

# Fifth Joint Review Mission Report: Odisha

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**Government of India**

**Ministry of Human Resource Development**

**Department of School Education & Literacy**



**मध्याह्न भोजन योजना  
Mid Day Meal Scheme**

**Report of 5<sup>th</sup> Joint Review Mission  
Mid-Day Meal Scheme**

**ODISHA**

***DISTRICTS: BALASORE & BHADRAK***

**(20<sup>th</sup> – 30<sup>th</sup> September, 2013)**

# **Fifth Joint Review Mission Report: Odisha**

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## **Acknowledgement**

The Joint Review Mission Team for the Fifth Review Mission –Odisha 2013-14 would like to thank the Government of Odisha for the support rendered in facilitating the Team to undertake the Review successfully.

The members of the Mission acknowledge and value the support and hospitality extended by the Secretary, School and Mass Education; the teachers working in the remote villages; the State office of the Mid-Day Meal Scheme; the kitchen staff working in the MDM kitchens; the Department of Health; SMC members and most importantly, the students of the sample schools.

The review team has made an earnest effort to include in the report the wide range of observations and discussions held at various levels with key officials and other stakeholders. It sincerely hopes that the recommendations that have emerged through this multi-pronged exercise would help the Government of Odisha in strengthening the implementation of the Mid-Day Meal Scheme in schools and ensure that every school going child avails its right to nutritious food in the State.

**The JRM Team**

**30<sup>th</sup> September, 2013**

## Chapter – 1 Executive Summary

### 1.1 Background

#### 1.1.1 Background of MDM –A Brief Note

It is an incontrovertible fact that the school meal programme exert a positive influence on enrolment and attendance in schools. A hungry child is less likely to attend school regularly. Hunger drains them of their will and ability to learn. Chronic hunger can lead to malnutrition. Chronic hunger also delays or stops the physical and mental growth of children. Poor or insufficient nutrition over time means that children are too small for their age, and susceptible to diseases like measles or dysentery, which can kill malnourished children. Subsequent to the landmark intervention by the Supreme Court of India, a directive was issued making it mandatory for the state governments to provide cooked meals instead of dry rations.

The Mid- Day Meal (MDM) Scheme is a flagship program of the Government of India. It has the distinction of being the largest school feeding program in the world, reaching out to about 10.68 Crore children in 12.12 lakh primary and upper primary schools (Government, Government Aided and Local bodies), Education Guarantee Scheme (EGS) / Alternative Innovative Education (AIE) centres and Madarsa and Maqtabas supported under Sarva Shiksha Abhiyan (SSA) as well as the National Child Labour Project (NCLP) schools. In drought-affected areas MDM is served during summer vacation also.

#### 1.1.2 Background of JRM - A Brief Note

A program of the scale and magnitude of Mid Day Meal Scheme requires close monitoring and evaluation at all levels. In 2010, the Ministry of Human Resource Development, Govt. of India, decided to review implementation of the program in all its aspects through the Review Missions, which are also to provide suggestions for improvement.

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## **1.1.3 Brief on Previous JRM – Findings and Recommendations**

**The Fourth Review Mission visited districts Bolangir, Kalahandi and Puri in Odisha during 16th to 21th February, 2012. The major findings were:**

- a. The Review Mission observed that, Mid-Day Meal Scheme is not being monitored effectively due to lack of proper organizational structure at the Directorate, District, Sub-district and the school level.
- b. The Review Mission also observed that on-line Management Information System (MIS) is not available in Odisha for capturing real time data on Mid day meal scheme.
- c. The Review Mission observed that the State has engaged one cook and one helper in each of the schools irrespective of their enrolment.
- d. The Review Mission also observed that the honorarium to cook and helpers are being paid in cash in Bolangir district and through bank in Kalahandi district by the school/BDO. The honorarium to Cook-cum-Helpers has been paid up to September, 2011 in most of the visited schools but a few schools had paid the honorarium up to December, 2011. The State Government should also ensure that the payment is made to Cook-cum-Helpers by e-transfer of funds to their bank accounts.

## **Suggestions of the Fourth JRM**

- Filling up of posts on deputation/contractual basis.
- Providing mobility facilities to the officers at various levels.
- Provision of Computers, internet facility, mobiles etc., to the officials
- Transfer of funds from Department of WCD to School & Mass Education Department on priority basis.
- Rationalization of fund flow by reducing the intermediate levels i.e. block level.
- Timely availability of funds to the schools,
- Opening of accounts in CBS branch.
- Payment of honorarium to the Cook-cum-helpers through their bank accounts in CBS branches.
- Involvement of SHG / VEC managed by women especially the women from the weaker and disadvantaged section of the society should be given priority

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in the implementation of MDM. Involve School Management Committees/Noon Feeding Committee in the implementation, monitoring and social audit of the Scheme.

- Use of the Management Information System integrated with IVRS being developed by MHRD.
- Setting up of State level Joint Review Mission to review the Scheme in a district on quarterly basis.
- Training module and material for imparting training to functionaries at various levels and cook-cum-helpers may be organized in consultation with UNICEF and corporate bodies under Corporate Social Responsibility (CSR).
- The curriculum for source books for primary and upper primary levels is prepared by NCERT. The States should now ensure that a chapter on mid-day meal scheme is included in the text books of all classes of elementary school.
- The Mission recommends a deeper review of the construction of kitchen- cum stores to ensure creation of infrastructure facilities by 2012-13, a mandate under RTE Act.
- Promotion of Gas based and use of energy from the Renewable Non - Conventional Energy Resources for cooking MDM.
- Discourage wood based cooking for creating pollution free environment.
- Promotion of use of smokeless chulha. Use of MIS system in online registration of complaints of the stakeholders and its redressal.
- Suggestions from Idea box may be evaluated on priority basis for taking necessary appropriate action

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## 1.2 Key observations of Fifth JRM 2013

- **Some of the major problems are as under:**

- 1) Lesser engagement of Cook-cum-Helpers against norms.
- 2) Delay in construction of kitchen-cum-stores.
- 3) Non-use of majority of the constructed kitchens.
- 4) Lack of awareness about the child's entitlements of mid day meal amongst functionaries and community.
- 5) Roles and responsibilities not clear to the District, Block and Cluster level functionaries.
- 6) Information available at MDM-MIS not being utilised for effective monitoring.
- 7) Cumbersome record keeping with too many registers being maintained at school level for MDMS.

## 1.3 Major Recommendations of the fifth Review Mission

1. **Cook-cum-Helpers:** State Govt. should engage adequate number of cook-cum-helpers in the schools as per norms.
2. Sensitisation of officials at District and Block level towards their role and responsibilities in the MDMS.
3. Non-use of pucca kitchen-cum-stores is also needs to be looked into. As these pucca kitchens are used as head teacher room in many schools and food is being cooked in make shift Kitchen sheds that do not provide adequate protection from insects and reptiles.
4. Completion of already sanctioned kitchen-cum-stores in time bound manner.
5. Testing of drinking water for any type of biological contamination and remedial purification.
6. State should use the information available with MDM-MIS for focused inspections and monitoring.
7. The gunny bags used for food grains can be auctioned and the amount can be utilized for better implementation of MDMS.

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8. The meals should be more nutrient dense and nutritionally balanced. Inclusion of higher amounts of non tuber vegetables is recommended.
9. Keeping in view the congenial weather some trees such as banana, papaya and, moringa may grown for supply of fresh/leafy vegetables to make meals nutritionally rich. Similarly, pokhars may be used to rear fish that may be used in addition to or replace eggs in the menu once a week.
10. A concerted effort for Health and Nutrition Education (HNE) is required for children, parents, teachers, cooks and caretakers. Feeding program along with HNE, may prove more effective in improving the health and nutritional status of the children.
11. Non-use of pucca kitchen-cum-stores also needs to be looked into. In many schools these pucca kitchens are used as head teacher's room and food is being cooked in make shift Kitchen sheds that do not provide adequate protection from insects and reptiles.
12. Since one reason for non usage of kitchens is the poor ventilation leading to unbearable smoke build up, the State needs to adopt and encourage the use of LPG.
13. Completion of already sanctioned kitchen-cum-stores in a time bound manner may be undertaken for cooking mid day meals in a clean and hygeinic enviroment.
14. State should use the information available with MDM-MIS to evaluate the performance and for focused inspections and monitoring.
15. The State Govt. should engage adequate number of Cook-cum-Helpers in the schools as per norms. There is need to educate the cooks regarding proper weighment of raw ingredients. Use of weighing balance is recommended for weighing raw ingredients so that children receive prescribed amounts of nutrients.

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- 16.** The rights and entitlement of children, menu, MDM logo, and emergency contact numbers should be displayed prominently on the outside wall of the schools.



## Chapter – 2 Joint Review Mission

### 2.1 The JRM Context

**Nutrition and health are the pre-requisites for human resource development. Our planners have been aware of these vital inputs and enshrined it in Article 47 of the Constitution. “The State shall regard raising the level of nutrition and standard of living of its people and improvement in public health among its primary duties.”**

In developing countries, children and adults are vulnerable to malnutrition because of low dietary intakes, infectious diseases, lack of appropriate care, and inequitable distribution of food within the household. Malnutrition in children is the consequence of a range of factors that are often related to poor food quality, insufficient food intake, and severe and repeated infectious diseases, or frequently some combinations of the three. These conditions, in turn, are closely linked to the overall standard of living and whether a population can meet its basic needs, such as access to food, housing and health care. Nutrition is directly linked to human resource development, productivity and ultimately to the nation's growth. Malnutrition on the other hand is a complex phenomenon. It is both the cause and effect of poverty and ill health: and follows a cyclical, inter-generational pattern. It is inextricably linked with illiteracy, especially female illiteracy, lack of safe drinking water, sanitation, ignorance, lack of awareness and ill health. It creates its own cycle within the large cycle of poverty. Malnutrition adversely affects UEE. Even if a malnourished child does attend school, he/she finds it difficult to concentrate on and participate in the learning activities in school. Unable to cope, the child would very often drop out of school.

The nutritional status of children is strongly related to maternal nutritional status. Under nutrition is much more common among children of mothers whose body mass index is below 18.5 than for children whose mothers are not underweight. All of the measures decrease steadily with an increase in the wealth index of the household. Children from households with a low standard of living are twice as likely to be undernourished as children from households with a high standard of living. Inadequate nutrition is a problem throughout India, but the situation is considerably better in some states than in others.

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## Percentage of children under age five years classified as malnourished according to three anthropometric indices of nutritional status: Odisha

Height for Age			Weight for age			Mean	Weight for age			
Percentage below -3 SD	Percentage below -2 SD1	Mean Z-score (SD)	Percentage below 3 SD	Percentage below -2 SD1	Percentage Above +2 SD	Mean Z-score (SD)	Percentage below-3 SD	Percentage below -2 SD	Percentage above +2SD	Mean Z-score (SD)
19.6	45.0	-1.7	5.2	19.5	1.7	-1.0	13.4	40.7	0.5	-1.7

Source NFHS-III, 2005-06

Various studies suggest that the absence of an adequate breakfast, over an extended period can affect both behavior and nutritional status; such children exhibit irritability, decreased attentiveness and low concentration span, all of which affect their active learning capacity. Malnutrition is therefore not just an issue for the nutritionist; the planners and economists also need to recognize that the cost of malnutrition is much greater than the investments required to end hunger/malnutrition.

A programme of the scale and magnitude of Mid Day Meal requires close monitoring and evaluation at all levels. In 2010, the Ministry of Human Resource Development, Govt. of India, decided to review implementation of the programme in all its aspects through the Review Missions, comprising of experts from various areas and representatives of MHRD and State Governments. The Review Mission visits schools in 2 districts in the State and presents their report to State and Central government.

### 2.1.1 Terms of Reference of the JRM

The Terms of Reference for the Review Mission were as under:

- (i) Review the system of fund flow from State Government to Schools/cooking agency and the time taken in this process.
- (ii) Review the management and monitoring of the scheme from State to School level.

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- (iii) 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.
- (iv) Role of teachers
- (v) Convergence with School Health Program (SHP) for supplementation of micronutrients and health check-ups and supply of spectacles to children suffering from refractive errors.
- (vi) Creation of capital assets through kitchen-cum-store/kitchen devices
- (vii) Appointment of Cook-cum-Helpers for preparation and serving of meal to the children
- (viii) Availability of dedicated staff for MDM at various levels
- (ix) Review the maintenance of records at the level of school/cooking agency.
- (x) Review the availability of infrastructure, its adequacy and source of funding.
- (xi) Review of payment of cost of food grains to FCI by the districts
- (xii) Review the involvement of NGOs/Trust/Centralized kitchens by States/UTs Government in implementation of the Scheme.
- (xiii) Management Information System (MIS) from school to block, district and State Level to collect the information and disseminate it to other stakeholders
- (xiv) Assess the involvement of Community' in implementation of MDM scheme
- (xv) Review of status of MIS integration with IVRS for monitoring of the Scheme
- (xvi) Review of the status of tasting of the meal by at least one teacher.
- (xvii) Review of status of Safe storage and proper supply of ingredients to schools.
- (xviii) Review of the status of Awareness about Mid- Day Meal Scheme.
- (xix) Review of status of convening of Monitoring Committee under the Chairmanship of Member of Parliament
- (xx) Review of the convening of regular review meetings at District level.
- (xxi) Review of the status of testing of food samples by reputed institute.
- (xxii) Review of the status of Emergency Medical Plan

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## Terms of Reference for Nutritional Status

1. To assess 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 review the quality and quantity of the served MDM.
5. To review the satisfaction of the children parents and community on the served meal under MDM in respect of quality and quantity.
6. To suggest some nutritionally balanced region specific recipes.
7. To assess the ways for better convergence with School Health Program

## 2.2 Composition of JRM – Team Members

1. **Dr Neelam Grewal**, Director, Directorate of Research on Women in Agriculture (DRWA), ICAR, Bhubaneswar, Odisha (Mission Leader)
2. **Shri Rajiv Kumar**, Under Secretary, Ministry of Human Resource Development, Government of India
3. **Shri Gangadhar Sahu**, State Nodal Officer - MDM, Govt. of Odisha
4. **Shri Rajkishore Mishra**, Advisor to the Commissioners of Supreme Court
5. **Dr P K Acharya**, Nodal Officer, N K C Centre for Development Studies, Bhubaneswar, Monitoring Institution for Odisha
6. **Dr Abha Singh**, Scientist (SS), Food & Nutrition, DRWA, Bhubaneswar

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7. **Shri Bhupendra Kumar**, Consultant (Plan Monitoring), NSG-MDM, Ed.CIL.

8. **Dr Anindita Shukla**, Consultant (Food & Nutrition), NSG-MDM, Ed.CIL.

### Co-Team Members

1. **Ms Gayatri Mohrana**, Scientist, DRWA, Bhubaneswar

2. **Ms Suchismita Dash**, Research Assistant

3. **MS Sagarika Bisoyi**, Research Assistant

4. **Ms Nimisha Das**, Research Assistant

### 2.3 Methodology

#### 2.3.1 Planning & preparation for the JRM

A detailed schedule of activities for the JRM was planned and prepared for the field visits and meetings with the officials at different levels. The team was divided in two sub teams for a larger coverage of schools and children. The team visited a total of 41 schools, 20 schools from district Bhadrak and 21 from Balasore.

#### Detailed schedule of the JRM

Date	Activity
20.09.2013	<ul style="list-style-type: none"><li>◆ <i>Arrival of Review Mission at the State Headquarter in the morning</i></li><li>◆ <i>Field visit in district one (Selected by State Govt.)</i></li><li>◆ <i>Return to Headquarters (Bhubaneswar)</i></li></ul>
21.09.2013	<ul style="list-style-type: none"><li>◆ <i>Field visit in district one</i></li><li>◆ <i>Return to headquarters</i></li></ul>
22.09.2013	<ul style="list-style-type: none"><li>◆ <i>Data entry and report writing</i></li></ul>
23.09.2013	<ul style="list-style-type: none"><li>◆ <i>Field visit in district one</i></li><li>◆ <i>Departure for district two</i></li></ul>
24.09.2013	<ul style="list-style-type: none"><li>◆ <i>Field visit in district two</i></li></ul>
25.09.2013	<ul style="list-style-type: none"><li>◆ <i>Field visit in district two</i></li><li>◆ <i>Meeting with District Magistrate</i></li></ul>

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26.09.2013	<ul style="list-style-type: none"><li>◆ <i>Field visit in district two</i></li><li>◆ <i>Return to Headquarters</i></li></ul>
27.09.2013	◆ <i>Report preparation at State Headquarter</i>
28.09.2013	◆ <i>Report preparation at State Headquarter</i>
29.09.2013	◆ <i>Report preparation at State Headquarter</i>
30.09.2013	◆ <i>Presentation and submission of the Review Mission Report before State Government (afternoon)</i>

### 2.3.2 Methodology

#### i. Selection of districts

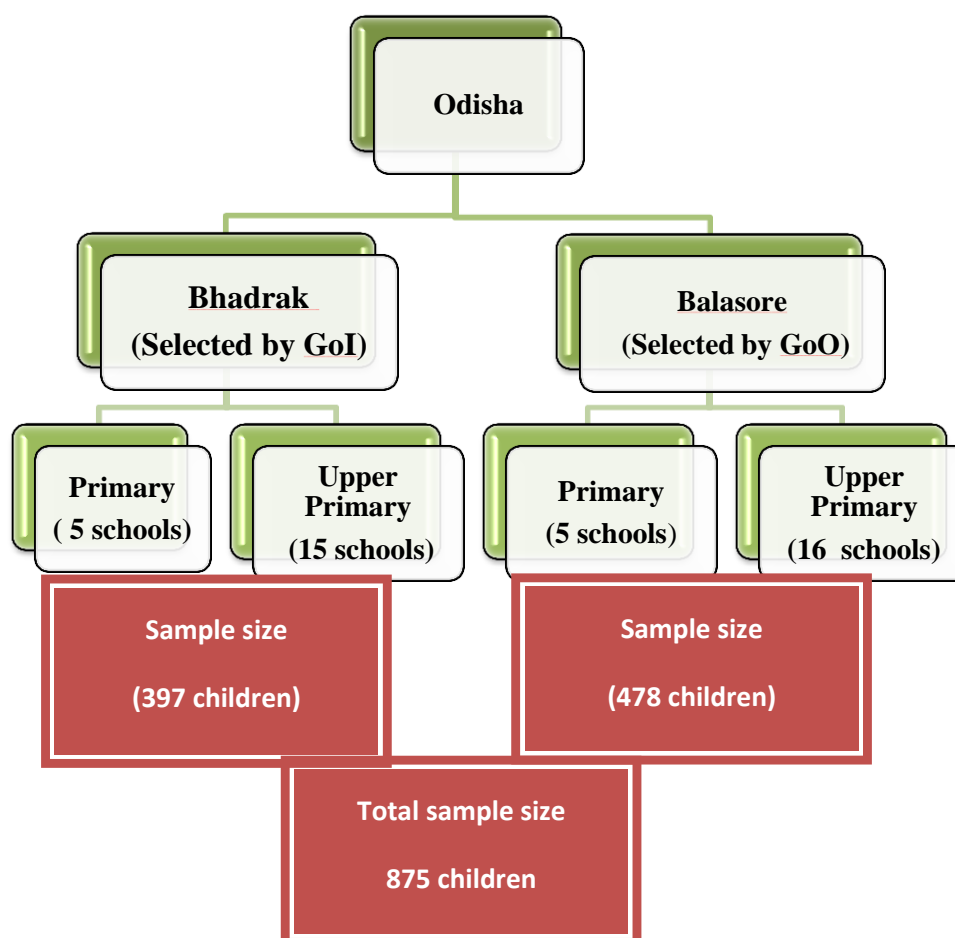
Two districts of Odisha, namely Bhadrak and Balasore, were selected for the visit of JRM. District Balasore was selected by the Govt. of India on the basis of performance of the Scheme during the last year and the second district i.e. Bhadrak was selected by the State Govt.

#### ii. Sampling design

The Review Mission followed a multistage sampling design to capture the intricacies involved in the implementation of the programme. From each of the two districts 4-5 blocks were selected and from each block 2-4 schools were selected randomly.

A sample of 875 children from 10 primary (I - V class) and 21 upper primary schools (VI-VIII class) from the two selected districts of Odisha viz. Bhadrak and Balasore, were randomly selected for assessment of nutritional status. It comprised of 424 girls and 451 boys. A multi stage, random sampling design was used for the selection of schools and the children in the selected district

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## Multi Stage Sampling Design for Nutritional Assessment

### iii. Information collected from schools

- a. **Primary Data** - Primary data were collected from the schools through a detailed schedule. The data on display of information regarding MDM, the number of children enrolled and the number of children attending the school as well as the number of children availing MDM was collected. Information on the infrastructure facilities, community participation, tasting of meal by teachers, engagement of Cook-cum-Helpers, utilisation of foodgrains and funds, etc. was also collected. For nutritional assessment data was collected on height, weight, food pattern and clinical symptoms of micronutrient deficiency.

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- b. Secondary Data** - The documents available with the implementing agencies were carefully studied and analyzed. Detailed discussions were held with the State, District, block and school level functionaries.
- c. Miscellaneous Tools** - During the visit to schools interview with stakeholders, observations, focused group discussions and record based inquiry methodology was followed to capture the information on the performance of the scheme.
- d. Anthropometric measurements** - Nutrition anthropometry is one of the most important tool used for assessing the health and nutrition status of a population. The physical dimensions of the body are influenced by nutrition/ during the growing period of school age. Height and weight are the most commonly used anthropometric measurements. The related indices generally used to assess nutritional status of the children are height for age, weight for age and body mass index for age which are age and gender dependent. The height and weight of selected children was measured using standard methods (Jelliffe, 1966).

Height was measured using an anthropometric rod. It was recorded to the nearest  $\pm 0.1$  centimeters. The height was taken with the child standing erect on a flat surface without shoes, with his/her arms hanging naturally at the sides. The child held his head in a comfortably erect position, with the lower border of the eye in the same horizontal plane as the external auditory meatus. A scale was held over the child's head without much pressure in the sagittal plane (central part of head). The height was then converted to meters for calculating the body mass index (BMI).

The weight of children was taken on spring based electronic balance having an accuracy of  $\pm 100$  g. In order to obtain accurate results, an area in the classroom was selected which was away from the wall. The weighing scale was placed on a flat and even surface. Since it was not feasible, to take weight with minimal clothing, it was taken while the child was wearing the school uniform but without shoes. Each child was requested to stand straight i.e. without any support and not move while the reading was being noted.



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The Body Mass Index (BMI) or Quetlet's Index is a statistical measure of the weight of a person scaled according to height (WHO, 2003). BMI is a reliable indicator of body fatness for most children. The Body Mass Index (BMI) of the selected children was calculated using the following equation given by Garrow (1981):

$$\text{BMI} = \text{Weight} / \text{Height}^2$$

where the weight is in kilogram and the height is in meters.

The height, weight and BMI were analyzed for Z - scores using WHO Global Database on Child Growth and Malnutrition (WHO, 2006).

Based on their Weight for Age (WAZ) and Height for Age (HAZ), the selected children were classified into normal (-2SD to +1SD), undernourished (< -2SD) and overweight (+1SD to +3SD) categories. Similarly, based on their BMI Z-scores, the children were classified into the following categories:

**Table: Nutritional Status Classification of Children According to Body Mass Index (WHO, 2006)**

Categories of BMI	Z Scores
Normal	-2SD to +1SD
Moderately undernourished	-2SD to -3SD
Severely undernourished	< -3SD
Overweight	+1SD to < +3SD
Obese	≥ +3SD

From the full Body Data, commonly used undernutrition indicators viz underweight, stunting and thinness have been employed to evaluate nutritional status of the children. Thus, in the current analysis WAZ, HAZ & BAZ indices have been used.

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**Underweight:** A child, who is 15-20% below the normal weight for his age and height, is classified as underweight. Underweight reveals low body mass relative to chronological age which is influenced by both, height and weight of the child.

**Stunting:** According to World Health Organization stunting refers to insufficient gain of height relative to age (WHO, 1995). It is an indicator of chronic under nutrition and is the result of extended periods of inadequate food intake or increased morbidity or a combination of both.

**Thinness:** It is an indicator of acute under nutrition, the result of most recent food deprivation or illness (Bose et al, 2008). It is defined as body weight significantly below the weight expected of a child of same length or height.

### IV. Evaluation of MDM

**Serving Size of Mid Day Meals:** The serving size of MDM on the day of the visit was observed to determine the quantity of energy and nutrients present. The usual portion size being served to children on the day of visit was weighed on a spring balance having an accuracy of +10 grams. In order to minimize variation, two serving portions of each dish were weighed separately. The weight of plate or tiffin box, etc. was subtracted from the total weight.

**Sensory Evaluation of MDM:** The colour, texture, taste, flavor and mouth feel determine the acceptability of a meal. The mid day meal being served on the day of visit was evaluated for the sensory attributes such as consistency of dal/Khichdi. The JRM members also conducted a qualitative sensory evaluation as and when possible.

**Water testing:** The drinking water was tested for its potability using Water Testing kits developed by Punjab Agricultural University, Ludhiana. Water from the source was put directly into the kit bottle containing the reagent which was put aside after duly coding. The sample was observed for any color change and turbidity over 48 hours that denoted presence of coliforms.

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## **Chapter – 3 The Mid-Day Meal Scheme in Odisha**

### **3.1 Historical perspective of MDM implementation in the State (In brief)**

In Odisha, the Cooked Mid-day Meal was initiated in 2001-2002 for the children in all Govt. and Govt.-aided Primary schools only in the rural areas of the 8 KBK districts (80 Blocks including 44 ITDA Blocks) and in 74 ITDA Blocks of the Non-KBK districts. As regards the other districts of the State, dry ration, @ 3 kgs. of rice per beneficiary per month was being supplied. During the year 2002-03, the cooked meal system under the MDM Programme was also extended to the Primary school children in the backward district of Boudh w.e.f. 01.04.2002. Thus, 157 Blocks out of the 314 Blocks in the State were covered under the 'dry ration system' till 31.08.2004. Since 01.09.2004 cooked meal at noon time is being provided to all students of all the Govt./Govt.-aided Primary Schools, EGS & AIE Centres. The scheme was Further extended to Upper Primary school children from 1st October, 2007 and from 2010-11 for NCLP schools.

### **State Profile**

Odisha, formally known as Orissa, is an Indian state on the subcontinent's east coast, by the Bay of Bengal. It is surrounded by the Indian states of West Bengal to the north-east and in the east, Jharkhand to the north, Chhattisgarh to the west and north-west and Andhra Pradesh to the south. It is the modern name of the ancient kingdom of Kalinga, which was invaded by the Mauryan Emperor Ashoka in 261 BCE. The modern state of Orissa was established on 1st April 1936, as a province in British India and consisted predominantly of Oriya speakers. 1st April is therefore celebrated as Utkala Dibasa (foundation day of Odisha). Cuttack remained the capital of the state for over eight centuries until 13th April 1948 when Bhubaneswar was officially declared as the new state capital, a position it still holds.

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## District Map of Odisha



Odisha is the 9th largest state by area in India, and the 11th largest by population. Oriya (officially spelled Odia) is the official and most widely spoken language, spoken by three quarters of the population. Odisha has a relatively unintended coastline (about 480 km long) and lacked good ports, except for the deepwater facility at Paradip, until the recent launch of the Dhamara Port. The narrow, level coastal strip, including the Mahanadi river delta supports the bulk of the population

**Table – 1 Vital Statistics related to Odisha**

Sl. No.	Description	2011
1	Population	41974218
2	Male	21212136
3	Female	20762082

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4	Population Growth	13.97
5	Density/km <sup>2</sup>	270
6	Sex Ratio (Per 1000)	979
7	Average Literacy (7+ yrs)	72.87
8	Male Literacy (7+ yrs)	81.59
9	Female Literacy (7+ yrs)	64.01
10	Literates (7+ yrs)	26742595
11	Male Literates (7+ yrs)	15089681
12	Female Literates (7+ yrs)	11652914

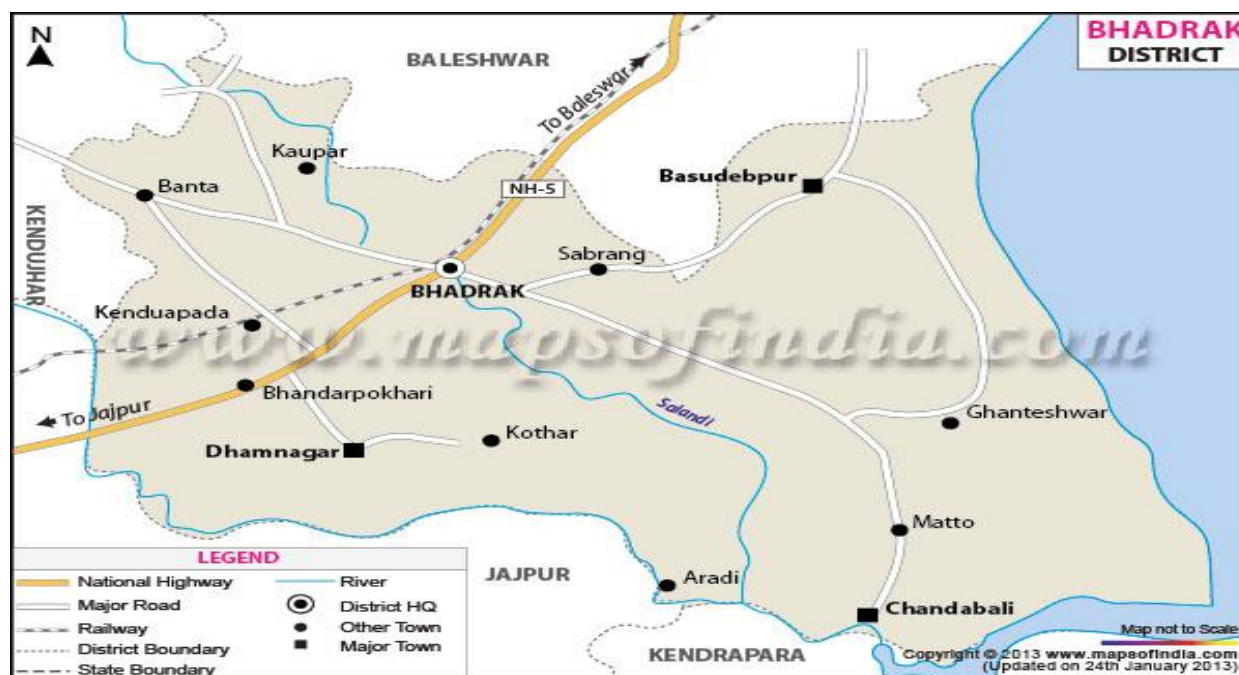
### 3.2 District Profile – Bhadrak

The legendary history of Bhadrak District dates back to the age of the Puranas when Odisha achieved thriving maritime and agrarian prosperity. As far as the history is concerned, king Mukunda Dev was the last sovereign indigenous ruler of Bhadrak. The Muslim population began to settle in the District around the year 1575 following the discomfiture of the Afghans under Usman at the hand of Raja Man Singh.

During the Mughal period Bhadrak District survived as a Subha under the Nawabs of Bengal. When the majestic Muhgals diminished from the political scenario of Bhadrak District. In course of time Bhadrak District has passed on to different hands and colonized by different dynasties till the British occupied the entire region of Odisha.

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## District Map of Bhadrak



Since independence, the history of Bhadrak has been the history of multifarious progress in Education, Industry, Agriculture, Trade and commerce and with the birth of a new star it is leaping towards the twenty first century with hope and promise

Table – 2 Vital Statistics related to district Bhadrak

Sl. No.	Description	2011
1	Population	1506337
2	Male	760260
3	Female	746077
4	Average Literacy (7+ yrs)	82.8 %
5	Male Literacy (7+ yrs)	89.6 %
6	Female Literacy (7+ yrs)	75.8 %

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7	Literates (7+ yrs)	1094140
8	Male Literates (7+ yrs)	596269
9	Female Literates (7+ yrs)	497871

### 3.3 District Profile – Balasore

Balasore district was part of the ancient Kalinga which later became a territory of Toshala or Utkal, till the death of Mukunda Dev. It was annexed by Moghuls in 1568 and remained as a part of their suzerainty up to the middle of eighteenth century, to be precised up to 1750-51. Then the Marahattas occupied this part of Odisha and it became a part of the dominion of the Marahatta Rajas of Nagpur.

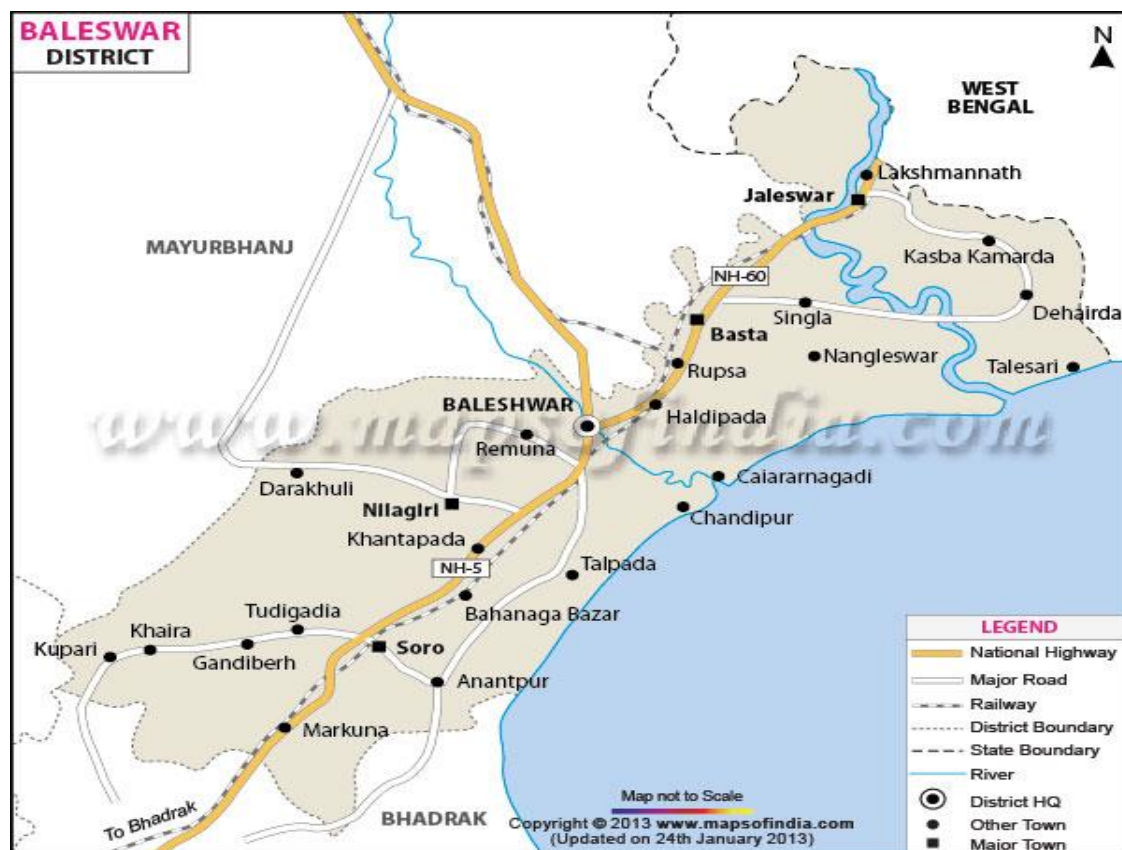
The East India Company ceded this part through a treaty called treaty of Deogaon in 1803 and it became a part of Bengal Presidency up to 1912. But the first English Settlement came into existence in Balasore region in 1634 while Sahajahan was the emperor at Delhi. The first of English factories was established in this region in 1640. During this period Dutch and Danish settlements were also founded in this region. Balasore as a separate district was created in October, 1828 while it was in the Bengal Presidency.

The national movement of independence surged ahead with the visit of Mahatma Gandhi in 1921. Similarly Praja Andolan was initiated against the ruler of Nilagiri State. The state of Nilagiri merged with state of Odisha in January, 1948 and became a part of Balasore district. In 3rd April, 1993 Bhadrak Sub-division became a separate district and from this day Balasore remains a district of Odisha with two Sub-divisions namely Balasore and Nilagiri having 7 Tahasils namely Balasore, Soro, Simulia, Nilagiri, Jaleswar, Basta & Baliapal and 12 Blocks namely Bhograi, Jaleswar, Baliapal, Basta, Balasore, Remuna, Nilagiri, Oupada, Khaira, Soro & Bahanaga. The name of the district is being derived from the name of the town, which is old and important. The name Balasore is recognised from the Persian word BALA-E-SHORE which means "TOWN IN THE SEA". The historical legend ascribes that the district has been

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named as per the LORD BANESHWAR (LORD SHIVA) of the town., which subsequently changed to Balasore during MUGHUL Rules.

### District map of Balasore



**Table – 3 Vital Statistics related to district Balasore**

Sl. No.	Description	2011
1	Population	2320529
2	Male	1185787
3	Female	1134742
4	Average Literacy	79.8
5	Male Literacy	87.0
6	Female Literacy	72.3
7	Literates	1621232
8	Male Literates	902359



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9	Female Literates	718873
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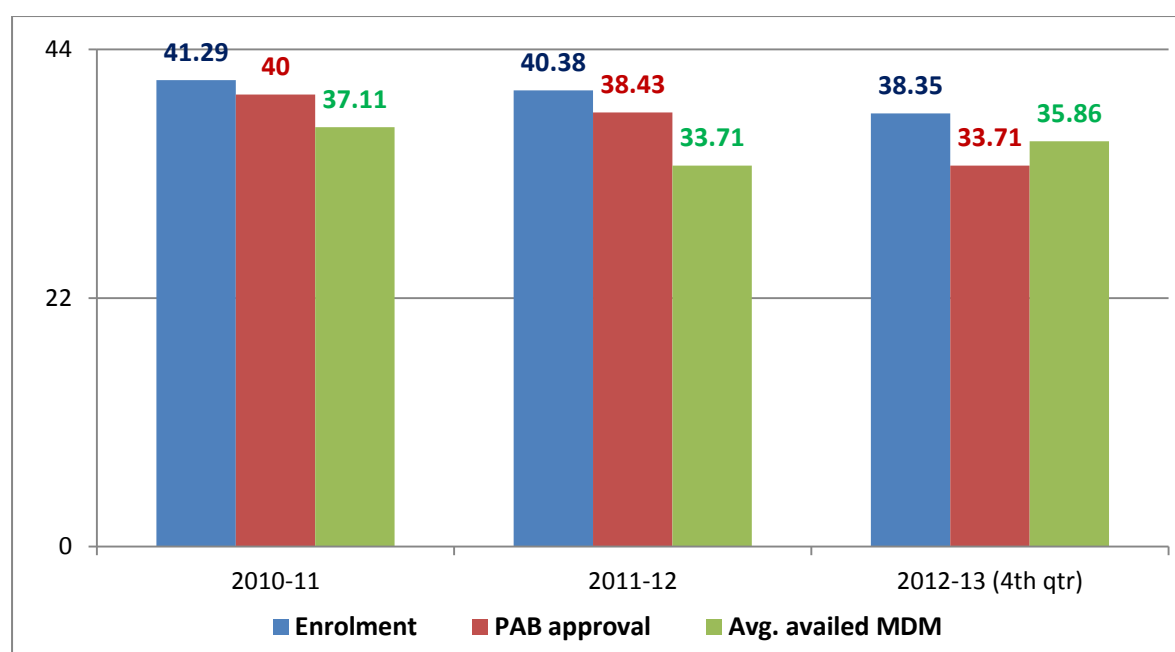
### 3.4 Review of performance: Physical and financial (2009-10 to 2012-13)

#### 3.4.1 Coverage of children: Primary

A perusal of the figures given in the table below shows a constant decreasing trend of enrolment between 2010-11 to 2012-13. The coverage of children under MDM has registered a sharp decline from 2010-11 to 2011-12. Although coverage has improved during 2012-13, and is the highest in terms of percentage of enrolled children covered, it is still well below what it was during 2010-11 in terms of absolute numbers.

Primary					
Year	Enrolment	PAB approval	Avg. availed MDM	% availed vs. Enrol.	% availed vs PAB approval
2010-11	4129953	4000000	3711317	90	93
2011-12	4038760	3843406	3370951	83	88
2012-13 (during 4 <sup>th</sup> qtr)	3835632	3642500	3586563	94	98

**Graph : Trends of enrolment and Average number of children availing MDM : Primary**



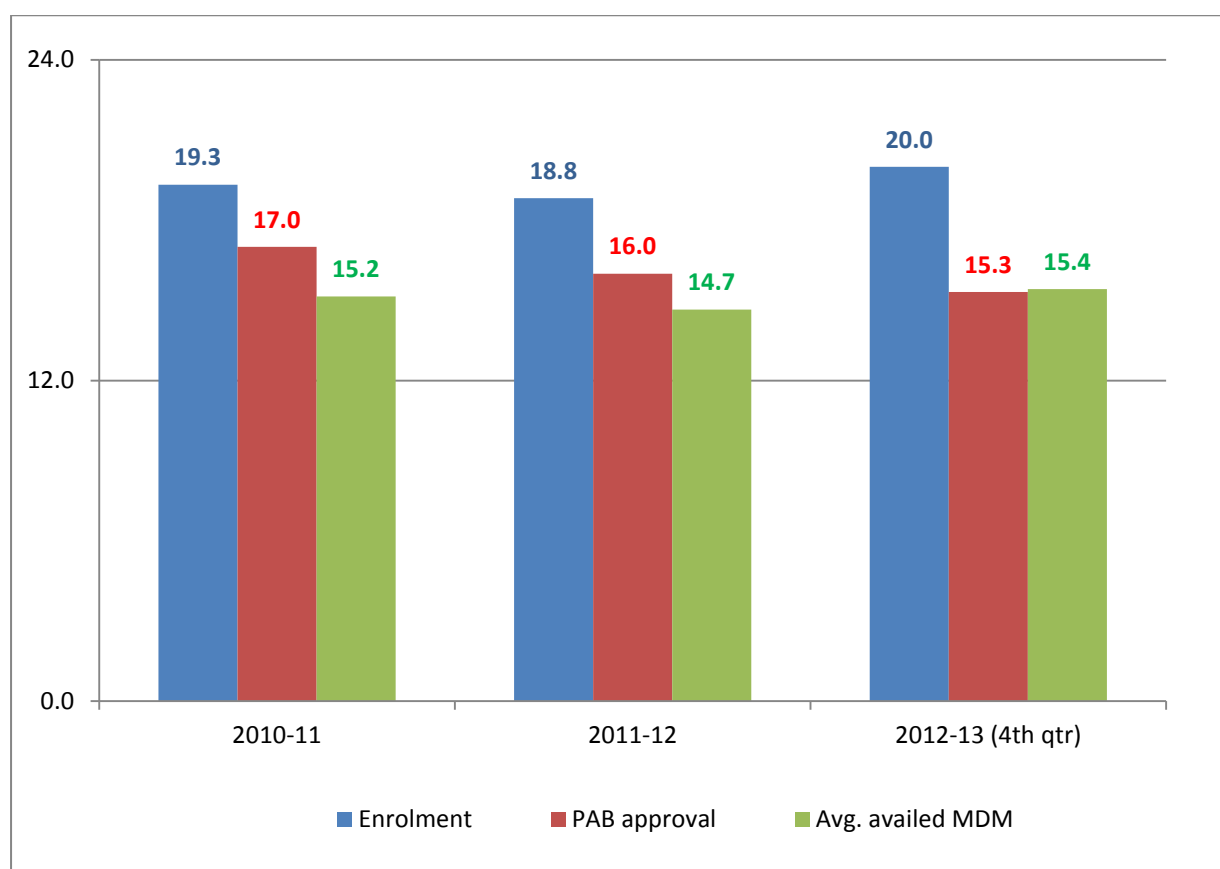
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### 3.4.2 Coverage of children: Upper Primary

In the upper primary section both enrollment and coverage of children has gone up. Thus performance in terms of coverage of children has improved.

Upper Primary					
Year	Enrolment	PAB approval	Avg. availed MDM	% availed vs. Enrol.	% availed vs PAB approval
2010-11	1933347	1700000	1515835	78	89
2011-12	1882928	1600000	1466110	78	92
2012-13 (during 4th quarter)	2006030	1532900	1542619	77	101

**Graph: Trends of enrolment and Average number of children availing MDM: Upper Primary**



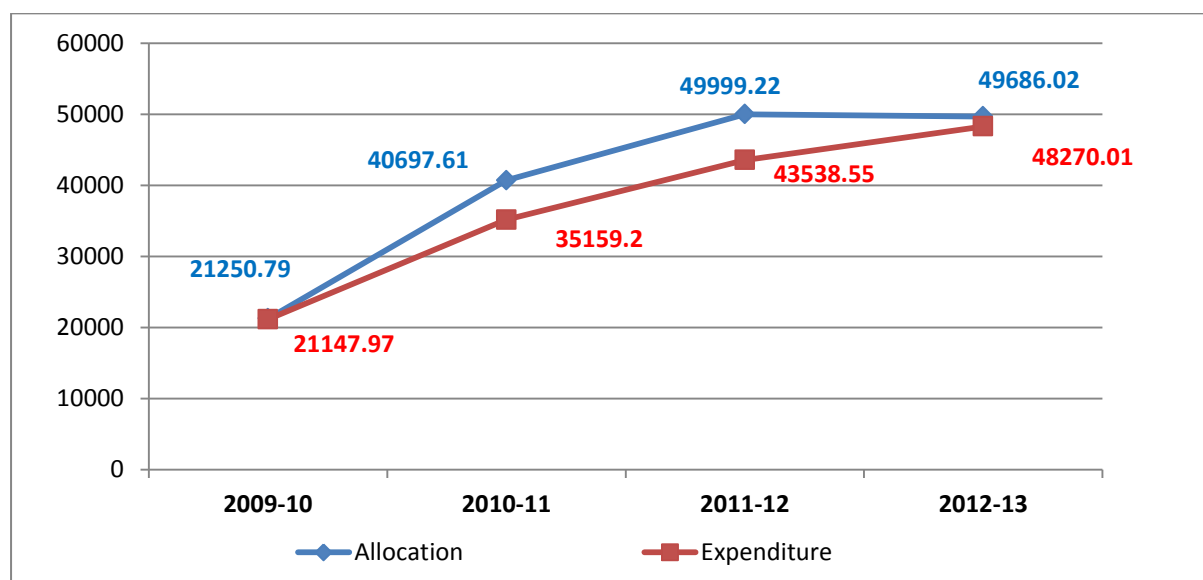
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### 3.4.3 Utilisation of Cooking Cost

Utilisation of cooking cost is directly linked with the quality and quantity of meals served under MDMS. State Govt. has utilised more than 95% of the allocated funds for cooking cost.

(Rs in lakh)

Cooking Cost	2009-10	2010-11	2011-12	2012-13
Allocation	21250.79	40697.61	49999.22	49686.02
Expenditure	21147.97	35159.20	43538.55	48270.01



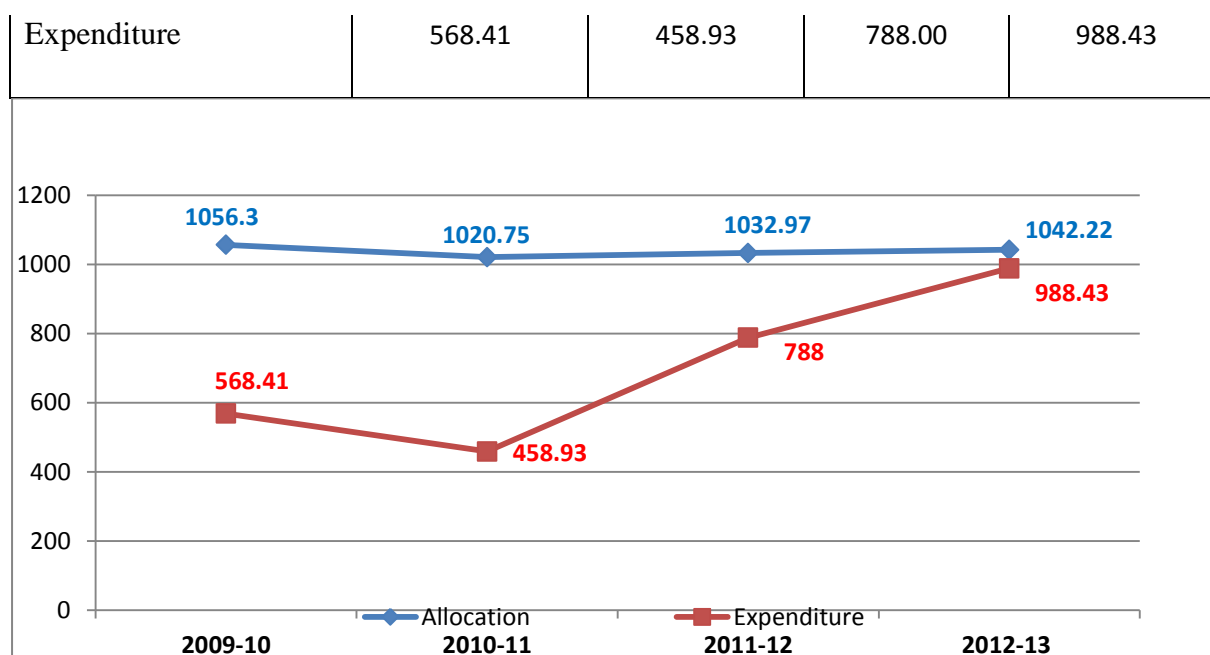
### 3.4.4 Utilisation of Transportation Assistance

Funds are provided to the State for transporting of food grains from the FCI godown to the school door steps @ Rs. 7500/- per MT. The information given in the table below reveals that the utilisation of transportation assistance has improved during 2011-12 and 2012-13.

(Rs. in lakh)

Transportation Asst.	2009-10	2010-11	2011-12	2012-13
Allocation	1056.30	1020.75	1032.97	1042.22

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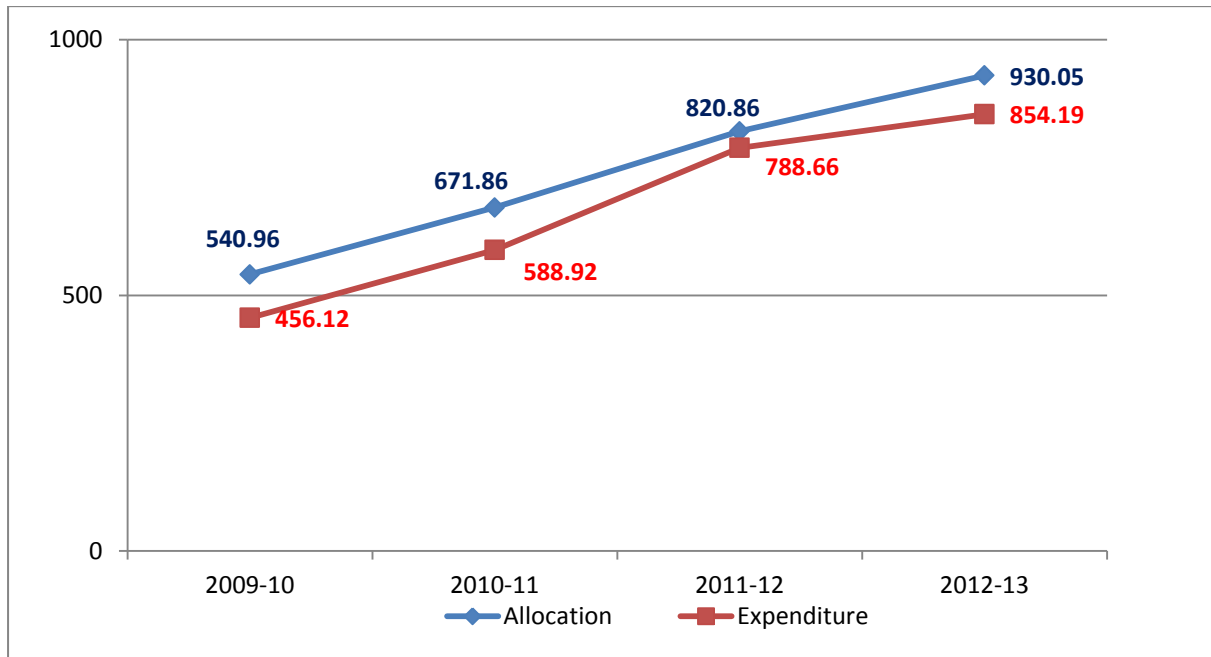
### 3.4.5 Utilisation of Management Monitoring and Evaluation (MME)

Monitoring is a very crucial area for a scheme like Mid Day Meal. Govt. of India provides 1.8% of the total recurring grant to the States towards Management, Monitoring and Evaluation funds. Utilisation of these funds has a direct reflection on the health of scheme in the State. The analysis of utilization of funds allocated towards MME reveals that these funds have never been fully utilized, although the utilization percentage is good and every year about 90% of the funds have been utilized.

(Rs. in lakh)

MME	2009-10	2010-11	2011-12	2012-13
Allocation	540.96	671.86	820.86	930.05
Expenditure	456.12	588.92	788.66	854.19

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### Part A. Observations on MDM implementation

#### 1. Review the system of fund flow from State Government to Schools/cooking agency and the time taken in this process.

The JRM team was briefed that the Director, Elementary Education is the controlling officer so far as financial transactions are concerned. He draws the amount under different components of MDM scheme and deposit in the joint account opened in the State Project Monitoring Unit (SPMU). Funds are transferred to the Districts through e-transfer on the same day. At District level, the District Inspector of schools at headquarter, who is the nodal officer at district level, releases funds directly to schools through e-transfer, according to the requirement, direct to the joint account maintained at school within seven days of receipt. At school level, joint account in the name of the Head Teacher & SHG/ SMC/NEC has been opened. The intermediary role of block has been dispensed with.

The JRM team observed that funds are released to the schools on reimbursement basis till the month of August. It was informed by the officials that now the funds are released on advance basis to the schools. Adequate amount of funds towards cooking cost were available with almost all the schools at the time of visit. However, previously schools were forced to continue the scheme on credit basis due to non-availability of funds. Honorarium to cook-cum-helpers has been paid up to the month of August.

The teachers informed that when the funds are transferred to the MDM account of the school it is normally not known to the MDM managing body. They further informed that only when they go to the bank to get their bank pass book updated they come to know about the transfer of fund. The case is same in case of salary of CCH. The teachers interacted were of the opinion that they get confused about the fund transferred and its purpose.

**of The JRM team suggested that the CRCC, BRC or Inspector of Schools should intimate the schools when the funds get transferred and details it.**

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### 2. 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.

Mid day Meal was served in almost all the visited schools barring Puruna Balesore UGUP School. The teachers informed that there were some rumours by media regarding MDM was not good and eaten by dogs before serving to the children on 5<sup>th</sup> August, 2013. They further informed that since then the parents had told the children not to take MDM. In urban areas in Balasore, primary school children hada been deprived of MDM for long time. The team was informed that since January 2013 only they are being provided with MDM. *Likewise in a few schools i.e. Hazi Nasiruddin School in Balasore Municipal Area, the MDM was not served for full two years of 2011-12 and 2012-13 due to some dispute among SHG and community or for some other reasons. However, nothing was done by the administration and for two years children were deprived from MDM. It is very important to mention here that this school was selected by the team on the basis of information furnished by the State in MDM-MIS, which also reflected that MDM was not served in this school during 2012-13. The disappointing part is that the State itself did not utilise the available information to solve the issue and therefore the children remain deprived of the meals for long.*

The quality of MDM served was observed to be good in the visited schools. Sufficient quantity of food grains was available with all the visited schools. The State Govt. has issued instructions to deliver the rice at door step of school after weighing and in presence of teacher and SMC member, which is not followed. In most cases it is considered that each bag of rice contains 50 kgs, but in reality it varies from the presumed weight of 50 kg.

### 3. Review the management and monitoring of the scheme from state to school level

Structural units have been set up to manage the MDM scheme starting from the state to school level. At the state level, State Project Management Unit (SPMU) has been established for management of the programme. The SPMU has staff

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e.g. Consultants, Programmer, Accountant and Data Entry Operators to support the State Nodal Officer (SNO) in managing the day to day functioning of the scheme. The main objective of this Unit is to release funds and allocate food grains to the districts in time. This Unit has an MIS system that sends information to field and receives the feedback from the district and block level offices through e-mail. A student helpline has been opened at OPEPA which is used for Mid-Day-Meal scheme and accordingly, instructions have been issued to all district functionaries. Complaints are received from the students, general public, SMCs/ SHGs/ Mothers' Committee/ Parents Teachers Association through this helpline. The state has also formed a State level Steering-cum-Monitoring Committee under the chairpersonship of Chief Secretary of the State to oversee the implementation of the scheme.

At the district level, District Project Management Units (DPMUs) have been set up in all the districts & its function is to ensure uninterrupted supply of MDM to the students, availability of rice and payment of cooking cost and honorarium to cook-cum-helpers in time. Each DPMU has a District Nodal Officer (DNO) for MDM assisted by other staff (Data Entry Operator and Programmer-cum-Accountant). Each district has also formed a District level Steering-cum-Monitoring Committee to oversee the implementation of the scheme.

At the block level, the MDM management unit constitutes one Block Nodal Officer (BNO) for MDM and one Data Entry Operator. Its primary function is to ensure regular supply of rice to schools, uninterrupted provision of MDM to children at schools and compilation of feedback data obtained from the cluster level MDM units represented by only one Cluster Nodal Officer (CNO) for MDM. In the state the CRCCs have been designated to act as the CNOs for MDM. The SIs of schools have been designated as BNOs for MDM. At school point, the MDM management is looked after by SMCs or local SHGs. The Head Teachers play a supporting role as specified in the MDM guidelines of the state. At school level, SMC, Jaanch Committee & Mothers' Committee are authorized to ensure quality, quantity and uninterrupted service of cooked meals. Every day, the MDM is first tasted by one or more SMC member, MTA member, teacher and Cook-cum-Helpers and then served to children. At school point, these members put



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their remarks on a register every day after tasting the MDM. This is done to ensure the quality of food as per the menu.

The state has developed a monitoring mechanism to obtain feedback information regarding operation of the MDM scheme. From school point, feedback data are obtained by the CNOs for MDM in prescribed formats such as Monthly Return on MDM, Absentee Statement of CCH and Samiksha. The CNOs submit a compiled statement for the cluster to the BNOs for MDM where the data are fed into computer for block level compilation and onward transmission to the DPMU and SPMU.

The Review Mission was informed that State level Joint Review Meetings consisting of all Directors School and Mass Education Department, District Education Officers, DPCs and DNOs for MDM are held on quarterly basis under the Chairpersonship of the Commissioner-cum-Secretary of the School and Mass Education Department to take stock of the situation in respect of MDM scheme. Similar meetings are being held every month at district level consisting of the DEO, DPC, DNO for MDM and the BNOs for MDM under the chairpersonship of the District Collectors. Besides, the districts are visited by the senior officers from the State Hqrs. to oversee the implementation of the programme. All the field level officers, right from the DPC, SSA to CNOs for MDM have been assigned the task of rigorous visit of schools.

The JRM observed that sufficient quantity of food-grains was available with all the visited schools having school based kitchen. Buffer stock of food-grains was maintained in almost all the visited schools. The quality of rice was observed to be good. In some schools rice had been kept in storage bins whereas in schools lacking such storage bins, rice had been kept in gunny bags. However, the JRM team observed that the size of the storage bin was only 1.5 quintals while the monthly listing was much more. Therefore, in some schools the rice had been kept in the kitchen-cum-store sheds while in others it had been in classrooms thus hampering the classroom hygiene.

It was observed that most of the CNOs and BNOs were not fully aware of their responsibility because of lack of a clearly-specified job-chart. Many of them had not been given any training or orientation on MDM management. In absence of such training, decentralized planning from school level on MDM is not practiced.

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The present formats used for feedback data collection from school point need to be improvised to cover other aspects of the scheme such as quality, equity, community participation, hygiene, sanitation and healthcare provision. The MDM staff at all levels starting from the state to cluster need regular training and orientation relating to planning, monitoring and management of the MDM scheme. **The JRM team was informed that the job-charts have been provided to all functionaries to help them focus on their own responsibilities and tasks, however, the same was not available at the field level with the concerned functionaries.**

The JRM Team also visited the Centralised Kitchen being run by an NGO Nandi Foundation located at Berhampur in Ganjam district. The conditions in the kitchen were found to be satisfactory. The collector of Ganjam district has issued an order and prepared a roaster for daily supervision of the preparation of food in the centralised kitchen. It was observed that inspections are taking place at regular intervals.

### **4. Convergence with School Health Programme (SHP)**

The MDMS guidelines envisage that necessary interventions like regular health checkups, 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 Mission (NRHM) of the Ministry of Health & Family Welfare. The School Health Programme is the only public sector programme specifically focused on school age children. Successful school health programme ensures better educational outcomes, improved social equity and improved capabilities to handle the adult world.

The School Health Program is envisaged as an important tool for the provision of preventive, promotive and curative health services to the population. The states can, in the spirit of the flexibility of RCH and NRHM, modify the options as per their needs and the available options for service delivery.

### **Components of School Health Program**

**Health service provisions including:**

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- **Screening, health care and referral**
  - ❖ Screening of general health, assessment of anaemia/nutritional status, visual acuity, hearing problems, dental check up, common skin conditions, heart defects, physical disabilities, learning disorders, behavior problems
  - ❖ Basic medicine kit to be provided to take care of common ailments prevalent among young, school going children
  - ❖ Provision of Referral Cards for priority services at District / Sub-District hospitals.
- **Immunization**
  - ❖ As per national schedule
  - ❖ Fixed day activity
  - ❖ Coupled with education about the issue.
- **Micronutrient (Vitamin A & Iron Folic Acid) management**
  - ❖ Weekly supervised distribution of Iron-Folate tablets coupled with education about the issue
  - ❖ Vitamin-A as per national schedule.
- **De-worming**
  - ❖ As per national guidelines
  - ❖ Biannually supervised schedule
  - ❖ Prior IEC with intimation to families to bring siblings to school on the fixed day
  - ❖ Siblings of students also to be covered.
- **Health Promoting Schools**
  - ❖ Counselling services, promotion of mental well-being.
  - ❖ Regular practice of yoga, physical education, health education
  - ❖ Peer leaders as health educators
  - ❖ Adolescent health education
  - ❖ Linkages with the out of school children

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- ❖ Health clubs, Health cabinets, Health jamborees
- ❖ First Aid room/corners or clinics.

- **Capacity building of teachers and involved health personnel**
- **Monitoring & Evaluation**

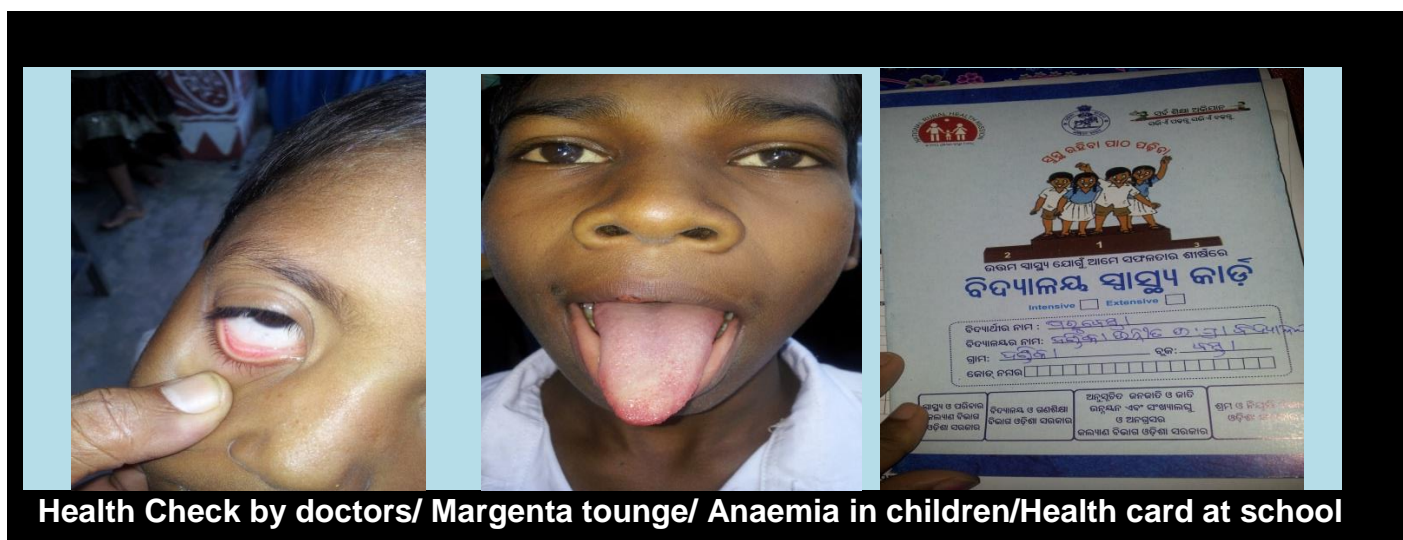
In Odisha, the School Health Programme has been started in convergence with Health Department to cover all the children in Government, Local body and Govt. Aided Schools / Hostels from Classes I to X from the year 2011-12. The following are the components of the health services covered under this Programme:

- Screening, health care
- Immunization
- Micronutrient management like Vitamin A and Iron Folic Acid
- De-worming

***The Mission has observed that the convergence with School Health Programme for supplementation of micronutrients, health check-ups and for supply of spectacles is extremely poor.***

- a. Most of the visited schools have Individual School Health Cards of students and the health check-up registers. Wherever present, the individual health cards were not being maintained properly. Only names of the students and their blood groups have been written in the health cards, without any mention of their height, weight, health status or any other deficiency or health problem. In the absence of such records, follow up and monitoring becomes difficult. In some schools ANMs have made their visits and distributed some IFA and Deworming tablets randomly, most of which are lying unutilised. No eye checkups have been done, neither spectacles have been distributed.
- b. In some schools the Doctors with the JRM team observed deficiency of vitamin B complex, B 12 and decayed, missing and filled teeth. A marked prevalence of worm infestation was also observed especially in Balasore district. Majority of the students in the visited schools had extremely poor status of hygiene with a number of them suffering from a fungal infection of the skin called tenia.

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Health Check by doctors/ Margenta tongue/ Anaemia in children/Health card at school

### 5. Engagement of Cook-cum-Helpers for preparation and serving of meal to the children

The State Government has engaged 1,33,202 Cook-cum-Helpers in the State against the PAB approval of 1,45,522. Most of these are women belonging to the deprived sections of the society, thus the State Government is following the MDM guidelines for empowering the women by providing them opportunities for employment and income generation. The JRM team observed that in most of the schools lesser number of Cook-cum-Helpers have been engaged than the prescribed norms. In fact in all the schools in Balasore district, 2 Cook-cum-Helpers have been engaged without considering the enrolment in the schools. The district officials seem to be unaware of the norms and there was no plan to link the engagement of Cook-cum-Helpers to enrolment. The Cook-cum-Helpers informed that they had never received any training. The JRM team felt that they need to be trained in a rigorous manner on the issues of health, hygiene and food safety aspects and the methods of cooking. It was observed in the visited schools that the soya nuggets were not properly boiled because of which, children were simply throwing them out of the plate while eating. The cooks were unaware of the proper methods of preparation of *soya nugget* which is served

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twice a week.

The Cook-cum-Helpers also informed that they have received honorarium up to the month of August, 2013. The records also reveal that payment in both the districts has been made till August, 2013 @ Rs.1000/- per month per cook-cum-helper at both schools. The officials informed that honorarium towards cook-cum-helpers has not been provided to the centralised kitchen. The Review Mission observed that centralised kitchens are eligible for honorarium component for cook-cum-helpers on apportionment basis. The non-provision of honorarium to the centralised kitchen working in the centralised kitchen may have its impact on quality of meal served.



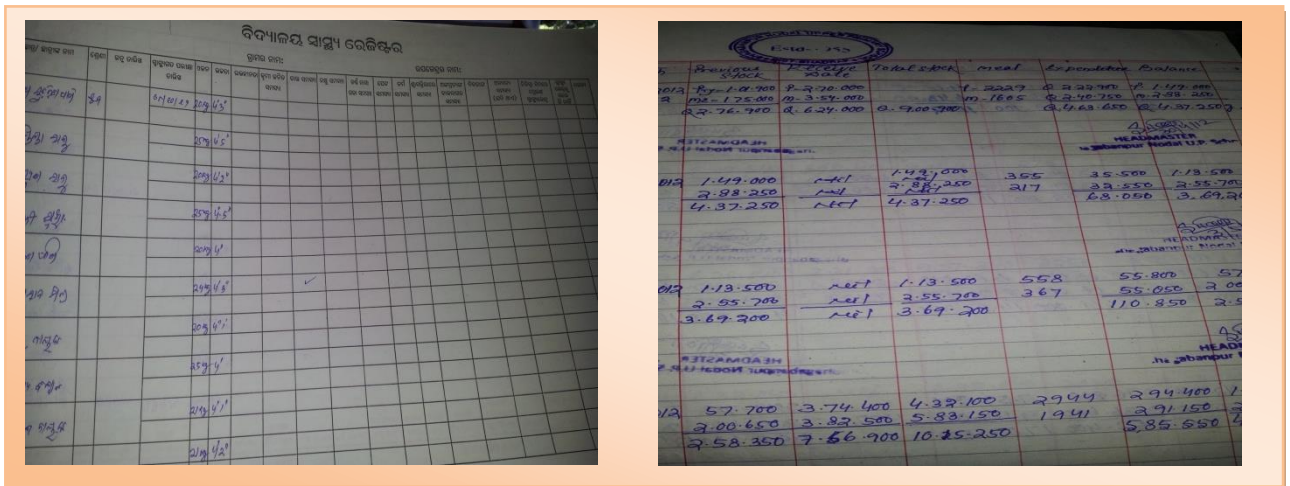
It was found that the Cook-cum-Helpers had been given aprons made of thick synthetic fabric in most schools which is not only uncomfortable but also hazardous. The thick masks given to them also did not have much practicality in the hot and humid weather. The other thing is that they are provided with only one apron for cooking Mid Day Meals in schools. The very purpose of providing apron will get defeated if the number is not increased. One apron will not allow cooks to clean it every day leading to soiling and contamination. The team felt that there is a need of training of the Cook-cum-Helpers for the correct preparation methods.

The JRM Team recommended that Cook-cum-Helpers should be engaged as per the norms. It is also suggested to provide honorarium to the centralised kitchen as per the norms of the scheme.

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## 6. Review the maintenance of records at the level of school/cooking agency.

Record keeping is an area of concern, as in most of the schools records were not maintained properly. The JRM also observed that too many registers are maintained at school level for record keeping of activities related to MDM, which is a tiresome task for the teacher and consumes lots of time. In 4 schools records were not available in the school and it was told that either the records were kept under lock and key by the concerned teacher or were with the SMC/SHG personnel. In many schools teachers and SMC members need special training for record keeping, especially for different registers they have to maintain.



In order to materialise the policy of providing MDM cooked every day at the school point, infrastructure facilities like kitchen-cum-store, storage bins, cooking and serving utensils and eating plates are to be provided to each school. At field level, the JRM team observed that kitchen-cum-stores had been constructed utilizing the MDM grants of Rs. 60,000/- per unit. Owing to fund limitation, in some schools, the sheds had been constructed with asbestos roof. In most of the visited schools in district Bhadrak the kitchen sheds were constructed but they were used as the head teacher's room, and MDM was prepared in make shift kitchens made of bamboos etc. In schools with large enrolment strength, the kitchen space appeared inadequate for storage as well as cooking. Under such condition, rice in some schools had been kept in classrooms or food had been

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cooked outside the kitchen. **Such schools may be given funds for extension of the kitchen-cum-store as per their students' strength.**

In most of the schools, the JRM team noticed that fire wood was used for cooking food items. The CCHs had mentioned that in rainy season the hearth as well as fire wood become wet causing problem in cooking and hence requested for provision of LPG for cooking purpose. The State Government has arranged to provide eating plates for most of the children. These plates had been kept at schools and were used by the children for partaking MDM. The plates had been cleaned every day by the children using liquid soap before using for eating food and again cleaned after eating. This habit had been noticed in every school visited by the JRM team. In order to facilitate a smooth process of cleaning the eating plates, multi-tap water outlets had been constructed recently at schools.



**The condition and maintenance of toilets was pathetic in many schools.** Toilets were damaged and not used in some schools. The toilets for CWSN were under construction in some schools and fully constructed in some others. But keeping the students' strength in view, **the urinal as well as latrine seats were very inadequate**, compelling the children to go outside to attend the call of nature.

**The location of toilets in many schools is also a matter of grave concern. In many places, the toilets are located next to the drinking water**



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**facility. In several places, make shift kitchens had been made next to the toilet. Such close proximity to the toilet increases the risk of contamination.**

It was also noticed that there were no proper places for the students to have a meal in many schools. The students had the meals in veranda or in open space in the school and throw the leftover haphazardly. It is suggested that as per the guidelines of MDMS, the funds under MPLAD scheme may be utilised for construction of dining halls in schools. In some of the States like Tripura and Jharkhand, dining halls have been constructed in the schools, where space is available, in convergence with other schemes/departments or through CSR (Corporate Social Responsibility) funds. Odisha may also explore the possibility for the same.

There were no pits/dustbins installed in the schools. During rainy season, the children suffer a lot while eating MDM, said the SMC members. In many schools, there had been a demand for supply of pressure cooker to reduce the expenditure incurred on fuel consumption. The JRM team is of the view that provision of pressure cooker and cooking gas may be encouraged as per the demand at school point.

### **8. Review the involvement of SHG/NGO/Trust/Centralized kitchens**

Women self help groups are managing MDM in about 63% schools in the state. The SHG members themselves cook the food through the cooks and helpers engaged under the programme. In other schools cooks and helpers engaged by the SMC are managing the same. The Akshaya Patra Foundation and the Nandi Foundations are providing Mid-day-Meal from Centralised kitchens in Purl, Nayagarh, Ganjam, Kalahandi and Keonjhar Districts. In the schools, where MDM is served through centralised kitchen the cooks and helpers engaged previously have been retained to serve the meal to the children and clean the utensils. However, the honorarium for cook-cum-helpers is not being paid to the centralised kitchen. The Review Mission recommended that the State should calculate the number of cook-cum-helpers permissible for the schools catered through centralised kitchen and apportionment method should be used for

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payment of honorarium to cook-cum-helpers working at school level and at centralised kitchen.

The members of the Joint Review Mission found that both in Bhadrak and Balasore district small SHG groups are helping in the implementation of MDM at the school level. The members of the SHG procure the pulses, vegetables and condiments for cooking of MDM. The cooks are engaged by the SMC members for cooking and serving Mid Day Meal to children.



**Cooking and distribution by SHG at Bhadrak/ Cooking by Cook-cum-Helpers at school level**

### 9. Management Information System (MIS)

At the State level State Project Management Unit (SPMU) has been established for management of the programme. This Cell sends information to field and receives the feedback from the district and block level offices through e-mail. A student helpline has been opened at OPEPA and this helpline is used for Mid-Day-Meal Programme and accordingly, instructions have been issued to all district functionaries. Complaints are received from the students, general public, SMCs/ SHGs/ Mothers' Committee/ Parents Teachers Association through this student's helpline.

MHRD had developed a web enabled MDM MIS portal for Mid Day Meal Scheme in collaboration with NIC to monitor the Scheme. The State has completed annual data entry for 90% schools during 2013-14. However, the

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pace of data entry of monthly data requires monitoring as even for the month of April, 2013 data entry has been completed for only 54% schools as on 25.09.2013.

**The JRM team observed that the State Govt. is not utilising the information available with the MDM-MIS, which could be used for review and targeted inspections in the problematic areas.**

### **10. Assess the involvement of Community' in implementation of MDM**

For effective and better implementation, scope for community participation has been provided in MDM scheme. Keeping this in view, the state has given responsibility to the School Management Committee (SMC) to manage the MDM scheme at school level. Some of the members of SMCs were trained in previous years in this regard. The state has also encouraged the MTA members of each school to support in effective management of the scheme. Further, for each school, a **Jaanch Committee** has been formed to participate in the process of MDM management. The state has specifically instructed that the food be served to children only after it is being tasted by some of these members.

At school point, the JRM team had noticed that the food had been first consumed by some of CCH and SMC members and then served to the children. These members had also recorded their remark on the quality of food in a separate register. As per the state norm, except rice, all other items required for MDM preparation are to be procured from the local market and from shops selected by the Jaanch Committee. The JRM team had found that this norm had been practiced in all schools. In some schools, the team had observed the participation of SMC members in monitoring the meals prepared and served at school point. Monitoring by parents was absolutely nil in most of the schools visited. The MTA and PTA members were not found to shoulder responsibility in supervision, management or monitoring of the MDM scheme. Some parents were found to encourage children to take home-made food instead of the MDM. A significant gap between the number of children enrolled and the number of

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children who had their MDM on the day of the visit was observed in majority of the visited schools. The role of community in ensuring attendance of children in school is of utmost importance. One should not forget that active participation of community can address many of the issues related to MDM in schools in more meaningful ways. Therefore, government agencies must put an all out effort in increasing its participation in every school. It will also help in building an atmosphere of support for government programmes in the rural areas and in urban areas. **The JRM team recommends for regular sensitization and mobilization of the MTA and PTA members to take responsibility in the management of the scheme.** Social audit mechanism was not found to be in practice in any school. **The state should take due step to ensure social audit of the scheme to strengthen community participation in the scheme.**

### **11. Grievance Redressal Mechanism**

A student helpline has been opened at OPEPA and is being used for the programme. A control room has been made functional and toll free telephone has been installed as a measure for Grievance Redressal Mechanism. The complaints received from students / parents through student helpline are being sent to the concerned Collectors for immediate redressal. Video Conferencing are being held at regular intervals with District Collectors & other senior officials of the district for smooth implementation of the programme.

### **12. Review of the status of tasting of the meal by at least one teacher.**

The MDM guidelines envisage mandatory tasting of meal by teachers and community members before it is served to children. The Govt. of Odisha has issued instructions for tasting of meal by the head teacher, Cook-cum-Helpers and a member of SMC of the school, before it is served to the children. The JRM team observed that the practice is being followed in all the visited schools wherein a register has been maintained for getting the signature / thumb impressions of the teachers and SMC members to certify that they have tasted the meal.

However, the JRM team observed that in the visited schools in district Balasore full meals have been provided to the above mentioned 3-4 members and these meals are recorded as meal served in the accounts for utilisation of cooking

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cost and food grains. This practise of booking funds and foodgrains on account of meal served to CCH and SMC members for tasting of meal should be stopped.

### **13.Review of status of safe storage and proper supply of ingredients to schools**

The Review Mission members observed that the State Government has provided bins for safe storage of food grains and other condiments in majority of the visited schools. However, the capacity of grain storage bins is only one and half quintal, which is inadequate for almost all the visited schools due to this the grains have been stored in gunny bags.



### **14.Review of the status of awareness about Mid- Day Meal Scheme**

The JRM members interacted with the parents and the community members at a few places and held group discussions with them. It was observed that although most of them were not aware of the entitlements of the children under MDM, but all of them were aware that MDM is the right of the child.

The Team also observed that information regarding MDM i.e. the entitlements of children, Menu, logo, and emergency contact number etc. are not displayed at a prominent place in almost 50% of the visited school.

**The mission strongly recommends that this information should be displayed at prominent place in every school on urgent basis.**

### **15.Review of status of convening of Monitoring Committee under the Chairmanship of Member of Parliament**

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The Review Mission was informed that Vigilance-cum-Monitoring Committees have been formed under the chairpersonship of the senior most Member of Parliament of the district at all districts. However, no information was available regarding meeting of the committee.

### **16. Review of the status of testing of food samples by reputed institute.**

There is no NABL laboratory for testing of food samples in the State of Odisha, the nearest one being in Kolkata. It was informed that the State Government is exploring the possibility for laboratory testing of meals.

### **17. Review of the status of Emergency Medical Plan**

The review Mission team could not see any planning in terms of emergency Medical Plan in the visited schools of the selected districts. **However, several helpline telephone numbers were prominently displayed in some of the visited schools, especially those in Bhadrak district.**

**The JRM team was of the view that a dedicated helpline number for MDMS is required by the State.**

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## Part B . NUTRITIONAL ASSESSMENT

A survey was conducted in government run primary and upper primary schools of two districts of Odisha with an objective to collect information related to the following aspects of children availing Mid Day Meal:

- Meal Food pattern
- Anthropometric profile
- Clinical symptoms of nutritional deficiencies
- Quality and quantity of the Mid Day

### SALIENT FINDINGS

#### I. Food pattern

The findings regarding the food pattern revealed that the majority of selected children had four meals (Table 1). Almost all the children reported to have meals after the school in both the districts which indicated that the **MDM did not replace their home meal; instead it was an additional meal for them.**

**Table 1: Daily food pattern of the selected children**

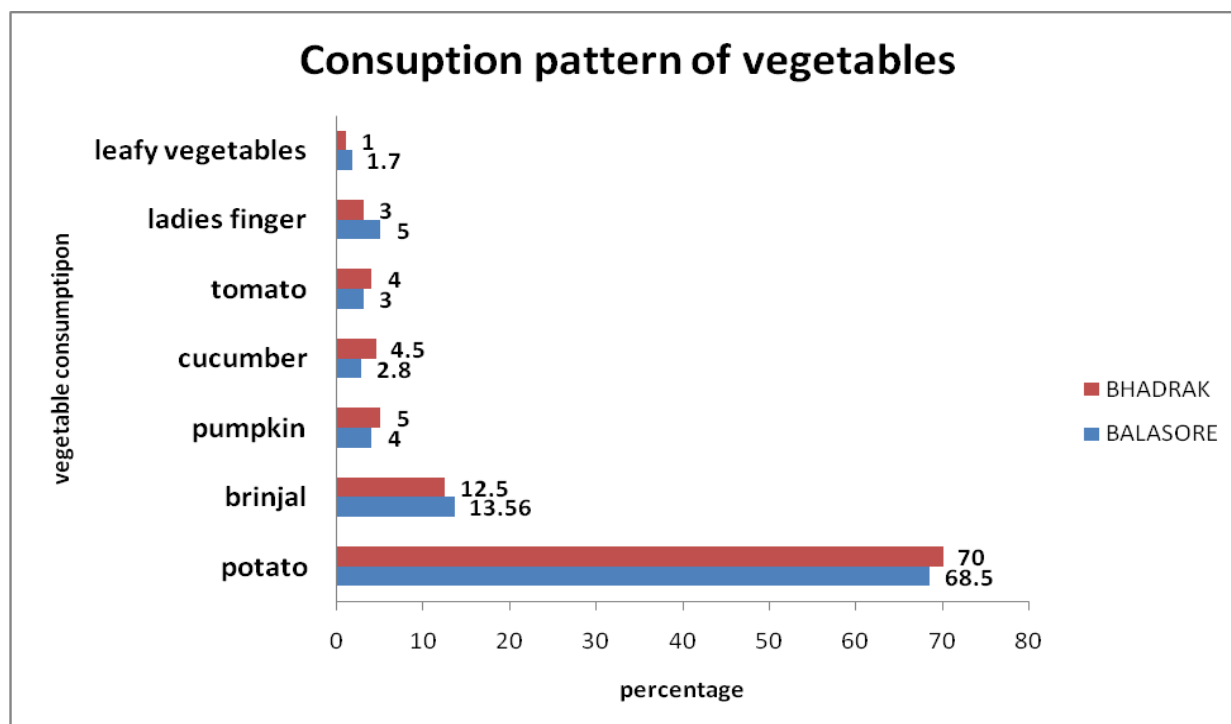
Meal	Food Item
Morning	Water rice /puffed rice/rice flakes/potato (fried/boiled)/cucumber
MDM	As per scheduled
After school	Water rice / rice/ puffed rice/ poha/ potato/ biscuit
Dinner	Rice/ fish/ dryfish/ dalma/ potato/ mix veg

Majority of the selected children reported that they had breakfast daily, though a lesser variety of food items was observed in their diets. Cereals were the main food item consumed. Consumption of fresh vegetables and green leafy vegetables was low while intake of fruits was negligible in both the districts. The vegetables that were consumed by the children during previous day of the survey were potato, brinjal, raw banana, ladies finger, and raw papaya, maximum being that of potato and the leafy vegetables being the least. The consumption of other vegetables was negligible. The data show that except for potatoes, other vegetables were consumed



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by a very small number of children that could be a cause of sub-clinical micronutrient deficiencies among them. Milk consumption among the children was seemed to be negligible in both the districts.



**Fig. 1. Vegetable consumption as reported by children of Bhadrak and Balasore districts**

### II. Anthropometric profile

#### i. Weight for Age (WAZ) and Height for Age (HAZ)

Weight for age reflects body mass relative to chronological age, whereas height for age reflects achieved linear growth and its deficit indicates long term, cumulative inadequacy of nutrition. In district Bhadrak, 38.28 per cent and 26.44 per cent of the total children were underweight and stunted, respectively as shown in Fig. 2 & 3. A gender difference was observed in stunted children in Bhadrak, being 24.87 per cent in boys and 28.13 per cent in girls. HAZ scores, as depicted in table 2, indicated that stunting was more prevalent among girls (boys: 24.87 % vs. girls: 28.13 %). The incidence of underweight and stunting was higher in district Balasore as compared to Bhadrak. In Balasore the percentage of underweight children was 34.90 per cent among boys and 33.59 per cent in girls while stunting was 31.96 per cent in boys and 32.04 per cent in girls. As in Bhadrak, stunting was more prevalent in boys in this district too. The

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percentage of tall children was 3.78 % and 2.51% in Bhadrak and Balasore, respectively (Table 2).

**Table 2. Classification of children based on WAZ, HAZ and BMI-Z scores**

	Boys		Girls		Total	
<b>BHADRAK</b>						
	<b>N1(205)</b>	<b>Percentage (%)</b>	<b>N<sub>2</sub> (192)</b>	<b>Percentage (%)</b>	<b>N (397)</b>	<b>Percentage (%)</b>
<b>WAZ</b>						
Normal	124	60.48	115	59.89	239	60.20
Underweight	76	37.07	76	39.58	152	38.28
Overweight	5	2.43	01	0.5	06	1.50
<b>HAZ</b>						
Normal	144	70.24	133	69.27	277	69.77
Stunted	51	24.87	54	28.13	165	26.44
Tall	10	4.87	05	2.60	15	3.78
<b>BMI</b>						
Normal	129	62.92	134	69.79	263	66.24
Moderately Undernourished	36	17.56	26	13.54	62	15.61
Severely malnourished	25	12.19	15	7.81	40	10.07
Overweight	15	7.31	16	8.3	31	7.80
<b>BALASORE</b>						
	<b>N1(219)</b>	<b>Percentage (%)</b>	<b>N2(259)</b>	<b>Percentage (%)</b>	<b>N(478)</b>	<b>Percentage (%)</b>
<b>WAZ</b>						
Normal	140	63.92	167	64.47	307	64.22
Underweight	76	34.90	87	33.59	163	34.10
Overweight	03	1.36	05	1.54	08	1.46
<b>HAZ</b>						
Normal	145	66.21	171	66.02	313	66.10
Stunted	70	31.96	83	32.04	153	32.00
Tall	07	3.19	05	1.93	12	2.51
<b>BMI</b>						
Normal	145	66.21	184	71.04	328	68.82
Moderately Undernourished	33	15.06	31	11.96	64	13.38
Severely malnourished	19	8.60	19	7.33	38	7.94

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Overweight	23	10.50	25	9.65	48	10.04
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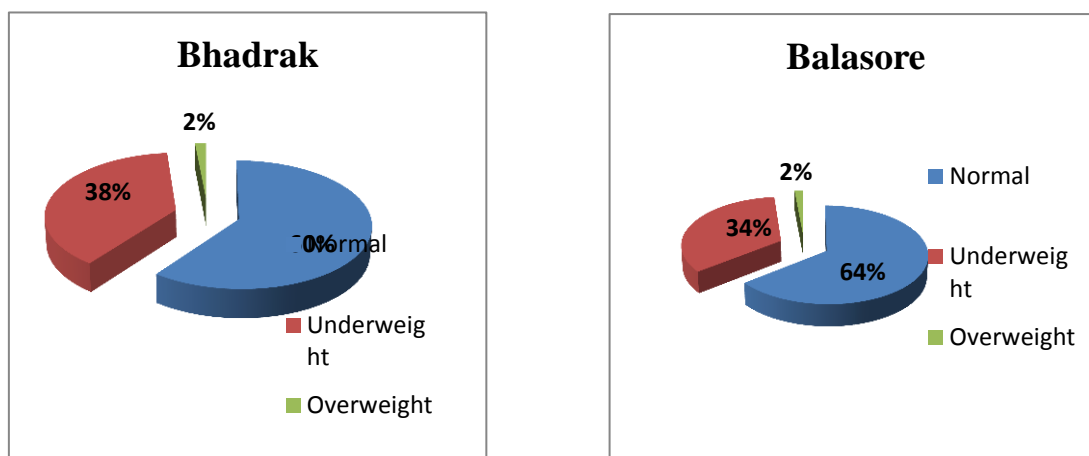
Table 3 shows that the age wise mean weight of boys and girls was 75.50 to 84.50 per cent and 74.97 to 92.12 per cent of the reference standards respectively. **In district Bhadrak, the mean weight of 14 year old girls was less than 75% of the WHO reference standards and is a matter of concern.** The mean height of boys in different age groups in district Balasore ranged between 87.82 to 95.99 per cent of the reference standards while the percentage for girls was between 70.36 to 101.1 per cent (Table 4). Here too, the 14 year old age group emerged as the vulnerable one.

**Table 3: Average weight of children from two districts of Odisha**

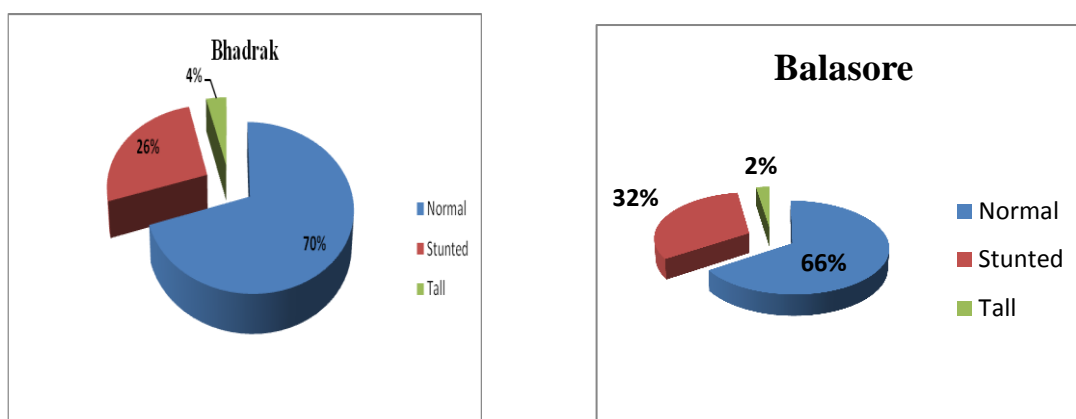
	AGE	BHADRAK			BALASORE			Reference standard WHO	
		n	Weight (Mean±SD)	% Reference standards	n	Weight (Mean±SD)	% Reference standards		
<b>BOYS</b>	5	7	15.35±1.54	82.97	8	16±1.19	86.48	18.5	
	6	21	17.59±2.92	84.56	20	17.95±3.5	86.29	20.8	
	7	21	18.55±2.39	79.95	33	22.5±3.13	96.98	23.2	
	8	30	20.41±3.11	79.10	25	22.89±5.5	88.72	25.8	
	9	26	22.98±4.89	80.06	24	22.35±3.74	77.87	28.7	
	10	24	25.31±4.20	78.84	30	28.45±7.42	88.62	32.1	
	11	34	29.92±8.35	82.88	25	30.04±6.62	83.21	36.1	
	12	23	33.3±7	81.81	23	30.97±6.17	76.09	40.7	
	13	16	34.93±8.12	76.26	24	36±6.17	78.60	45.8	
	14	3	38.66±4.72	75.50	6	45.41±8.45	88.69	51.2	
	<b>GIRLS</b>	5	5	15.2±1.72	84.44	15	15.33±2.34	85.16	18
		6	21	15.96±2.33	78.62	20	15.77±1.75	77.68	20.3
		7	20	17.17±2.60	74.97	33	18.59±3.07	81.17	22.9
		8	28	19.92±2.40	77.20	34	20.82±4.18	80.69	25.8
9		26	23.25±5.34	79.8	34	23.98±6.44	82.40	29.1	
10		17	26.02±5.22	78.61	34	26.52±5.74	80.12	33.1	
11		24	34.45±7.24	92.12	25	32.32±7.05	86.41	37.4	
12		20	34.52±6.18	82.58	37	31.05±5.30	74.28	41.8	
13		16	38.06±4.64	82.73	21	37.11±9.36	80.67	46	
14		15	37.41±7.09	75.50	6	37.41±7.09	75.57	49.5	

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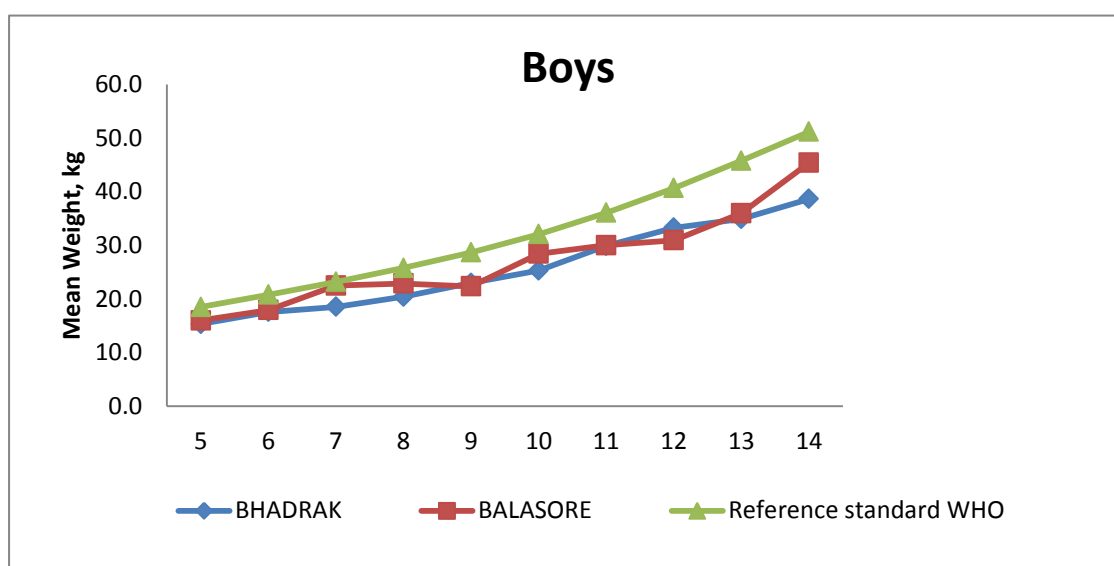
The findings revealed that the mean heights of the children (5-14 years) were much closer to the reference standards, while the weights were lower in both the districts, more specifically in Bhadrak district.



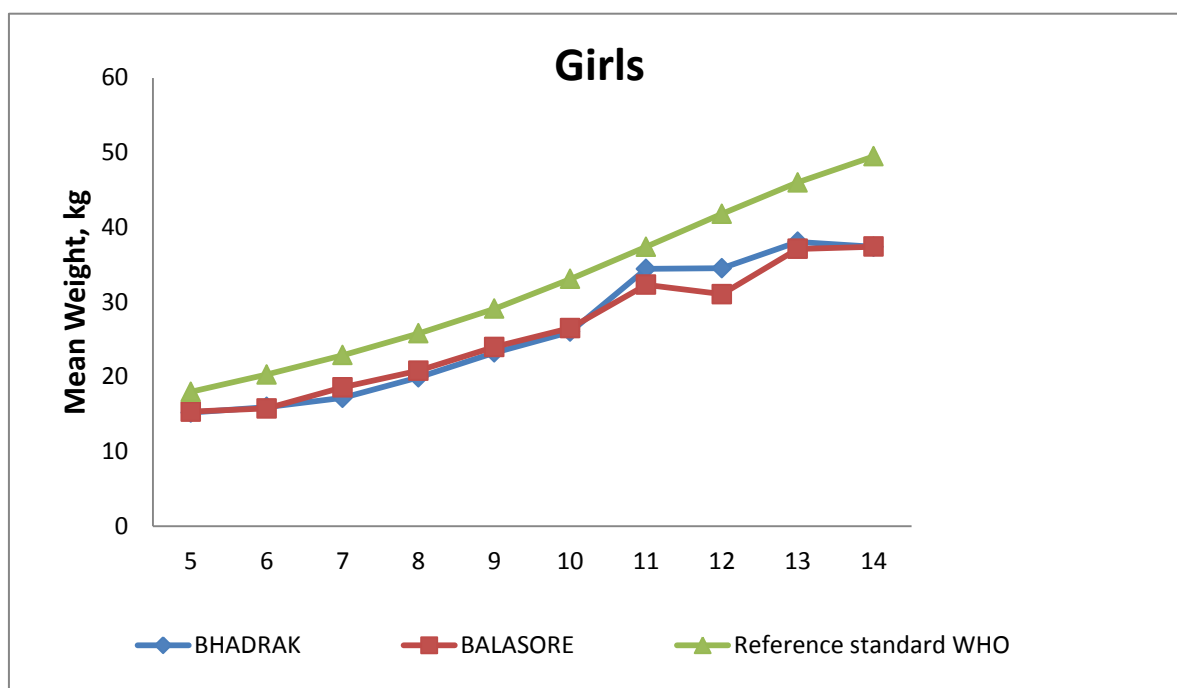
**Fig. 2. Classification of children based on Weight for Age Z scores**



**Fig.3 Classification of children based on Height for Age Z scores**



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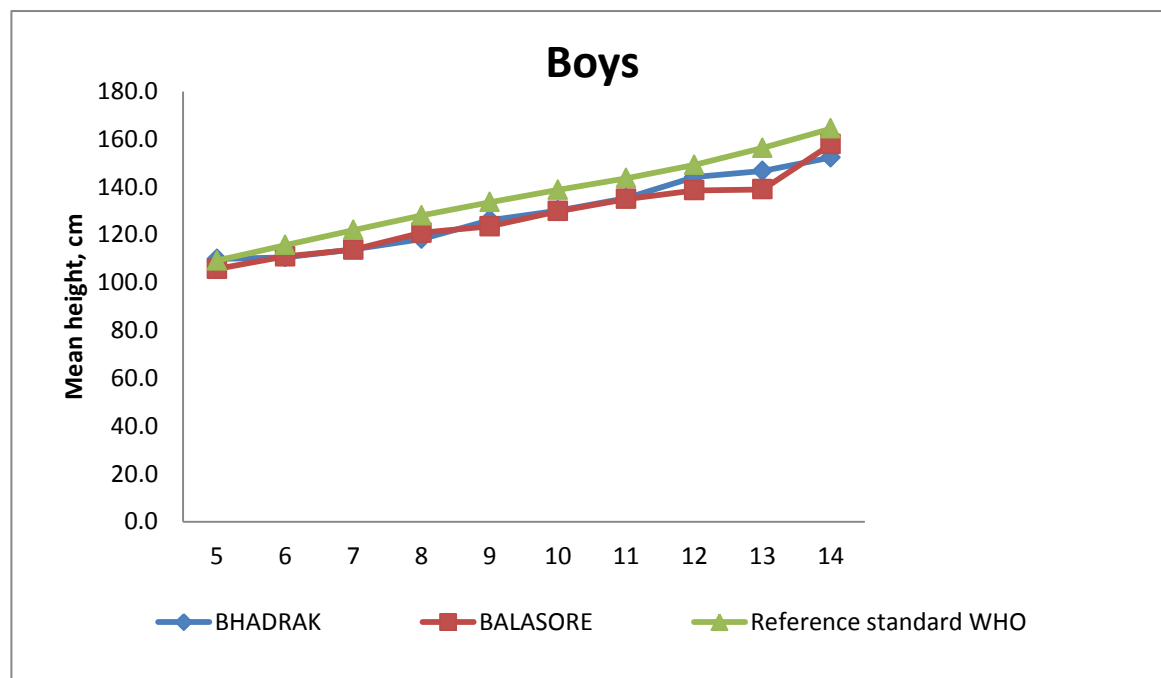
**Fig. 4. Mean weight of boys and girls (5-14 y) in Bhadrak and Balasore districts of Odisha**

**Table 5: Average height of children from Bhadrak and Balasore districts of Odisha**

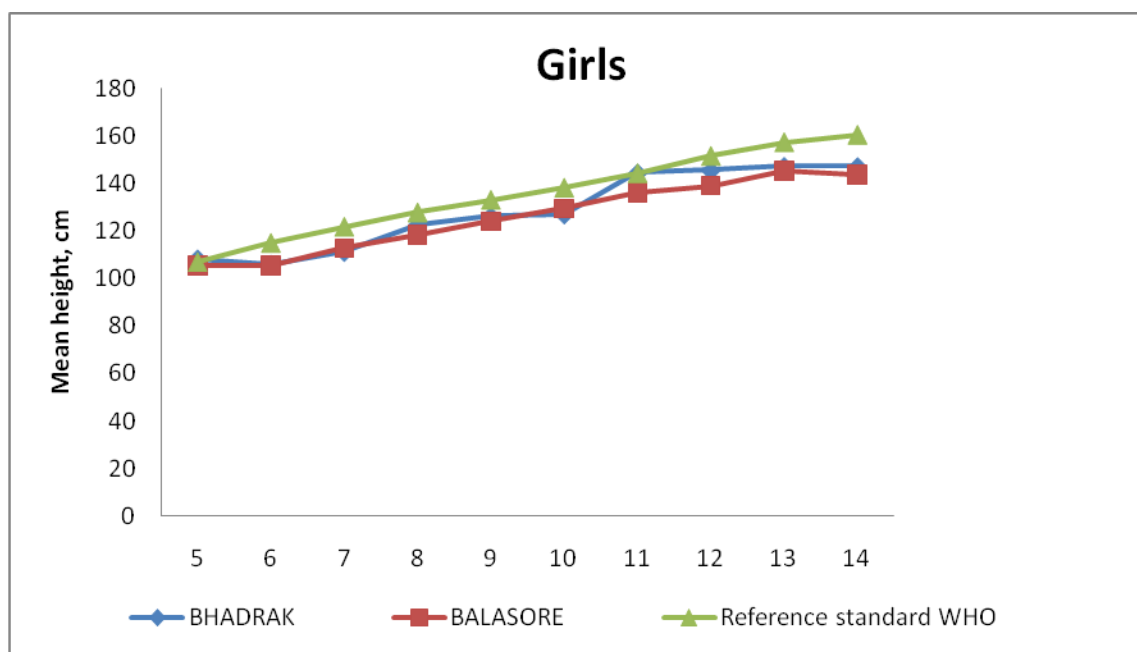
	AGE	BHADRAK			BALASORE			Reference standard WHO
		n	Height (mean±SD)	% Reference standards	n	Height (mean±SD)	% Reference standards	
<b>BOYS</b>	5	7	109.92±3.74	100.65	8	105.75±6.22	96.38	109.2
	6	21	110.61±8.51	95.60	20	110.95±8.86	87.82	115.7
	7	21	113.95±7.99	93.40	33	113.78±5.87	93.26	122
	8	30	118.25±10.22	92.31	25	120.89±7.09	94.37	128.1
	9	26	126.19±10.34	94.38	24	123.57±7.46	92.42	133.7
	10	24	130.2±7.76	93.80	30	129.91±8.90	93.59	138.8

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	11	34	135.32±10.52	94.16	25	135.04±8.35	93.97	143.7
	12	23	144.17±9.49	96.56	23	138.61±8.71	92.83	149.3
	13	16	146.75±11.98	93.82	24	139±6.35	88.87	156.4
	14	3	152.33±10.40	92.60	6	157.91±6.65	95.99	164.5
<b>GIRLS</b>								
	5	5	108.2±5.67	101.1	15	105.26±6.9	98.3	107
	6	21	105.95±7.39	92.13	20	105.25±6.46	91.52	115
	7	20	111.2±5.71	91.29	33	112.6±6.65	92.44	121.8
	8	28	122.57±7.72	95.90	34	118.33±9.19	92.58	127.8
	9	26	126.19±9.11	94.80	34	124.06±8.16	93.20	133.1
	10	17	127±8.41	91.89	34	129.41±8.81	93.63	138.2
	11	24	144.33±13.92	100.0	25	136.16±10.22	94.3	144.3
	12	20	145.45±8.38	96.00	37	139.09±10.14	91.80	151.5
	13	16	147.18±7.34	93.56	21	145.42±7.83	92.44	157.3
	14	15	147.1. ±4.71	70.36	6	143.66±12.78	89.56	160.4



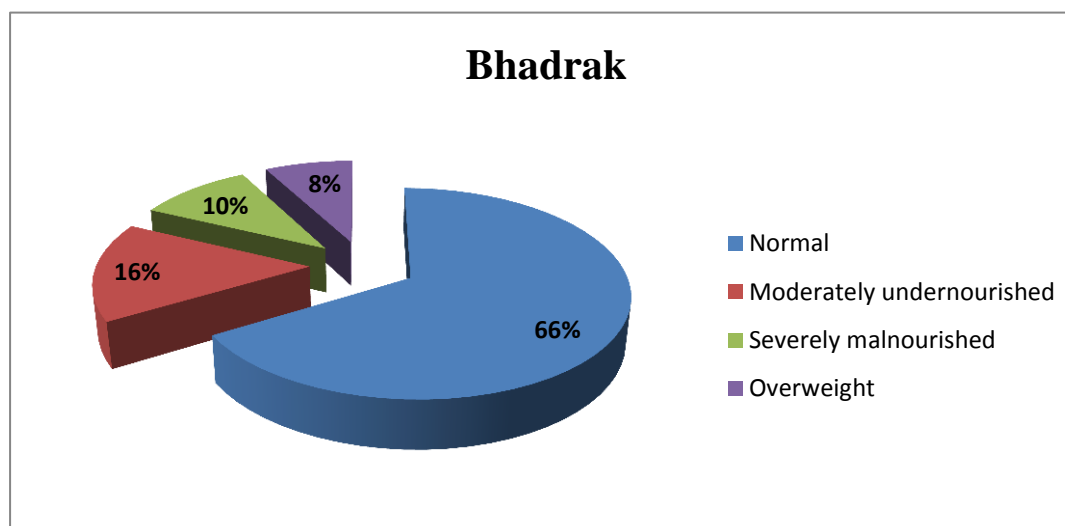
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**Fig. 5 Mean height of boys and girls (5-14 y) in Bhadrak and Balasore districts of Odisha**

### BMI for Age

BMI for age reflects the body weight relative to height. WHO has classified low BMI for age as an indicator of under nutrition which varies from moderate to severe malnourishment. High BMI for age expresses overweight and obesity. The data show that there were more moderately undernourished children in district Bhadrak (16 %) as compared to Balasore (13 %). Eight per cent and 10 per cent of the children in Bhadrak and Balasore were found to be overweight respectively (Fig 6). The mean BMI for age was lower than the reference standards in boys as well as girls of the two districts except the 14 years old girls of Balasore district.



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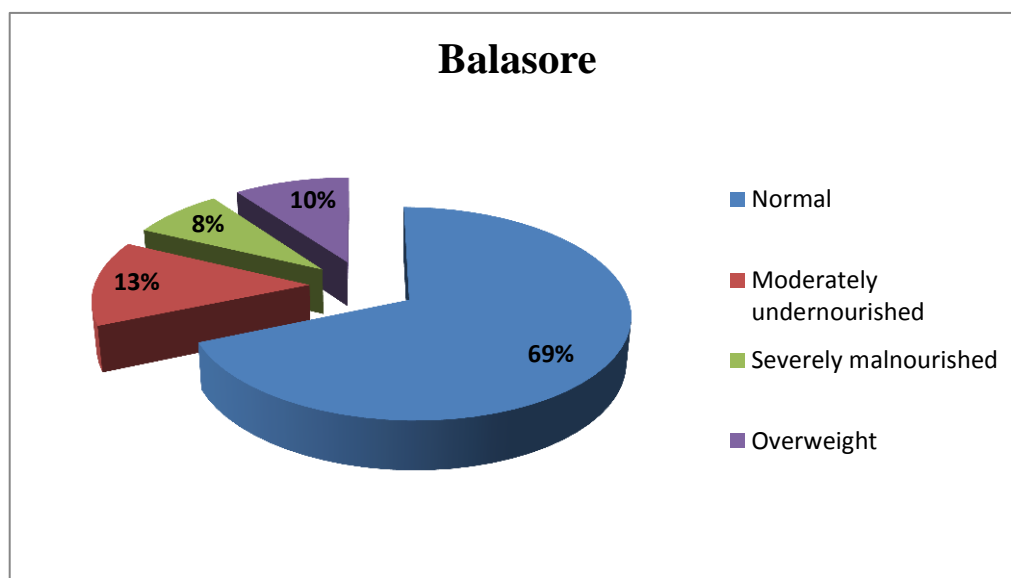


Fig. 6. Classification of children based on BMI for age Z scores

Table 6: Average Body Mass Index (BMI) of children from Bhadrak and Balasore districts of Odisha

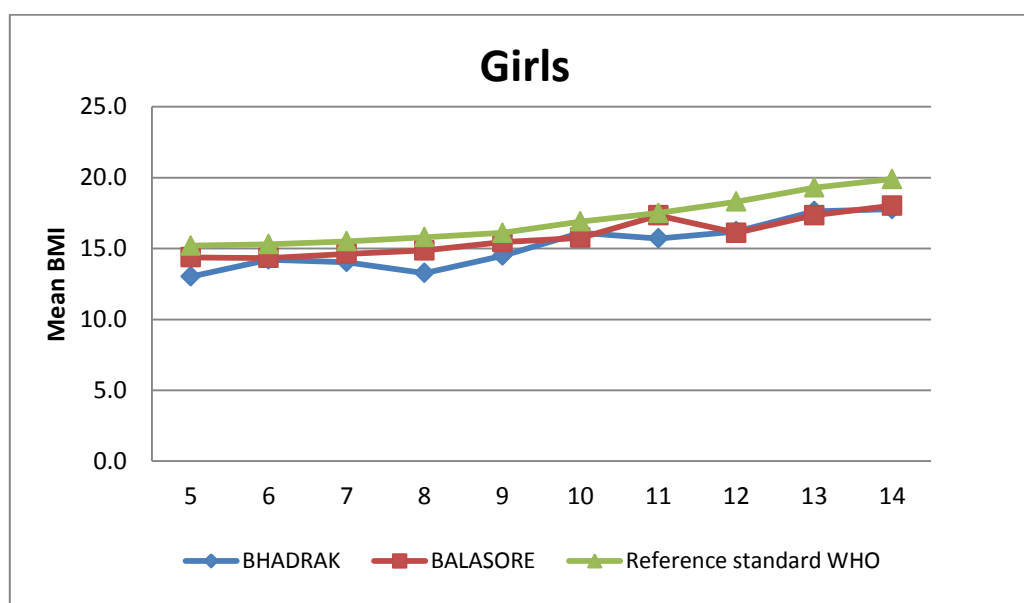
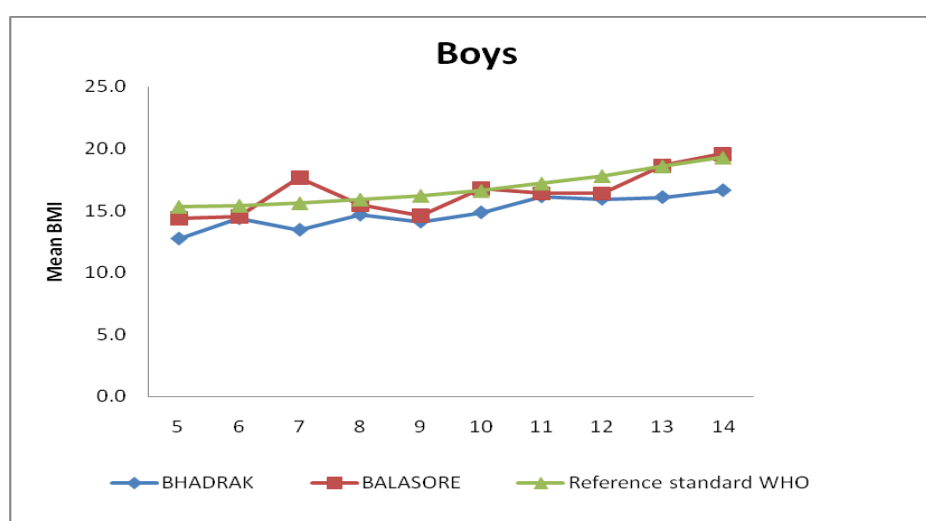
	AGE	BHADRAK			BALASORE			Reference standard WHO	
		N	BMI (Mean±SD)	% Reference standards	n	BMI (Mean±SD)	% Reference standards		
<b>BOYS</b>	5	7	12.74±1.47	83.26	8	14.37±1.41	93.92	15.3	
	6	21	14.38±1.80	93.37	20	14.52±1.74	94.28	15.4	
	7	21	13.45±3.46	86.21	33	17.66±15.29	113.20	15.6	
	8	30	14.67±2	92.26	25	15.45±2.49	97.16	15.9	
	9	26	14.11±2.32	87.09	24	14.62±1.82	90.24	16.2	
	10	24	14.86±1.68	89.51	30	16.78±3.89	101.08	16.6	
	11	34	16.15±3.30	93.89	25	16.4±2.73	95.34	17.2	
	12	23	15.96±2.67	89.66	23	16.39±3.38	92.07	17.8	
	13	16	16.09±2.66	86.50	24	18.63±2.49	100.16	18.6	
	14	3	16.65±1.07	86.26	6	19.59±2.93	101.50	19.3	
	<b>GIRLS</b>	5	5	13.02±1.55	85.6	15	14.38±1.65	94.6	15.2
		6	21	14.22±1.46	92.94	20	14.33±1.89	93.66	15.3
		7	20	14.04±3.30	90.58	33	14.62±1.74	94.32	15.5
		8	28	13.27±1.27	83.98	34	14.86±2.67	94.05	15.8
9		26	14.49±2.31	90	34	15.45±2.98	95.96	16.1	
10		17	16.11±2.84	95.32	34	15.75±2.53	93.19	16.9	
11		24	15.71±3.32	89.77	25	17.33±2.65	99.02	17.5	



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	12	20	16.21±1.82	88.57	37	16.1±2.66	87.97	18.3
	13	16	17.63±2.32	91.34	21	17.34±3.69	89.8	19.3
	14	15	17.82±1.94	91.12	6	18.02±1.85	90.55	19.9

Table 6 and fig 7 show that BMI for age ranged between 83.26 per cent to 91.73 per cent of reference standards in boys, the corresponding values for girls were 85.60 to 99.02 per cent respectively. When compared with WHO standards, the heights and weights of about 70% of the selected children from both the districts seem to be satisfactory.



**Fig. 7. Mean BMI of boys and girls (5-14 years) in Bhadrak and Balasore districts of Odisha**

### III. Clinical signs of nutritional deficiencies

Deficiency symptoms of protein, vitamin A, B complex and Iron deficiency anemia were observed in the surveyed children. Pale conjunctiva was observed in 6.0 and 6.5 % of children from district Balasore and Bhadrak, respectively. The prevalence of iron deficiency symptoms was found in Bhadrak district only. Though clinical signs were present in a small percentage, it is assumed that sub-clinical iron deficiency may be prevalent in this region.

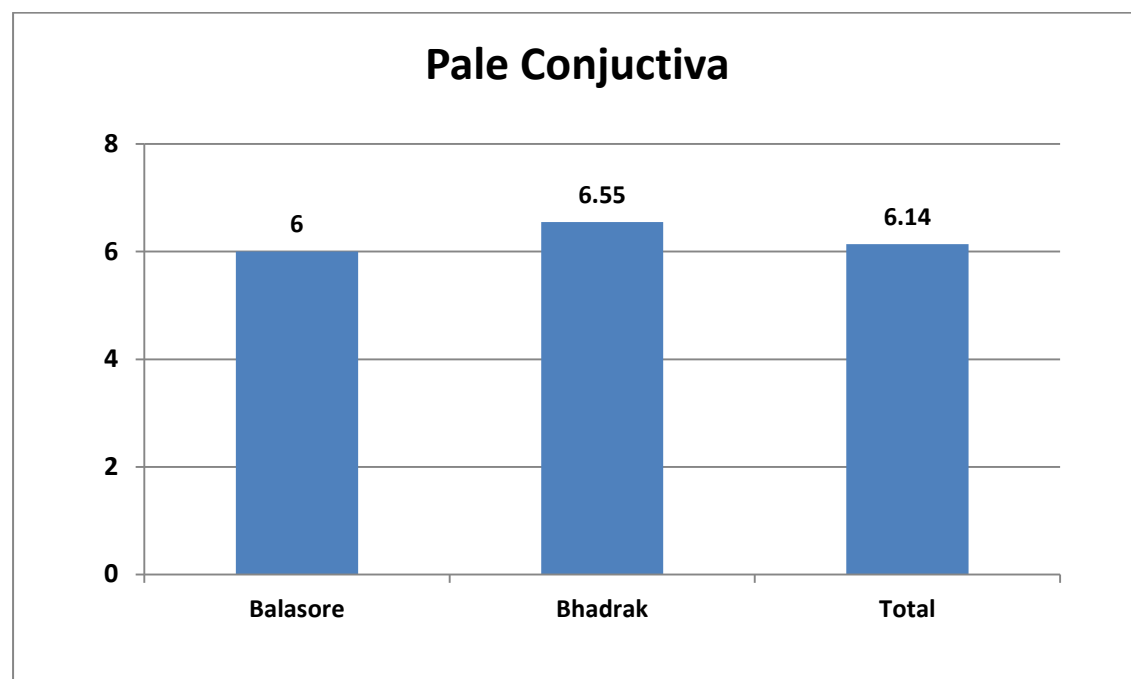
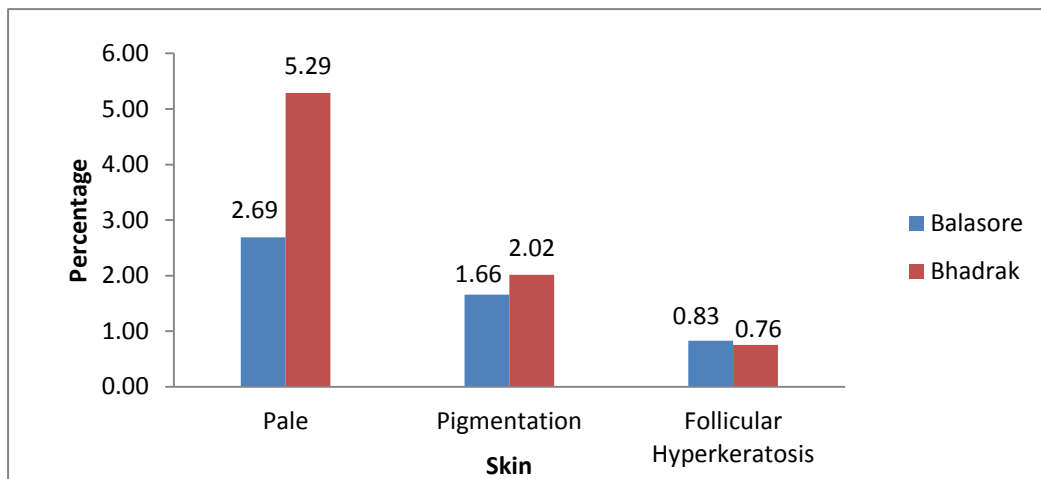


Fig. 8 Clinical signs of Vitamin A and Iron deficiency among selected children

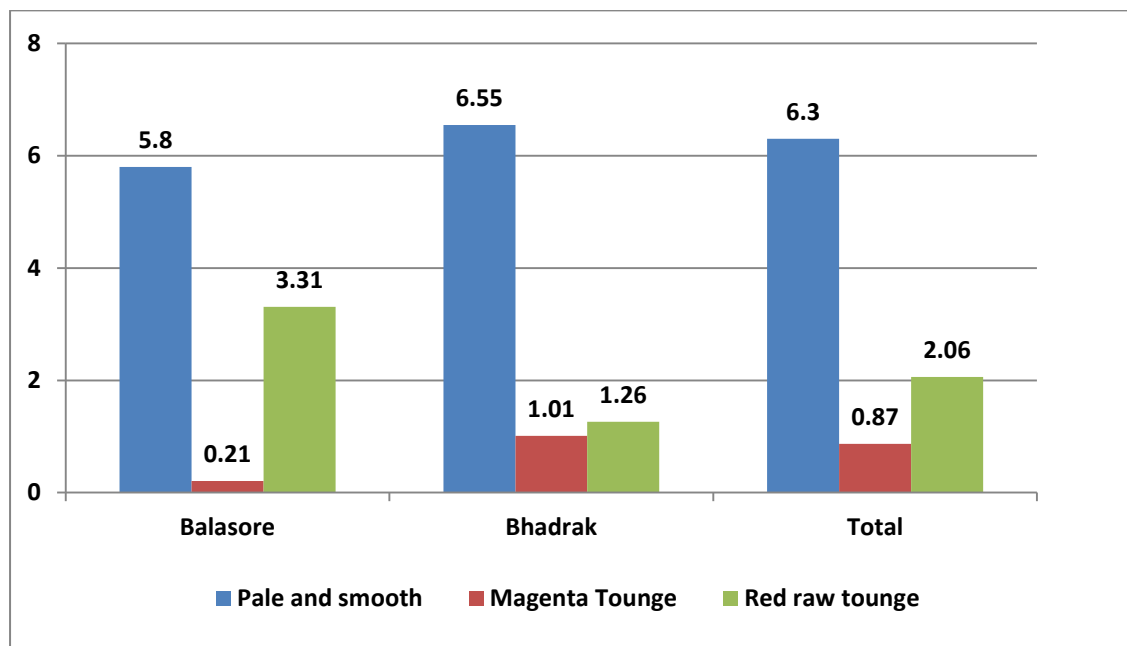
Skin problems were also observed in both the districts. In Bhadrak district, Pale skin was found higher than the Balasore district. Other problems like Pigmentation and Follicular Hyeperkeratosis were almost in similar percentage in both the districts (Fig.9).

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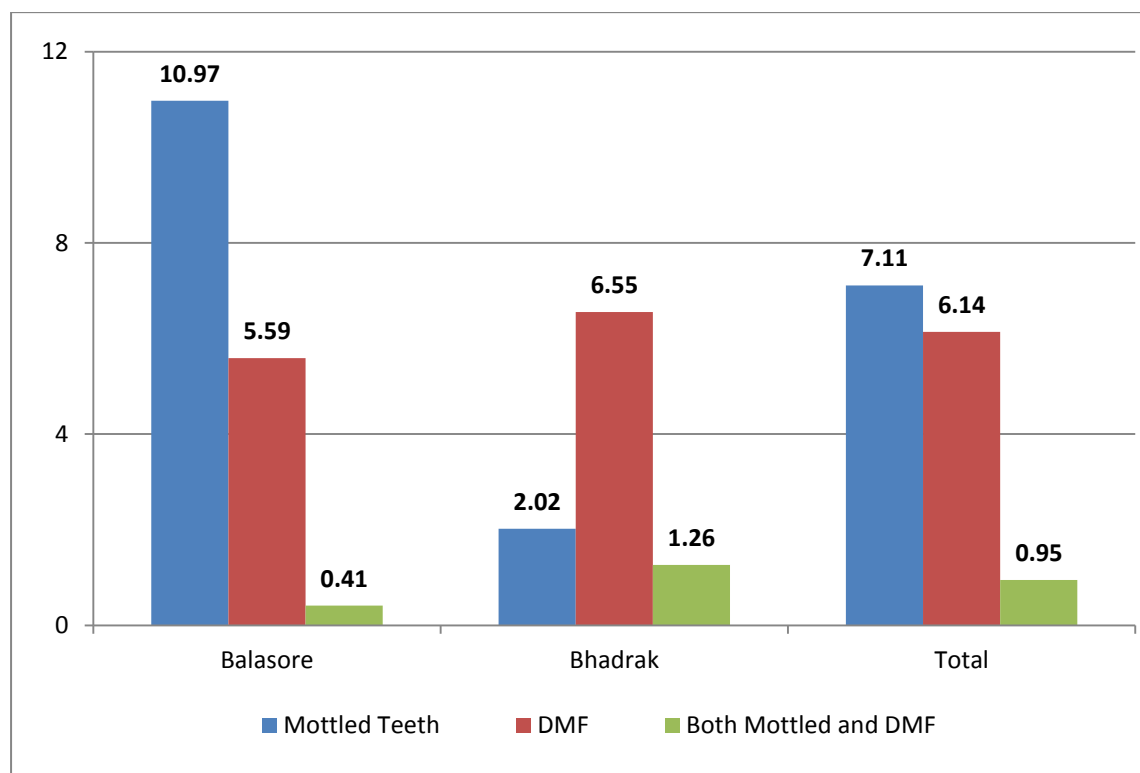
**Fig. 9 Clinical signs of skin infections among selected children**

Deficiency of Vitamin B Complex was also observed in selected children with the symptoms of pale, red raw, magenta and ulcerated tongue.



**Fig. 10 Clinical signs of various B complex deficiency among selected children**

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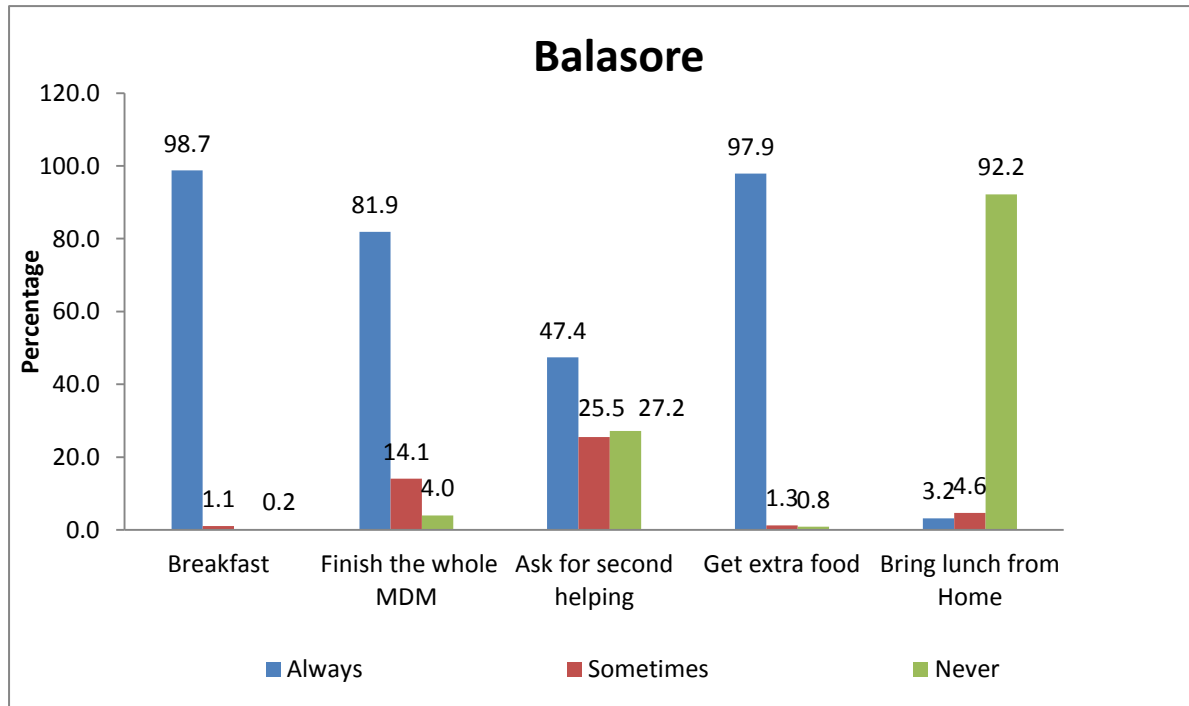
**Fig.11. Percentage of mottled enamel and Decayed, Missing or Filled teeth (DMF) among selected children**

Spongy gums, a sign of vitamin C deficiency, was observed in 0.62 and 0.5 per cent of the children from the Balasore and Bhadrak districts respectively. Decayed, missing, filled teeth (DMF) was observed in 5.59 and 6.55 per cent of the children from Balasore and Bhadrak districts, respectively (Fig.11). The overall oral hygiene was poor among majority of the subjects. The yellow and brown teeth were also observed in the selected children due to excess iron and fluorine content in the water. The incidence of DMF may also be attributed to poor oral hygiene and excess fluorine cannot be the only causative factor.

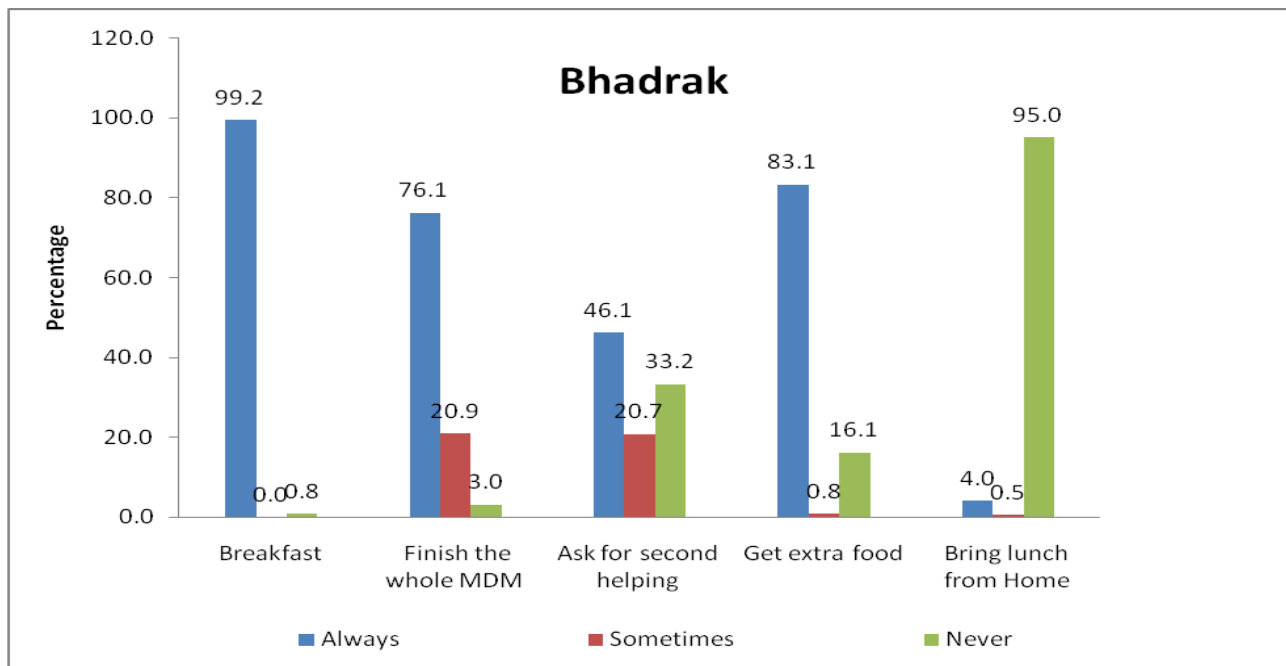
#### **IV. Consumption pattern of Mid Day Meal**

Observations were taken to study the consumption of MDM in respect of frequency of children taking Mid Day Meal, number of helpings taken and the practice of having breakfast at home by the children. It was observed that all the children took breakfast at before coming to the school and about 99 per cent were taking MDM at school daily.

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**Fig.12 & 13. Consumption pattern of Mid Day Meal**



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### V. Quality of potable water

Twenty two water samples of the visited schools were tested by using a Water Microbial contamination, presumably of coli forms, was observed in twenty one of the water samples collected, raising a serious concern about the potability of water.



Fig.14. Quality of water tasted

### VI. Quantity and Quality of Mid Day Meal

The prescribed nutrition to be provided by the mid day meal is as follows:

1. 450 kcal and 12g of protein which is derived from 100 g of food grains (rice/wheat), 20g of pulses, 50g of vegetables and 5g of oil for children studying in primary classes and
2. 700 kcal and 20g of protein, which is derived from 150g of food grains (rice/wheat), 30g of pulses, 75g of vegetables and 7.5g of oil in upper primary classes.

The quantity and quality of the meal was evaluated by the JRM team at the time of serving of meals in eleven schools of the two districts. The measured quantities of meals served were found to be adequate or more than adequate in all the eleven surveyed schools. The use of vegetables was grossly inadequate in all the schools as compared to prescribed amount.

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The MDM guidelines clearly mention that a supervising teacher should taste the prepared meal prior to serving, which is practised in almost all the schools. The sensory quality of the tasted meals was either good or very good in all the surveyed schools. All the children reported that they finished their serving and got more food if asked for.

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## **Suggested Recipes (For 25 Servings)**

### **POUSHTIK KHICHDI**

Ingredients	Amount(in gm)
Rice	500
Split green gram	225
Oil	50
Onion	100
Green chilli	1-2
Tomato	2gm
Fresh vegetables ( cut into pieces)	2 cups
Green leaves chopped	½ cups
Turmeric	1 tea spoon
Salt	to taste

### **PROCEDURE**

- Wash and soak grams for half an hour
- Heat oil. Add sliced onion, chopped vegetables, tomato, rice, dal, turmeric and double the amount of water.
- Stir and cover the vessel.
- Cook gently till khichdi is soft.
- Garnish with corriander leaves and serve with podina chutney.

### **PAUSHTIK DALMA**

Ingredient	Amount(in gm)
Arhar dal	250
Fresh vegetables cut into pieces	3 cups
Finger millet powder	100gm
Tomato	4-5 gm
Onion	3 gm
Garlic ginger paste	2 tbsp

### **PROCEDURE**



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- Boil dal and vegetables. When dal and vegetables become tender then add raggi powder
- And stir properly.
- Sauté the cumin seeds, onion, tomato and garlic ginger paste with a little amount of oil. And then add the cooked veg and dal to the sauté.
- Serve the cooked paustik dalma with rice or roti.

### **BENGAL GRAM CURRY**

<u>Ingredients</u>	<u>Amount in (gm)</u>
Sprouted Bengal gram	500
Tomato	150
Ginger garlic paste	20
Potato	200
Papaya	100
Onion	50
Salt	as per taste

### **PROCEDURE:**

- Wash and soak grams for one night for germination.
- Heat oil. Add germinated grams, sliced onion, chopped potato, papaya, tomato, turmeric and double the amount of water.
- Stir and cover the vessel.
- Cook gently till the grams and veg are soft.
- Garnish with coriander leaves and serve hot as side dish.

### **RAGI VEGETABLES DALIA**

Ingredients	amount(gm)
Rice suji	500
Ragi	500
Oil	125-150
Onion	300gm
Green chilli	6-8 nos
Tomato	250 gm
Vegetables cut into	
Pieces	4-5 cups
Coriander leaves	½ cup
Turmeric and salt	according to requirements

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### **METHOD**

- Put oil on pan and add seasoning, green chilli, onion and fry till brown.
- Add tomato and cut pieces of vegetables and cook for 3-5 minutes.
- Add ragi and rice suji and stir properly.
- Put adequate water and cook till it become tender.

## **Chapter – 6 Recommendations**

- 1- Sensitisation of officials at District and Block level towards their role and responsibilities is essential for effective implementation of MDMS.
- 2- The JRM recommends that the undernourished children, especially the 14 year age group, should be identified by periodical health checkups. The identified children should be given special care during MDM.
- 3- Better convergence with the School Health program is essential. There is a need for the regular health monitoring. Vitamin A, Iron and Folic Acid supplements and deworming tablets should be provided on regular basis to the schools. Further, proper instructions regarding their dosage should be given to the teachers. Health cards, with duly filled record of each child need to be maintained and updated regularly in all the schools.
- 4- Drinking water should be tested for any type of biological contamination and remedial purification be done accordingly.
- 5- The meals should be more nutrient dense and nutritionally balanced. Inclusion of higher amounts of non tuber vegetables is recommended.
- 6- Keeping in view the congenial weather some trees such as banana, papaya and, moringa may grown for supply of fresh/leafy vegetables to make meals nutritionally rich. Similarly, pokhars may be used to rear fish that may be used in addition to or replace eggs in the menu once a week.
- 7- A concerted effort for Health and Nutrition Education (HNE) is required for children, parents, teachers, cooks and caretakers. Feeding program along with HNE, may prove more effective in improving the health and nutritional status of the children.
- 8- Non-use of pucca kitchen-cum-stores also needs to be looked into. In many schools these pucca kitchens are used as head teacher's room and

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food is being cooked in make shift Kitchen sheds that do not provide adequate protection from insects and reptiles.

**9-** Since one reason for non usage of kitchens is the poor ventilation leading to unbearable smoke build up, the State needs to adopt and encourage the use of LPG.

**10-**Completion of already sanctioned kitchen-cum-stores in a time bound manner may be undertaken for cooking mid day meals in a clean and hygeinic enviroment.

**11-**State should use the information available with MDM-MIS to evaluate the performance and for focused inspections and monitoring.

**12-**The State Govt. should engage adequate number of Cook-cum-Helpers in the schools as per norms. There is need to educate the cooks regarding proper weighment of raw ingredients. Use of weighing balance is recommended for weighing raw ingredients so that children receive prescribed amounts of nutrients.

**13-**The rights and entitlement of children, menu, MDM logo, and emergeny contact numbers should be displayed prominently on the outside wall of the schools.

### **14-Monitoring and Supervision:**

- **Inspections by the officials-** Considering that the scheme is not properly monitored in the State, it may ensure that all the parameters related to MDMS be properly monitored through a structured format.
- **Setting up of State Review Mission** to review the Scheme in a district on quarterly basis.

**15-**All the centralized kitchens must follow the principles of HACCP (Hazard Analysis Critical Control Point) to ensure that compromised quality food products are not prepared and food related hazards do not occur.

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**16-**The gunny bags used for food grains can be auctioned and the amount can be utilized for better implementation of MDMS.

**17-**Periodic feedback may be obtained for further improvement of from the stakeholders and other concerned officials/teachers who are engaged at the gross root level.

*Dr Abha Singh*

*Mr Rajkishor Mishra*

*Dr P K Acharya*

*Shri Gangadhar Sahu*

*Shri Rajiv Kumar*

*Dr Neelam Grewal, (Mission Leader)*

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Annexure - I

**EDUCATION OFFICIALS OF BALASORE & BHADRAK DISTRICT interacted during the visit of JRM**

## A. DISTRICT PROJECT MANAGEMENT UNIT(MDM), BALASORE

SL.NO	NAME	DESIGNATION & ADDRESS
1	Prashan kishore Mohapatra	DPC, SSA, Balasore
2	Prakash kumar Joshi	DEO, Balasore
3	Laxmidhara Behera	BEO,Balasore
4	Kapileswar Mohanty	BRC, Jaleswar
5	Ganga Narayan Pradhan	Nodal SI(MDM)
6	Snehasis Patra	CRCC,Jamalpur
7	Radhakanta Mahalik	CRCC,Jaleswar
8	Prakash kumar Joshi	DEO, Balasore
9	Srikanta Seet	BRC, Basta
10	Chiraranjan Das	Nodal SI(MDM)
11	Bansidhara Jena	BRC,Soro
12	Kamalakanta Sahu	Nodal SI(MDM)
13	Manoranjan Rout	SI,Remuna
14	Amulya kumar Jena	CRCC, Remuna
15	Laxmidhara Behera	BEO,Balasore
16	Bikartana Nayak	BRC, Sadar
17	Gauranga Charan Senapati	Nodal SI(MDM)
18	Radha mohan Barik	SI,BIs MPL
19	Chandrakanta Behera	CRCC,Sunhat
20	Arun Kumar Patra	CRCC, Azimabad
21	Laxmidhara Behera	BEO, Balasore
22	Bikartana Nayak	BRC, Sadar
23	Pitambar Barik	BRC, Simulia
24	Narahari Mishra	Nodal SI(MDM)
25	Ramakanta Panda	CRCC, R.S Nodal Patuli
26	Mahendra Behera	CRCC, Kanheibindha
27	Bijay Kumar Nayak	BEO,Soro
28	Uttam Kumar Nayak	Nodal SI(MDM)
29	Gangadhara Parida	SI, Soro NAC
30	Shridhara Behera	Brc, Soro
31	Kartikeswar Dalei	CRCC, Anantapur
32	Shrustidhara Sethi	CRCC, Pakhar

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### B. DISTRICT PROJECT MANAGEMENT UNIT(MDM), BHADRAK

Sl. No.	Name	Designation	Name of the Block/ Address
1	Satya Mohan Senapati	District Education Officer	District Education Office, Bhadrak
2	Sukadev Tarei	Block Education Officer	D.I. Office, Bhadrak
3	Mirza Md. Hifzur Rahman	Prog.-cum-Acct.	DPMU (MDM), Bhadrak
4	Ananya Kumar Pradhan	Data Entry Operator	DPMU (MDM), Bhadrak
5	Sanatan Sahoo	S.I. of Schools	Block, Bhadrak
6	Gurupada Sahoo	BRCC	Block, Bhadrak
7	Sashi Kanta Mishra	CRCC	Block, Bhadrak
8	Namita Samal	Data Entry Operator	BRC Office, Bhadrak
9	Smt. Binapani Ratha	Block Education Officer	Block Education Office, Dhamnagar
10	Niranjan Kar	S.I. of Schools	Block, Dhamnagar
11	Sricharan Mallick	BRCC	Block, Dhamnagar
12	Surendra Kumar Sethi	CRCC	Block, Dhamnagar
13	Abhaya Kumar Behera	Data Entry Operator	BRC Office, Dhamnagar
14	Kartikeswar Lenka	Block Education Officer	Block Education Office, Bonth
15	Dibakar Chaudhury	S.I. of Schools	Block, Bonth
16	Bhaskar Parhi	BRCC	Block, Bonth
17	Abhaya Kumar Sahoo	CRCC	Block, Bonth
18	Ratikanta Rout	CRCC	Block, Bonth
19	Rashmi Prava Parhi	Data Entry Operator	BRC Office, Bonth
20	Sambhunath Panigrahi	Block Education , Officer	Block Eduaction Office, Tihidi
21	Harekrushna Jena	S.I. of Schools	Block, Tihidi
22	Damodar Jena	BRCC	Block, Tihidi
23	Pratap Kumar Dhupal	CRCC	Block, Tihidi
24	Karunakar Ojha	Data Entry Operator	BRC Office, Tihidi
25	Kartikeswar Lenka	Block Education Officer	Block Education Officer, Bhandaripokhari
26	Surendra Kumar Panda	S.I. of Schools	Block, Bhandaripokhari
27	Santosh Kumar Sahoo	BRCC	Block, Bhandaripokhari
28	Natabar Sahoo	CRCC	Block, Bhandaripokhari
29	Prafulla Kumar Sahoo	CRCC	Block, Bhandaripokhari
30	Monalisha Biswala	Data Entry Operator	BRC Office, Bhandaripokhari
31	Sambhunath Panigrahi	Block Education Officer	Block Eduaction Office, Basudevpur
32	Ramakanta Parhi	S.I. of Schools	Block, Basudevpur
33	Nityananda Behera	BRCC	Block, Basudevpur
34	Daitari Behera	CRCC	Block, Basudevpur
35	Sarbeswar Nayak	Data Entry Operator	BRC Office, basudevpur

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**Annexure – II**

## Trends of attendance in District Balasore

<b>BALASORE</b>														
SN	Block Name	Name of the school	Enrollment	Attendance										Avg
				Day-1	2	3	4	5	6	7	8	9	10	
1	Jaleshwar	Chalanti Nodal UP School	145	143	134	141	127	132	141	136	136	141	133	136
2	Jaleshwar	NPS Nodal UP School (Primary)	133	112	103	111	101	105	116	106	99	110	100	106
		Upper Primary	78	68	68	70	55	64	69	66	62	67	60	65
3	Sadar	Ranasahi School	159	146	150	120	149	143	145	150	140	148	148	144
4	Sadar	Ranasahi Primary School	220	209	195	177	206	194	206	211	177	193	180	195
5	Sadar	Jhagalapadhi Primary School	211	165	175	112	178	165	173	177	183	188	170	169
6	Jaleshwar	Baghabali UGP School	157	112	126	129	57	114	133	122	122	121	124	116
		Upper Primary	113	90	91	93	63	83	96	92	96	95	85	88
7	Jaleshwar	Jaleshwar Nodal UP School (Primary)	107	70	87	90	85	90	93	93	86	90	90	87
		Upper Primary	101	88	93	85	88	89	75	80	91	92	96	88
8	Sadar	Mansingh Bazar UGUP	163	100	100	70	100	105	100	80	70	110	100	94
9	Basta	Dandika UGUP School	44	44	44	44	44	44	44	44	44	44	44	44
		Upper Primary	21	21	21	21	21	21	21	21	21	21	21	21
10	Basta	Siddheshwar Nodal UPME school	226	202	150	188	190	181	199	186	184	182	148	181
11	Basta	Siddheshwar High school	<b>NO Register found on the day of the visit</b>										0	
12	Basta	Hadamoudh Primary school	190	160	150	165	145	160	170	160	150	170	160	162
13	Basta	BoshontoPur Prathamic Vidyalaya	104	84	82	91	96	91	84	60	97	100	97	88
14	Remuna	Himramoni Nodal UP School	151	110	127	94	129	94	123	129	118	119	122	117
15	Remuna	Surendra Nath High School	66	50	55	57	64	63	62	63	63	63	62	60
16	Remuna	Somnathpur Nodal UP School	211	173	126	139	159	135	127	125	56	118	175	133
17	Remuna	Somnath pur Primary	107	95	72	78	89	75	79	88	50	80	79	79
18	Remuna	Remuna High School	242	126	135	135	107	95	135	30	110	115	128	112
19	Simulia	Dadhibamanapur Primary School	47	46	45	47	47	47	47	47	47	47	47	47
20	Simulia	Kshetramohan Nodal UP School	169	152	150	144	155	150	155	158	155	158	157	153



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21	Simulia	Goudapada UG UP School	116	59	67	72	74	100	94	102	103	96	104	87
22	Soro	Purbai Kanya Sharma Primary School	139	132	132	124	114	104	114	98	98	98	94	111
23	Soro	Pakahear Nodal UP	304	259	252	229	229	230	235	240	218	224	231	235
24	Soro	Anantpur Nodal UP School	273	201	181	196	197	204	210	196	194	200	202	198

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**Annexure – III**

## Trends of attendance in District Bhadrak

BHADRAK														
S N	Name of the Block	Name of the school	Enrol.	Attendance										Avg
				Day-1	2	3	4	5	6	7	8	9	10	
1	Dhamnagar	Bhagawanpur Nodal UP Primary Dhamnagar Primary	142	124	88	120	116	118	105	112	114	117	114	113
		Upper Primary	134	114	90	116	118	124	114	105	114	112	115	112
2	Dhamnagar	Tapaneshwar Nodal School Ichada	222	201	164	199	203	207	203	20720 8	202	203	203	199
3	Tihdi	Dolosai ME School	240	220	223	238	236	235	237	238	230	238	230	233
4	Tihdi	Ram Narayan High School	220	199	168	180	162	157	124	203	174	216	206	179
5	Tihdi	Hidimbai Primary School	119	109	101	109	109	111	110	110	108	108	109	108
6	Dhamnagar	Jaynagar Primary School	113	100	100	99	97	103	101	94	102	112	98	101
7	Bhandar Pokhri	Anand Keshori ME School	46	35	40	40	40	40	40	40	40	40	40	40
8	Bhandar Pokhri	Sarsada Primary School	102	59	97	96	100	97	99	96	99	100	82	93
9	Bhandar Pokhri	Sarsada UP ME School	199	194	194	198	198	194	192	192	192	193	190	194
10	Bhandar Pokhri	Bhandarpokhri High School	58	41	42	57	57	56	56	57	55	55	56	53
11	Bhandar Pokhri	Sarsada High SchoolBhandar Pokri	98	62	72	63	82	85	85	84	62	29	65	69
12	Bhandar Pokhri	Barikpur Nodal UP School	83	24	70	71	72	71	71	71	71	71	73	68
13	Bhandar Pokhri	Helpur Primary School	73	61	66	65	66	62	67	70	67	69	69	66
14	Bhandar Pokhri	Pahimahura Nodal UP School	58	38	54	54	54	54	57	55	52	54	56	53
15	Bhadrak	Tisalpur UGM Project UP school	<b>NO records Found in the school on the day of visit</b>											
16	Basudevpur	Batda Nodal UP ME School (Primary)	113	94	104	104	102	103	95	83	96	91	92	96
		Upper Primary	107	89	102	101	100	101	93	88	100	88	96	96
17	Basudevpur	Tulamtula Nodal UPS	132	115	120	115	118	119	109	110	118	115	120	116
18	Bonth	Kendundala	129	85	116	120	122	121	113	119	120	114	118	115

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19	Bonth	Badakanpad UGM (Upgraded ME)	100	100	98	99	100	100	100	99	98	100	97	99
20	Bonth	Gandagara Middle School	88	66	85	84	78	84	84	84	84	79	81	81

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Annexure – IV

## Availability of Infrastructure – District Bhadrak

BHADRAK : Annexures												
Name of the Block	Name of the school	Availability of K Shed	Kitchen devices	No. of CCH	Caste of the CCH	Separate toilet	Drinking water	Fuel	Health check up	SMC Register	Inspection	
Dhamnagar	Bhagawanpur Nodal UP Primary Dhamnagar Primary	Under construction	Yes	2	One SC 1 OBC	Common	Tube well	Firewood	Nil	Yes	Yes	
	Upper Primary	Same School as above										
Dhamnagar	Tapaneshwar Nodal School Ichada	Constructed	Yes	2	2 OBC	Yes	Tube well	Fire wood	Nil	Yes	Yes	
Tihdi	Dolosai ME School	Constructed	Yes	2	2 OBC	Yes	Tap water	Nil	Nil	No	No	
Tihdi	Ram Narayan High School	No	Yes	2	2 OBC	Yes	Tube well	Nil	Nil	No	Yes	
Tihdi	Hidimbai Primary School	Constructed	Yes	2	2 OBC	Yes	Tube well	Nil	Nil	Yes	Yes	
Dhamnagar	Jaynagar Primary School	Constructed	Yes	2	2 OBC	Yes	Tube well	Nil	Nil	Yes	Yes	
Bhandar Pokhri	Anand Keshori ME School	Constructed	Yes	2	2 OBC	Yes	Tube well	Nil	Nil	Yes	Yes	
Bhandar Pokhri	Sarsada Primary School	Constructed	Yes	2	2 OBC	Yes	Tube well	Nil	Nil	Yes	Yes	
Bhandar Pokhri	Sarsada UP ME School	Constructed	Yes	2	2 OBC	Yes	Tube well	Nil	Nil	Yes	Yes	
Bhandar Pokhri	Bhandarpokhri High School	No	Yes	2	2 OBC	Yes	Tube well	Nil	Nil	Yes	Yes	
Bhandar Pokhri	Sarsada High SchoolBhandar Pokri	No	Yes	2	2 OBC	Yes	Tube well	Nil	Nil	Yes	Yes	
Bhandar Pokhri	Barikpur Nodal UP School	No	Yes	2	2 OBC	Yes	Tube well	Nil	Nil	No	No	
Bhandar Pokhri	Helpur Primary School	Constructed not in Use	Yes	2	2 OBC	Yes	Tube well	Nil	Nil	No	Yes	
Bhandar Pokhri	Pahimahura Nodal UP School	Constructed not in Use	Yes	2	2 OBC	Yes	Tube well	Nil	Nil	No	Yes	
Bhadrak	Tisalpur UGM Project UP school	<b>NO records Found in the school on the day of visit</b>								Nil	Yes	Yes
Basudevpur	Batda Nodal UP ME School (Primary)	Constructed not in Use	Yes	2	2 OBC	Yes	Tube well	Nil	Nil	No	Yes	
	Upper Primary	Same as above										
Basudevpur	Tulamtula Nodal UPS	Constructed not in Use	Yes	2	2 OBC	Yes	Tube well	Nil	Nil	No	Yes	

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Bonth	Kendundala	Not approved	Yes	2	2 OBC	Yes	Tube well	Nil	Nil	No	Yes
Bonth	Badakanpad UGM (Upgraded ME)	Constructed not in Use				Yes	Tap and Tube	Nil	Nil	yes	No
Bonth	Gandagara Middle School	Constructed not in Use				Yes-Bad	Tap and Tube	Nil	Nil	Yes	No

**Annexure – V**

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### Availability of Infrastructure – District Balasore

Balasore: Annexures											
Name of the school	K Shed	Kitchen devices	No. of CCH	Caste	Separate toilet	Drinking water	Fuel	Fire extinguisher	Health check	SMC Register	Inspection
Chalanti Nodal UP School	Yes	Yes	2	OBC	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
NPS Nodal UP School (Primary)	Yes	Yes	2	OBC	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Upper Primary	Yes	Yes	2	OBC	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Ranasahi School	Yes	Yes	3	2 OBC, 1 Gen	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Ranasahi Primary School	Yes	Yes	3	2 SC, 1 OBC	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Jhagalapadhi Primary School	Yes	Yes	3	2 SC, 1 OBC	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Baghabali UGP School	Yes	Yes	3	2 OBC	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Upper Primary	Same as above										
Jaleshwar Nodal UP School (Primary)	Yes	Yes	3	2 OBC	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Upper Primary	Same as above										
Mansingh Bazar UGUP	Yes	Yes	3	2 OBC	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Dandika UGUP School	Yes	Yes	3	2 OBC 1 SC	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Upper Primary	Yes	Yes	3	2 OBC	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Siddheshwar Nodal UPME school	Yes	Yes	3	2 OBC 1 Gen	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Siddheshwar High school	NO Register found on the day of the visit										
Hadamoudh Primary school	Yes	Yes	3	2 OBC	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
BoshontoPur Pratham Vidyalaya	Yes	Yes	3	2 OBC 1 BC	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Himramoni Nodal UP School	Yes	Yes	3	2 OBC 1 Gen	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Surendra Nath High School	Yes	Yes	3	3 OBC	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Somnathpur Nodal UP School	Yes	Yes	3	3 OBC	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Somnath pur Primary	Yes	Yes	3	2 OBC 1	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Remuna High School	Yes	Yes	3	3 OBC	Yes	Tube well	Firewood	Yes	Nil	Yes	Yes
Dadhibamanapur Primary School	Yes	Yes	2	2 OBC	Yes	Tube well	Firewood	Yes	Yes	Yes	Yes
Kshetramohan Nodal UP School	Yes	Yes	3	3 OBC	Yes	Tube well	Firewood	Yes	Yes	Yes	Yes

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Kancheibindha											
Goudapada UG UP School	Yes	Yes	2	2 OBC	Under Construction	Tube well	Firewood	Yes	Yes	Yes	Yes