. Spinach was consumed by 2.16 percent children at home.
- Common vegetables consumed included mix cabbage, potato, pumpkin, bottle gourd etc.
- Fruits mostly are gooseberry, pineapple, plum, banana, myrobalan and apple. However fruit consumption as such is very meagre.
- Fish and meat are the preferred items by children. Meat consumption is reported occasionally as reported by children which included chicken, beef, mutton, duck.
- Only 8.89 percent of the children reported consuming eggs.
- Tea is the most preferred beverages by 22 percent of the children. Milk consumption was reported by 11.85 percent only.
- Out of processed packaged foods maggi, noodles, mixtures, samosa, chips, are consume by some children.

v. Pattern of food provided under MDM

Mid Day Meals served in the schools is rice based one in all the schools visited.

It was found that there is a sample menu provided by the Department of Elementary Education, Government of Assam, which is shown below:



DAYS	MENU
MON	RICE, DAL, SABJI
TUE	KHISIDI /SOYA, SABJI
WED	RICE, EGG CURRY / LOCAL OPTION
THU	RICE, DAL, MIX VEG
FRI	RICE, DAL, LEAFY VEG
SAT	KHISIDI / PULAO/ LOCAL OPTION

However, it was observed that most of the schools visited, do not follow the menu. Depending upon the availability of ingredients other than rice, meals are served. The most commonly included food items other than rice in the menu are dal, potato, bottle gourd and soya chunk. There is weekly inclusion of egg in the meals in some of the schools. Green leafy vegetables were included in only one school out of 48 schools visited. Interactions with the students, cook cum helpers and teachers also revealed that there is no inclusion of greens in the MDM.

Out of 48 schools visited by the team , 4 schools have the provision of Mid Day Meals from Akshaya Patra, an NGO, based in Amingaon, Guwahati. The meals included rice, dal with bottle gourd and potato and pickle.

vi. Quality and quantity of MDM served:

Observations regarding quality and quantity of the f the meals served under MDMS are as follows:

Few sample meals collected randomly from the schools were calculated for its nutrient content in terms of calories, protein and fat and depicted in the following table :

Nutritive value (approximate) of MDM served in selected school

Meal	Food served	Protein (g)	Energy (Kcal)	Fat (g)	
Meal 1(UP)	Rice + dal with potato and bottlegourd+boiled egg	18.74	538	4	
Meal 2 (P)	Rice+ dal+scrambled egg	15	494	2.1	
Meal 3 (P)	Rice+ dal with potato	11	441	0.6	
Meal 4 (P)	Khichri with potato and soya chunk	17	475	2.01	
Meal 5 (P)	Rice+mix veg+dal	13.5	459	30.4	
Recommended Value (MDM)		(Primary)	12	450	--
		(Upper Primary)	20	700	--

Out of 5 meals collected, one meal was for upper primary classes, and remaining 4 meals were for primary classes. It was observed that except the energy supplementation from the meal meant for upper primary classes, other meals have almost supplied the recommended energy and protein. The energy supplied by the meal served to upper primary classes was 538 Kcal, in comparison to the recommended value of 700 Kcal. The protein content of the same meal was 18.74 g against 20 of recommended value.

The energy content of the meals served to primary group ranged from 441 Kcal to 494 Kcal against the recommended value of 450 Kcal. Similarly the protein content of the meals ranged from 11 g to 17 g against the recommended value of 12 g.

Fat content of the meals ranged from 0.6 g to 30.4 g. This includes both visible and in visible fat.



Food served in schools

Quality of food grains and other ingredients:

The rice is supplied from FCI to respective cooperative societies of the regions. The quality of the grain was found to be of average standards in most of the schools. Inferior quality rice was found only in limited number of schools.

Other non perishable ingredients like dal, soya chunks were procured from local shops on daily or thrice weekly basis and were of good quality.

Potato is the most commonly used vegetable in most of the schools and it is of average quality.

Very few schools included other vegetables in the meals and it is procured daily from local market, which is of average quality.

All the schools use ISI marked iodised salts.



Quality of food

Quality of other food



Storage of ingredients:

Proper storage facilities are lacking in almost all the schools. Some temporary arrangements of raised platforms are made in some of the schools. Others store the grains on the floor itself.

It was worthwhile to mention that, one school uses dry neem leaves to protect the grains from insect infestation.

However, there are schools where no protective measures were taken against rodents and other animals.

Storage of iodised salt is very poor. Most of the schools leave the salt packet open without transferring it to an airtight container.

Good storage of food



storage of food grains with neem leaves

Bad storage of food



Safety and hygiene

Health is cleanliness and cleanliness is one of the main defenses against diseases, whether contagious or self-generated. Good health can be achieved through sanitary habits and healthy way of living

Health status of 13.62 percent of children (n= 877) out of 6435 of total enrollment from 48 schools visited under Mid Day Meal programme was examined physically. It was observed that personal hygiene of the children in many of the schools was poor which led to skin related problems and poor oral hygiene in many of the cases.

Additionally, the environment under which Mid Day Meal is prepared and served were evaluated. Following are the observations.

- Majority of the kitchen sheds were in very poor shape and unhygienic. Temporary kitchen sheds were used for pre preparation and cooking, with poor sanitary practices. In some cases cooking area have no proper ventilation and lighting, which could be dangerous in times.
- In some schools even grains were stored in very unhygienic conditions.
- Although, most of the schools have water sources like tube well, the surroundings are not always clean
- Non availability of proper utensil cleaning area in majority of cases is a problem
- Proper hand washing and monitoring is not there in most of the schools.
- Only few schools have separate dining area.
- All the schools have toilet facilities for girls, out of which, some are very hygienic. However many schools do not have toilets for boys.

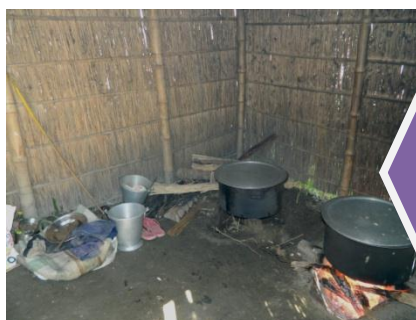


Unhygienic surrounding of water source

Hygienic surrounding of water source



Hygienic Kitchen



Unhygienic





Good practices of hand wash



Hygienic Toilets



Dining areas



vii. Satisfaction of children, parents and community on MDM served:

On the day of visit all the schools were cooking and serving meals to the children present in the schools. Meal quality and quantity was also found to be satisfactory on the day of visit. However, students of some of the schools have reported that there is irregularity in supply of MDM to them which is a major area of concern and needs immediate attention.

Although majority of students consume the Mid Day Meals in the schools, some percentages of students avoid the meals in schools due to 1) cultural believes and 2) considering it as unhygienic.

Response towards the Mid Day Meals served in schools by Akshaya Patra was not very positive in most of the schools. In one school, out of the total enrolment of 130 children only 30-50 children take meals in school depending upon the menu. Following are the menu served by Akshaya Patra:

1. Rice, dal or cuddy & Sabji
2. Once a week Kichidi and Kheer.
3. Pulav and Desi channa/Kabuli Channa sabji.
4. As a value addition they give them Chakli and Pickle.

From the interactions with the students, it was observed that Pulav and Kheer are the two items preferred by the students.

viii. Suggestions for nutritionally balanced nutritious recipes:

A. Salad with Sprouts

Ingredient:

Whole green gram -30 gm

Whole Bengal gram-20 gm

Tomato – 50 gm

Onion- 1 small

Cucumber – 50 gm

Oil – 5 gm

Salt – to taste

Method:

Wash and soak whole Bengal gram and whole Green gram overnight. Chop the onion, cucumber and tomato. Remove the soaked Bengal gram from water and mix it with the above chopped vegetables and add salt to taste. Garnish with oil and lime juice

1 serving contains: 279.90 Kcal, 13.37 g protein, 6.84 g fat and 4.38 g iron

B. Dal with Greens

Ingredient:

Lentil Dal – 20gms

Spinach- 50gms

Amaranth – 50gms

Turmeric -1 gm

Cumin seeds – 1 gm

Oil – 5 gm

Method:

Clean and wash the dal and vegetables properly. Chop the vegetables. Boil the dal till slightly soft, add green leafy vegetables and salt and cook till done. Heat oil in a karhai. Add cumin seed , onion and turmeric and pour the cooked dal. Let it come to boil and remove from fire.

1 serving contains: 161.60 Kcal, 8.72g protein, 5.79g fat and 4.04g iron

C. Mix vegetable

Ingredient:

Cauliflower- 50 gms

Potato -50 gms

French been – 20 gms

Carrot – 20 gms

Pees – 20

Onion – 1 small

Oil – 5 gms

Turmeric – 1 gm

Method:

Wash and chop the vegetables .Heat oil in a karhai and sauté the onion and add turmeric. Add vegetables and cook till done.

1 serving contains: 200.90 Kcal, 5.86 g protein, 5.43g fat and 2.67 g iron

D. Khichdi with vegetables

Ingredient:

Moong dal- 25gms

Rice – 50 gms

Carrot- 20gms

Potato – 50gms

Onion -50 gms

French beans – 20 gms

Oil – 5 gm

Method:

Clean and wash rice and dal. Chop vegetables. Put oil in a karhai, add onion turmeric and sauté. Add vegetables, rice and dal and sauté. Add water and salt and cook till done.

1 serving contains: 426.80 Kcal, 12.64 g protein, 5.76 g fat and 3.08 g iron

E. Tomato and Date Chutney

Ingredient:

Jaggery – 25 gms

Tomato – 100gms

Date – 20gms

Mustard seed – 1gm

Method:

Wash and cut the tomato. Shred the dates. Heat oil splatter mustard seed and red chilly. Add tomato, salt and jaggery and cook till done.

1 serving contains: 224.15 Kcal, 1.50 g protein, 5.30 g fat and 3.52 g iron

F. Bengal gram chutney

Ingredient:

Bengal gram – 50 gm

Lemon juice – 1 spoon

Curry leaves – 5 gm

Oil – 5 gm

Green Chilly – 1

Sugar – 5 gm

Method :

Wash and soak whole Bengal gram. Squeeze the lemon, wash the curry leaves and green chilly. Make paste of the Bengal gram and green chilly. Heat oil and add mustard seed and curry leaves and mix it with the above paste and sugar.

1 serving contains: 256.39 Kcal, 8.97 g protein, 7.79 g fat and 2.40 g iron


ix. Better convergence with NRHM:

Currently there is very poor convergence of MDMS with NRHM. Irregular visits were made by the NRHM team to the schools. However, health cards were incomplete and teachers were not aware about the details of the tablets supplemented. Proper awareness programmes should be initiated for teachers and students.

Assam: Joint Review Mission on Mid Day Meal Scheme

1st SCREENING

Height _____ cms Weight _____ Kgs Under Weight/Over weight _____ Pallor: Y/N Date of Screening _____

MPW/LHV's View* 

SHP Team Doctor's Finding ** _____ Date of Screening _____

Blood Group _____

Referral Doctor's Finding ** _____ Date of Treatment _____


1. 1. 1.

2. 2. 2.

3. 3. 3.

4. 4. 4.

Name & Signature of MPW/LHV _____ Name & Signature of SHP Doctor _____ Name & Signature of Referral Doctor _____

Use no disorder than the  will be ticked. In case the MPW/LHV suspects any disorder, the Code No of the same is to be filled in the box.

SCHOOL HEALTH PROGRAMME Health Card (Photo)

Name of the Student: Mr. Anant Gohain Gender (M/F): _____

Name of the Parent/Guardian: _____

Contact number of Parent/Guardian: _____

Name of School: Dhupaguri K.B.J.B. School School Code: 0100805

Class: V Date of Birth: _____

Religion: Islam Caste: GENUSCTIANGI

District: Nagaon

Health Block: Dhing

Present Address: _____

Pin: 782123

পিতৃ-মাতৃৰ মন্তব্য (Comments of Parents): _____

ৰক্তৰ গ্ৰুপ (Blood Group): _____ কিবা এলার্জি আছে নেকি (Any known allergy): _____

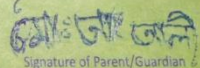
পৰিয়ালৰ তথ্য (Family History):

1. মধুমেহ (Diabetes) 2. উচ্চ ৰক্তচাপ (Hypertension) 3. কুই বোম্ব (Leprosy)

4. ফাঙ্গা (TB) 5. চৰ্ম বোম্ব (Skin Disease) 6. কৰ্কট বোম্ব (Cancer)

7. জন্মগত বিসংগতি (Congenital Malformation) অন্যান্য (Others) _____

বিশত সময়ছোৱাত শিশুটিৰ বিকোৱাৰ বেমাৰ (Any past history of illness episode of the child): _____

Signature of Principal/Head Master/Head Teacher 

Signature of Parent/Guardian _____

For Administrative Use Only

Health cards from NRHM

Anthropometric measurement

1) Mid arm circumference measurement



2) Height measurement



3) Weight measurement



Diet survey



5 Recommendations

➤ **Dedicated management structure at all levels:**

The Review Mission proposes and recommends that a dedicated mid-day meal cell may be set up at State, District and block level with clear roles and responsibilities. Indicative structure has been provided in the relevant section in the report. The posts may be filled up on deputation/contractual basis and the expenditure may be debited to funds allocated under MME component of the scheme.

➤ **Tasting food by teachers**

It is recommended that the MDMS guidelines with respect to tasting of the meal by the teachers should be strictly followed. The teacher should keep a record of having tasted food in a register to be maintained for the purpose. It could be further strengthened by ensuring that one of the SMC members should also taste the food on a rotation basis along with the teachers before it is distributed to the children.

➤ **Appointment of cook-cum-helpers as per the norms and timely payment of honorarium:**

The team recommends that the cook-cum-helpers must be engaged as per the norms. It is also recommended that separate accounts should be opened for the cook-cum-helpers in nearest bank branch and the honorarium (including State share) should be paid on monthly basis.

➤ **Creation of awareness about mid-day meal scheme:**

The team feels that efforts should be made to generate awareness of the scheme among all the stakeholders i.e Parents, Children, Mother's Group, Teachers, SMC & SHG members regarding their role and the entitlements of children. The entitlements of children and MDM logo as per the specifications given in the guidelines must be displayed at the prominent places in school.

There is a need to create more awareness regarding the Contingency/Medical health plans for any occurrence of untoward incident at school level. The team recommends that the number of ambulance helpline may also be painted prominently in all the schools. Also in accordance with the instructions issued the contact numbers of PHC/ Community Health Centres should be made available to the school authorities.

The State may use the two films on MDM prepared by Ministry of HRD as a part of the strategy for creating awareness.

➤ **Usage of Agmark certified ingredients especially cooking oil:**

It is recommended that the State Government should ensure strict compliance of the guidelines issued in this regard. All the major ingredients including cooking oil, spices etc. should be Agmark certified.

➤ **Convergence with School Health Programme:**

Convergence of the School Health Programme with MDMS is essential for monitoring the physical growth and the health status of children and to provide supplements to overcome micronutrient deficiency. It is recommended that the Health Cards should be maintained in schools for future reference and regular supervision of the needy students. Further, health officials need to give clear instructions regarding the dosage of deworming/supplementation tablets to avoid complications arising out of wrong dosage. Report cards and feedback must be shared with the parents. Regular health check-up should take place and IFA tablets, Vitamin A, De-worming tablets & spectacles (for the children suffering from refractive errors) should be provided in convergence with School Health Programme of NRHM. The possibility of health check-up of Cooks-cum-Helpers on a regular basis may also be explored.

➤ **Use of alternative sources as cooking fuel:**

Cooking is done mainly by firewood which not only denudes the forests but also produces a lot of smoke which is hazardous for health of cook-cum-helpers. Alternate method of fuel like solar cooker/LPG may be explored. The State Government may also install/convert chulhas into smokeless chulhas to combat the above problem.

➤ **State Review Mission**

The State Govt. should also constitute Review Mission at the State level on the lines of Joint Review Mission deputed by the GoI and send them to various districts of the State every six months to review the implementation of the programme. Inter-State exposure visits may also be planned. Orientation visits to better performing States to see the implementation of the scheme will widen the horizon of the officials.

- **Monthly review meeting** should be conducted at District and block level to review the implementation of the MDMS.
- The Mission recommends that the monitoring mechanism at all the levels, especially at the district and below, needs to be strengthened. There is a strong need to create an accountable monitoring mechanism to look into the implementational aspects of the scheme.
- Convergence with MGNREGS for maintenance of school **kitchen gardens** could be sought for all schools across the state. Kitchen gardens or green squares can be introduced using the waste water from kitchen and hand washing of children. This can become innovative and creative school based activity for the participation of children and teachers to grow drumstick trees and seasonal greens for use in MDM. The nutrition education then can be one of the major activities for children and use of vegetables in MDM can also be ensured. In the senior classes students can also be given the responsibility of managing the kitchen garden.
- Empty gunny bags available in the schools as well as NGOs may be sold and used for other expenditure related to MDMS like purchase of eating plates for the children etc.
- It is recommended that the Schools should be notified about the revision of cooking cost i.e. Rs. 3.34 for Primary and Rs. 5.00 from Upper Primary from 1st July, 2013. Further NCLP Schools should be provided cooking cost and food grains as per Upper Primary norms.
- It is recommended that in pursuance of MDM Guidelines the foodgrains should be delivered at school doorstep.

➤ **Data entry into MDM MIS portal:**

It was observed that the data entry position is not satisfactory in both the Districts. The State may utilize MME funds to engage data entry operators at the District/Block level for the timely data entry into the MDM-MIS portal as same would help in regular monitor of the scheme at the grass root level. The monthly data should be entered on 10th day of every subsequent month.

- **Grievance Redressal mechanism:** The Mission recommends that the Grievance Redressal mechanism up to grass root levels may be set up and a the toll free number should be displayed at a prominent place in the schools in order to address the genuine

complaints of all stakeholders etc., and to make the scheme more responsive to the stakeholders.

- It is recommended that the frequency of the SMC meetings be increased and the implementation of MDM should be made a compulsory agenda and records for the same should be maintained to ensure the smooth running of the scheme.
- Inspection is an important component for smooth implementation of the Scheme at the grass root level. Regular inspection should be made mandatory by the State Government by different District and Block level officials. Effective monitoring mechanism should be developed by the State Govt. to ensure periodic inspection of the scheme by officials at all levels. Inspecting Officers should record their observations on the implementation of the Scheme. The PRI or SMC member or any government official can write their remarks/comments about their observations on MDM in school.
- Provisions of Social and Community Audits should be made by the government to evaluate the implementation of programme and to identify gaps, with the involvement of PRIs and S.M.C members. The process should begin with capacity building of the concerned persons for the purpose.
- Capacity building of all the stakeholders at every level is required for effective implementation of the MDMS. A module for school teachers on roles and responsibilities of teachers under MDM may be included in the training curriculum of the teachers under SSA highlighting the nutritional and health needs of the children. Training of the MDM in charge and the head masters on record keeping of MDM is necessary. Training of cook-cum-helpers should be further strengthened.
- A book of low cost nutritious recipes be developed keeping the profiles of different regions of the state in mind to ensure standardised intake of cereals, pulses and other food groups. To facilitate scaling up of the recipes a ready reckoner for cooking in varying quantities be developed.
- Certain amount may be earmarked from the MME fund for procurement of large containers for storing food grains in schools so that rats and other insects may not spoil the food grains.
- Introduce and promote healthy competition amongst the implementers of MDM mainly School Authority and Inspectors of schools by declaring award in the form of cash/kind.
- First Aid Box may be provided in all the MDM implementing schools.

- Installation of Mass Handwashing with Soap facility as being demonstrated in 100 schools of Rani and Rampur Blocks of Kamrup (R), be scaled up to all Government schools through MDM and/or SMC funds in a phased manner. This will ensure all children wash their hands with soap before eating mid-day meals.

Recommendations on health, hygiene and sanitation

1. Good hygiene is an important barrier to many infectious diseases and it promotes better health wellbeing. To achieve the greatest health benefits, improvements in hygiene should be made concurrently with improvement in the water supply and sanitation.
2. Short documentary may be developed on health and hygiene and activities related to these aspect and which may be sent to all schools through CDs to be shown to the children and guardians as part of campaign.
3. Proper hand washing is one of the most effective ways of preventing the spread of diarrhoeal diseases. Soap should be used for hand wash as cleansing and disinfecting agents. When running water is not there a clean bucket of water and a mug should be used and washing should be facilitated by a worker/student.
4. Detergents should be used for cleaning utensils to kill the pathogens.
5. Promoting good personal hygiene often requires that community workers are mobilized towards this goal and awareness is raised through various programmes.
6. Regular bathing and using washed/clean clothes are important for cleanliness and good personal hygiene and appearance.
7. Bathing with soap is an important means of preventing the transition of trachoma- an illness that can cause blindness and other eyesight problems.
8. Food hygiene should be maintained by avoiding contaminated food/raw ingredients. Food should be cooked in clean utensils with clean water and in a clean environment cooked food should be kept covered and serve to the students in a hygienic condition.
9. The staff involved in food preparation should maintain good personal hygiene. They should use clean head gear and apron.
10. In the absence of dining hall facilities, wherever classroom/verandas are in use for dining, proper cleanliness to be maintained.

Recommendations on diet-

1. Dietary quality needs to be improved to a great extent both in terms of quality and quantity. Amount of pulses for protein and vegetables for important vitamins and minerals should be increased which at present is below the RDA. Serving size is highly approximate. All head teachers/concerned MDM teacher should be asked to get cooked one unit of rice (100 g or 150 g) and one unit of sabji in school. They should measure the cooked amount in one vessel/serving device. This measure should be used to serve food as per norms.
2. Measures to weigh raw amount of food should be provided in the schools.
3. Incorporation of green leafy vegetables in MDM should be given importance, since green leafy vegetables are treasure house of many essential minerals and vitamins.
4. Promotion of nutrition garden in the school premises can be taken up for incorporation of vegetables in the MDM.
5. Consumption of local fruits should also be encouraged.
6. Nutrition education programmes for students, parents and teachers should be arranged on regular basis.
7. Some schools have developed good dining areas/ halls. Others make children sit in the class room or sit in the verandah or in open air. In these schools some better sitting arrangements should be made.

(The above recommendations may be implemented within a period of three months with a compliance report.)

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Sh. B.D. Shivani

Sh. Deepak Kumar Sarma

Dr. (Mrs) Daisy Bora Talukdar

Sh. Janki Kumar Pegu

Ms. Pramila Manoharan