



## Research Article

# Food group diversity within the Supplementary Nutrition Programme of the Integrated Child Development Services Scheme of India

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### Highlights/Key Messages

- Food group diversity in ICDS-SNP meals varies widely across Indian states.
- Several states achieve high diversity using locally available foods.
- Greater inclusion of fruits, vegetables, dairy and eggs could improve SNP meals.

## Background

A poor-quality diet with low diversity is central to the high prevalence of malnutrition among young Indian children. The Indian Integrated Child Development Services Scheme (ICDS) addresses this nutritional gap through its Supplementary Nutrition Programme (SNP), which provides energy, protein, fat, and essential micronutrients to children via Take-Home Rations (THR, for children aged 6-36 months) and Hot Cooked Meals (HCM, for children aged 37-72 months).

## Objective

To examine the food group diversity of HCM provided under ICDS-SNP across Indian states and identify strategies for improvement.

## Methods

The SNP food group diversity scores (SNP-FGDS) were calculated using a food-group-based scoring approach adapted from established diversity indicators, with each food group coded as present or absent in state-level SNP provisions. Scores were summarised at the state level and organized zone-wise to examine regional patterns and incorporation of locally available foods.

## Results

The SNP-FGDS ranged from 3 to 11 across states. Southern and Eastern states showed higher diversity, with greater inclusion of fruits, vegetables, and animal-source foods. The findings indicate that achieving food group diversity within ICDS-SNP is feasible; however, states with lower diversity require geographically tailored, context-specific strategies.

## Conclusion

The findings indicate that achieving food group diversity within ICDS-SNP is feasible, as demonstrated by higher-diversity states; however, states with lower diversity may require geographically tailored, context-specific strategies.

**Keywords:** ICDS, supplementary nutrition programme, food group diversity, Anganwadi centres, India

## Introduction

The Integrated Child Development Services (ICDS), initiated in 1975 in accordance with India's National Policy for Children (Ghosh & Sengupta, 2022), is the world's largest community-based programme that offers a comprehensive set of services to children aged 0-72 months, adolescent girls, and pregnant and lactating women. One of these services is nutritional support that is offered to children through designated creches, or centres called Anganwadi Centres (AWC). The ICDS Supplementary Nutrition Programme (SNP), delivered through this nationwide network, reaches approximately 90 million children across India (Prasad, 2025). AWCs function as the primary platform for delivery of ICDS services, with a core focus on improving the nutritional and health status of young children and supporting early childhood development, in addition to reducing mortality, morbidity, and malnutrition (Sachdev & Dasgupta, 2001). The nutritional support provided through the SNP aims specifically to bridge the gap between recommended dietary requirements and actual energy and protein intake in children, as defined in the National Food Security Act of 2013 (Ministry of Consumer Affairs, Food and Public Distribution, 2023). The SNP is provided either as a Take Home Ration (THR, for children aged 6-36 months) or a Hot-Cooked Meal (HCM, for older children aged 37-72 months) at the AWC. The earlier provisions for energy and protein under the SNP were 500 kcal and 15-20 g protein/day for children aged 6-72 months (Ministry of Women and Child Development, 2009). These have now been revised to 200 kcal and 8-10 g protein/day for children aged 6-12 months and 400 kcal and 15-20 g protein/day for children aged 1-6 years (Ministry of Consumer Affairs, Food and Public Distribution, 2023). The THR that is offered to the mothers of children 6-36 months old is in the form of blended mixes of raw foods that can be made into a porridge at home. Children aged 37-72 months are admitted into the AWC for day-care, where a mid-morning snack and HCM are served at the site (Ministry of Consumer Affairs, Food and Public Distribution, 2023). The budgetary allowance for the nutritional support is Rs. 8/day for each child (ages 6-72 months) (Bhawan & Delhi-L, 2017). While the core of SNP guidelines specifies energy and protein norms, they do not explicitly address the diversity of foods required to ensure an adequate intake of essential micronutrients. In the absence of guidance on food composition, states may interpret SNP norms differently, potentially resulting in wide variation in the diversity of foods provided.

Dietary diversity among young children in India is quite low. Low diversity of foods consumed during early childhood has been consistently associated with suboptimal linear growth, impaired cognitive development, and increased risk of micronutrient deficiencies (Arimond & Ruel, 2004; Molani Gol et al., 2022). Analysis of the National Family Health Survey (2015-16) showed that fewer than 25% of children aged 6-23 months in most Indian states met the minimum dietary diversity criteria (Saha et al., 2022) and NFHS-5 (2019-2021) continue to report similarly low levels, with only about a quarter of children achieving the minimum dietary diversity. These findings underscore the broader context of poor dietary quality in early childhood (Majumder et al., 2025). Improving the diversity of food groups offered

through feeding programmes such as ICDS-SNP, therefore, represents a critical opportunity to positively influence child growth and development (Praveen Kumar et al., 2025).

However, no data are available on the diversity of the foods provided through this programme nationally. To address this lack, the present analysis examined the food-group diversity of ICDS-SNP provisions for children aged 3-6 years, based on a survey conducted across the states and union territories of India.

## Methods

The supply of ICDS provisions mandated for 3-6-year-old children was studied cross-sectionally at functional AWCs across India. The study was managed by six satellite centres located across the six regions of India: North, South, East, West, Central, and North-East (See Supplementary Table S1 for the states included in each region), while being centrally coordinated. Ethical clearance was obtained from the Institutional Ethics Committee, St. John's Medical College (IEC Study Ref No. 141 / 2022).

Data were collected in 25 states and two union territories (Jammu & Kashmir and the National Capital Territory of Delhi) from August 2022 to February 2023, as part of a study to develop optimization models for the ICDS supplementary nutrition programme to meet beneficiaries' nutrient requirements. The states included have been divided into geographical zones, details of which have been listed in Supplementary Table S1. Three states were omitted from the study: West Bengal due to the unavailability of permission, and Rajasthan and Uttar Pradesh because HCM was not distributed at the time of the survey. While 4 AWCs were selected (2 each from two districts purposively sampled) for the rest of India, for the 8 small North-Eastern states, 2 AWCs were purposively selected from one district per state.

The six satellite centres from across the country collected data from their respective regions (A list of districts included is provided in Supplementary Table S2.) using an electronic data management system developed for this study. Standard questionnaires were used to collect information on demography, the number of beneficiaries enrolled at the sampled AWCs, and the food items provided. This included details on the type of food provided, additional foods given to beneficiaries, food provided through schemes other than ICDS, the inclusion of fortified foods, and other nutritionally dense food items such as eggs and milk. Dietary practices in India are heterogeneous, with a substantial proportion of the population following vegetarian diets for cultural, religious, or personal reasons. In the Indian context, vegetarian diets typically include dairy products and thus are not equivalent to vegan diets. The inclusion of eggs and other animal-source foods varies across states and programme guidelines, reflecting local dietary norms and community preferences. However, the Supplementary Nutrition Programme Food Group Diversity Scores (SNP-FGDS) were derived exclusively from the food group composition of ICDS-SNP provisions and did not account for foods provided through other schemes.

The food diversity of SNP provisions (HCM and morning snack) in each state was assessed using a food-group-based scoring approach, adapted from the Household Dietary

Diversity Score framework (Swindale & Bilinsky, 2006). Twelve food groups were included: cereals and millets, pulses and legumes, green leafy vegetables, other vegetables, roots and tubers, nuts and seeds, fruits, edible oils and fats, eggs, milk and milk-based products, other non-vegetarian foods, and sugars. Each food group contributed one point, resulting in a maximum possible SNP-FGDS of 12. Scores were summarised and are presented region-wise to allow comparison of food group diversity across geographical regions.

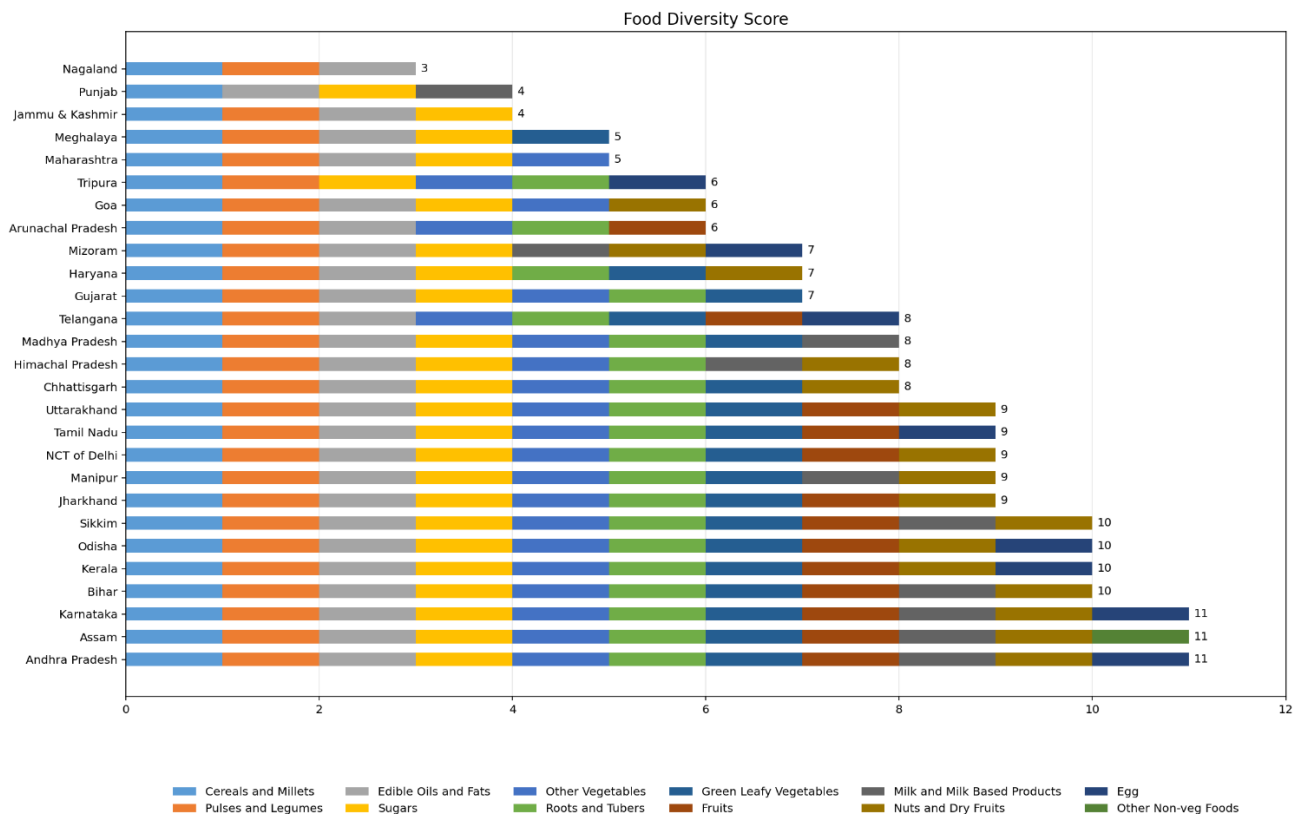
The total scores were categorised into three equal categories to indicate low (<4 food groups), medium (5-8 food groups), and high (>8 food groups) food group diversity. This approach was adopted because no validated indicator

currently exists to assess food-group diversity within the ICDS-SNP provisions.

## Results

### Regional Variation in ICDS-SNP Food Group Diversity

Given the vast diversity of cultures and food habits in a country like India, the SNP given at the AWCs exhibited substantial variation in food group diversity across states (Figure 1). While the main cereal remained mostly rice and wheat, major variations were observed in the side dishes that were provided. These are impacted by the local vegetation, the climatic conditions, and seasonal fluctuations. Further details of major food items given in the AWCs are listed in Supplementary Table S3.



**Figure 1.** State-level food group diversity scores for the hot cooked meals provided as supplementary nutrition in the Integrated Child Development Scheme in a sample of centres across India

### North India

The SNP-FGDS in North India ranged from a low of 4 in Jammu & Kashmir and Punjab to a high of 9 in Uttarakhand and Delhi. Overall, cereal-pulse combinations were given precedence, and a dearth in the provision of nuts & oilseeds, fresh fruits, and vegetables was observed. Wheat was the primary staple in the main dishes served in the AWCs as a part of the HCM. Additionally, rice and pulse-based dishes with vegetable were provided, perhaps owing to the ease of preparation and portioning. Pulse-based preparations were also frequently served as side dishes to complement the staple cereal served. AWCs in Jammu & Kashmir served a variety of one-pot cereal-pulse-vegetable composite dishes. Animal-based foods such as eggs and whole milk powder

were provided either in the HCM or the THR in some states. A variety of nutritious snacks were also commonly part of HCM in this region.

### East India

In this zone, there was substantial food group diversity, with Bihar and Orissa receiving a score of 10 and Jharkhand a score of 9. There was a noticeable shift away from predominantly rice-based offerings, as evidenced by the inclusion of various pulse-based dishes, locally sourced vegetables, fruits, and nuts. Milk was also part of the provisions for beneficiaries in some states. Apart from boiled rice and pulses, sweet rice preparations were provided. Eggs and egg-based preparations were provided in the state of

Orissa, along with pulse and vegetable preparations native to that state. Fruits (apples, oranges, papaya, and bananas) were included in mid-morning snacks. Healthy, sweet, and savoury snacks were also provided to the beneficiaries.

### North-East India

Intra-zonal variability in terms of the diversity of food provided was evident in the north-eastern region of India. For instance, Assam, Sikkim, and Manipur had high diversity scores of 11, 10, and 9, respectively, while Nagaland and Meghalaya had low scores of 3 and 5, respectively. In Assam, Manipur, Meghalaya, Mizoram, and Sikkim, a diverse range of both wheat and rice-based dishes was offered. In addition to these staples, traditional foods like high-protein soya noodles and dumplings were also part of the menu at AWCs. Children were also provided with reconstituted and cooked fortified premixes. Alongside the staples, pulse-based dishes were offered. For mid-morning snacks, children were provided with a variety of cereal or pulse-based options, milk, or fruit. In Tripura, Assam, Meghalaya, and Mizoram, eggs were included in ICDS provisions, while fish powder was also added to cooked meals in Assam.

### South India

Within the South zone, the SNP-FGDS was generally high, with 8 in Telangana to 11 in Andhra Pradesh and Karnataka. Tamil Nadu and Kerala also had high scores of 9 and 10, respectively. Across this zone, rice-based preparations or composite dishes with rice, pulses, and vegetables were given. In Andhra Pradesh, Karnataka, and Telangana, leafy greens (spinach, fenugreek, and amaranth leaves) and a variety of vegetables (ridge-gourd, cucumber, and tomatoes) were added to pulse-based preparations. A wide variety of vegetable-based preparations were given in Kerala using fresh seasonal produce (beans, drumstick leaves, beetroot, red spinach, papaya, raw banana, and potatoes). Eggs, either boiled, scrambled, or in the form of a curry, were served in all the states in this zone, while milk was provided in most. Apart from these foods, wheat and milk-based puddings, pulse-based sweets, and brittles were served as snacks in Karnataka. Millet-based snacks were included in Kerala.

### Central India

Among the three states of central India, Chhattisgarh and Madhya Pradesh had an SNP-FGDS of 8, while Maharashtra had 5, with both the HCM and the mid-morning snack dominated by cereals, with little or no fresh fruits or vegetables. The HCM in Maharashtra comprised rice-pulse mixtures. In Chhattisgarh, the same mixture, along with a dry seasonal vegetable as an accompaniment, was provided at the AWCs. HCM served in Madhya Pradesh exhibited greater variety, with rice and wheat cereal staples served alongside pulse-based preparations. Mid-morning snacks served in Central India were porridge and one-pot cereal-pulse-vegetable composite dishes.

### West India

In general, the SNP-FGDS was low to medium in this region. Gujarat had the highest diversity score of 7, followed by Goa

with 6. Leafy greens and other vegetables were being incorporated into traditionally consumed dishes in Gujarat. While the AWCs in Goa provided culturally appropriate meals and snacks, a dearth of leafy greens, fresh fruits, and vegetables was evident. Eggs and milk were absent in the SNP provisions for this region. For HCM, Gujarat reported serving a variety of traditionally consumed staples, including flatbreads enriched with green leaves and vegetables, as well as rice. Commonly provided side dishes included pulse preparations and potato curry. Mid-morning snacks included sweets made with whole-wheat flour and jaggery, as well as groundnut and sesame brittles.

### Availability and Use of Fortified Food

While iodized salt use is mandatory in all cooking at AWCs across the country, the use of double fortified salt (with iodine and iron) was reported in the states of Meghalaya and Mizoram. States such as Chhattisgarh, Karnataka, Arunachal Pradesh, Meghalaya, Orissa, Assam, Haryana, Tripura, Mizoram, Kerala, and Andhra Pradesh reported the inclusion of rice fortified with iron and/or folic acid and/or Vitamin B-12. Chhattisgarh, Manipur, and Meghalaya reported using fortified whole wheat flour (with added folic acid, iron and/or Vitamin B-12) while Uttar Pradesh, Mizoram, and all states of Southern India except Kerala included fortified oils (with added Vitamin A and Vitamin D) in the daily cooking of HCM. Haryana and Andhra Pradesh reported the inclusion of fortified milk (with added Vitamin A and Vitamin D) at AWCs.

Many of the THR premixes distributed to the beneficiaries in AWCs in states such as Jharkhand, Madhya Pradesh, Tamil Nadu, Meghalaya, Kerala, Telangana, and Andhra Pradesh were fortified with one or more micronutrients.

### Discussion

This paper examines the current state of food group diversity present in the ICDS-SNP provisions across India, focusing on the HCM. Among the 25 states and the two union territories examined, 16 had high food-group diversity scores (8-11), while five states reported low diversity (scores 3-5). Most states adopted provisions using locally acceptable foods. The fact that several states achieved high diversity within existing programme structures suggests that improvements are operationally feasible, and similar approaches, such as incorporating locally available foods and culturally appropriate recipes, could be adopted by states with low diversity.

Overall, the findings indicate that while ICDS-SNP has achieved scale in delivering energy and protein, food-group diversity remains uneven across states. This study contributes a programmatic assessment of the diversity and composition of foods provided under SNP using a standardized food-group-based approach. These results highlight the need to explicitly consider food-group diversity, alongside micronutrient targets, in strengthening ICDS-SNP.

In this evaluation, most states provided a rice-and-lentil-based diet. While the recipes were culturally adapted and

localized, many states lacked the diversity of foods they provided. Dairy products are known to improve overall nutritional status, particularly in childhood, a time of immense growth and development (Rumbold et al., 2022). Milk and eggs are known to be nutrient-dense sources of highly bioavailable, easily digestible protein, especially for children (Neumann et al., 2002). Their use was observed in only a subset of states. Additionally, AWCs in Assam added dried fish powder to dishes to make the meal more nutrient-dense. In collaboration with various organisations, Orissa has reportedly piloted the inclusion of fish and fish-based products in the ICDS, wherein the products were not only found acceptable by beneficiaries but also feasible for storage at the AWCs (Chadag, 2022). The consumption of fish, as a rich source of docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA), especially during the formative years, could aid in cognitive development and improve overall nutritional status (Lehner et al., 2020). Fruits were found to be a rare inclusion, given only in some states, mostly as a part of mid-morning snacks. Notably, some states that currently provide the most diverse HCM, such as Bihar and Odisha, report a very high prevalence of child undernutrition according to the National Family Health Survey (NFHS) (National Family Health Survey, 2021). As survey indicators reflect long-term nutritional status, this should not be interpreted as programme ineffectiveness and may instead reflect recent efforts to strengthen SNP provisions in response to earlier nutrition challenges.

Observations from selected AWCs also indicated that frontline initiatives such as the use of locally available ingredients, kitchen gardens, and efforts to improve meal palatability can enhance dietary diversity within existing programme structures. These practices underscore both the feasibility of improving food acceptability and diversity. The major barrier, then, may often be inadequate budgetary allocations, suggesting the need to reconsider programme budgeting. This interpretation is consistent with a complementary modelling analysis conducted by the authors, which estimated that formulating nutritionally diverse ICDS-SNP menus using locally available foods could require approximately 25% higher costs than current budgetary allocations (Ayoob et al., 2024). However, these estimates are indicative and not based on procurement or expenditure data from the present study.

While various studies have attempted to evaluate the outcomes of national early childhood development programmes, such as the ICDS, results are conflicting. For example, a study decades ago by the World Bank concluded that, at the time, there was no significant impact of the ICDS on overall child nutrition status, owing to improper implementation, inadequate training of AWC workers, erratic supply provision, and leakages (Das Gupta et al., 2005). On the other hand, a somewhat more recent study reported that having AWCs nearby helps communities combat childhood stunting (Mukhopadhyay, 2016).

Overall, the ICDS programme in India has the potential to deliver nutritionally diverse diets, provided that states prioritise food-group diversity alongside macronutrient targets. Strengthening SNP provisions to ensure that the

programme meal represents a nutritionally meaningful component of a child's daily intake is particularly important for beneficiaries from food-insecure households. Initiatives such as kitchen gardens demonstrate potential for enhancing access to fruits and vegetables, although scalability is limited by practical constraints, including space, water availability, and maintenance (Schreinemachers, Bhattarai, et al., 2017; Schreinemachers, Rai, et al., 2017; Suri, 2021). Overall, these findings emphasize the importance of food-based approaches and context-specific programme strengthening to improve the nutritional quality of ICDS-SNP.

### Limitations

As the present paper primarily offers a qualitative description of the SNP within the ICDS across India, the absence of quantitative analysis is a limitation. As the data represent point estimates of ICDS-SNP provisions at the time of survey, seasonal variations in food availability and menu composition may not be fully captured. Such variation could influence the inclusion of certain food groups, particularly fruits and vegetables, across regions. In addition, food group diversity scores in this study were derived from the intended food group composition of scheme provisions at the state level rather than an examination of the foods actually served at AWCs or from individual-level dietary intake data. Finally, the surveying of only two districts per state (on average, about 26) is a limitation, and extrapolation of findings to the entire state should therefore be undertaken with caution. Nevertheless, the approach enabled a programmatic assessment of food-group diversity across states despite limited resources.

### Conclusions

The study highlights the current state of food-group diversity within the HCM programme of the ICDS scheme in India. Considerable interstate variation was observed, with food group diversity scores ranging from 8 to 11 in sixteen states and from 3 to 5 in five states, alongside marked differences in the types of food provided across geographic zones, mainly related to the appropriate use of locally available foods. These findings underscore the need for clearer guidance on minimum inclusion of food groups in SNP menus, while allowing flexibility in the choice of locally available foods. Strengthening provisions to ensure the regular inclusion of nutrient-dense foods, such as dairy, eggs, and culturally acceptable alternatives, and fruits and vegetables, using shelf-stable or locally sourced options where fresh foods are not feasible, may help improve food group diversity across states. Strengthening coordination among key stakeholders, including supervisors, the AWC workers, self-help groups, and the local communities, is necessary to improve programme implementation and enable this flagship scheme to achieve its intended outcomes.

### Author Contributions

GB drafted the manuscript and carried out revisions. RG, HSS, AVK, and TT conceptualized the study, with RG, HSS, and AVK also supporting its execution. TT oversaw the overall

management and supervision of the study and finalised the manuscript. GB and AM trained field workers and compiled the data. AM managed the study, contributed to data compilation, and critically reviewed the manuscript. FA and JRM conducted data analysis and contributed to data interpretation, together with AA and AKM. MSN, SA, PM, LV, RM, SAB, SG, VN, HG, and SZQ provided oversight of regional field teams and reviewed manuscript drafts, offering critical feedback. All authors reviewed and approved the final manuscript.

### **Declaration of Generative AI and AI-Assisted Technologies in Scientific Writing**

AI-Assisted Technology (ChatGPT, GPT-5) was used exclusively for minor grammatical corrections only.

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### **Data Availability Statement**

All relevant data are available within the manuscript.

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### **Conflict of Interest**

The study was funded by the WHO (India). RG is an employee of WHO (India).

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## Supplementary Tables

Table S1. States under each region

| Zone              | States   |
|-------------------|--|
| <b>North</b>      | Jammu & Kashmir<br>Punjab<br>Uttarakhand<br>Delhi<br>Haryana<br>Himachal Pradesh               |
| <b>East</b>       | Bihar<br>Orissa<br>Jharkhand   |
| <b>North-east</b> | Assam<br>Sikkim<br>Manipur<br>Nagaland<br>Meghalaya<br>Mizoram<br>Tripura<br>Arunachal Pradesh |
| <b>South</b>      | Andhra Pradesh<br>Karnataka<br>Tamil Nadu<br>Kerala<br>Telangana                               |
| <b>Central</b>    | Chhattisgarh<br>Madhya Pradesh<br>Maharashtra  |
| <b>West</b>       | Gujarat<br>Goa   |

| State            | Districts surveyed              |
|------------------|---------------------------------|
| Goa              | North Goa<br>South Goa          |
| Gujarat          | Anand<br>Chotaudepur            |
| Haryana          | Kurukshetra<br>Rewari           |
| Himachal Pradesh | Kangra<br>Kullu                 |
| Jammu & Kashmir  | Srinagar<br>Ganderbal           |
| Jharkhand        | Pashchimi Singhbhum<br>Ramgarh  |
| Karnataka        | Bellary<br>Mysore               |
| Kerala           | Wayanad<br>Kollam               |
| Madhya Pradesh   | Jabalpur<br>Mandla              |
| Maharashtra      | Ahmednagar<br>Nandurbar         |
| Manipur          | Thoubal<br>Bishnupur            |
| Meghalaya        | Ribhoi<br>South Garo Hills      |
| Mizoram          | Kolasib<br>Lunglei              |
| Nagaland         | Dimapur<br>Peren                |
| NCT of Delhi     | South-west<br>Central           |
| Odisha           | Khordha<br>Rayagada             |
| Punjab           | Hoshiarpur<br>Amritsar          |
| Sikkim           | East District<br>South District |
| Tamil Nadu       | Dindigul<br>Thiruvallur         |
| Telangana        | Karimnagar<br>Medak             |
| Tripura          | South<br>Dhalai                 |
| Uttarakhand      | Hardwar<br>Nainital             |

Table S2. States and the respective districts surveyed

| State             | Districts surveyed        |
|-------------------|---------------------------|
| Andhra Pradesh    | Chittoor<br>West Godavari |
| Arunachal Pradesh | West Kameng<br>Changlang  |
| Assam             | Nagaon<br>Kamrup          |
| Bihar             | Munger<br>Patna           |
| Chhattisgarh      | Durg<br>Rajnandgaon       |

Table S3. Examples of the food given at Anganwadi centres in each region

|                | Staple                      | Side-dish  | Mid-morning snacks                            |
|----------------|-----------------------------|--|---|
| <b>Central</b> | <i>Daliya</i>               | <i>Dal</i> (Bengal gram, red gram, green gram, lentil)     | <i>Halwa</i>                                  |
|                | <i>Kheer</i>                | <i>Kadhi</i>   | <i>Suji Lapsee</i>                            |
|                | <i>Khichdi</i>              | <i>Dry chana</i>   | <i>Poha</i>                                   |
|                | <i>Pulao</i>                | <i>Aloo tamatar sabzi</i>                                  | <i>Upma</i>                                   |
|                | <i>Puri</i>                 | <i>Aloo palak sabzi</i>                                    | <i>Vatana usal</i>                            |
|                | <i>Rice</i>                 | <i>Soybean aloo sabzi</i>                                  |   |
|                | <i>Roti</i>                 | <i>Cabbage sabzi</i>                                       |   |
| <b>East</b>    | <i>Toor dal varan bhaat</i> | <i>Cauliflower sabzi</i>                                   | <i>Sprouted chana and moong</i>               |
|                | <i>Lentil dal khichdi</i>   | <i>Aloo chana sabzi</i>                                    | <i>Fruits</i> (apple, banana, orange, papaya) |
|                | <i>Pulao</i>                | <i>Soybean sabzi</i>                                       | <i>Laddoo</i>                                 |
|                | <i>Rice</i>                 | <i>Spinach lentil dal</i>                                  | <i>Suji halwa</i>                             |
|                | <i>Rasiyav</i>              | <i>Kaddu dal</i>   | <i>Roasted Bengal gram</i>                    |
|                | <i>Bengal gram khichdi</i>  | <i>Dalma</i>   | <i>Roasted groundnut</i>                      |
|                | <i>Red gram khichdi</i>     | <i>Egg curry</i><br><i>Ghanto tarakari</i> with boiled egg | <i>Jaggery and almonds</i>                    |

|                   | Staple   | Side-dish   | Mid-morning snacks  |
|-------------------|--|---|---|
|                   |  |   | <i>Halwa</i>  |
|                   |  |   | Milk  |
| <b>North</b>      | <i>Poori</i>   | <i>Aloo sabzi</i>   | Oats and <i>ajwain</i> biscuit                              |
|                   | <i>Aloo parantha</i>   | Bengal gram <i>dal</i>  | Banana  |
|                   | <i>Bathua parantha</i>   | <i>Rajma</i>  | Roasted <i>chana</i>  |
|                   | <i>Chana pulao</i>   | <i>Choley</i>   | Boiled <i>chana</i>   |
|                   | <i>Dal Khichdi</i>   | <i>Kala chana dal</i>   | <i>Daliya</i>   |
|                   | Sweet <i>Daliya</i>  | <i>Halwa</i>  | <i>Gulgule</i>  |
|                   | <i>Halwa</i>   | <i>Lentil dal</i>   | <i>Halwa</i>  |
|                   | <i>Kheer</i>   | <i>Aloo palak sabzi</i>                                       | <i>Matar</i>  |
|                   | <i>Matar pulao</i>   |   | Milk  |
|                   | Savoury <i>Daliya</i>  |   | <i>Murmura chana</i> mixture                                |
|                   | Rice   |   | <i>Panjiri</i>  |
|                   | <i>Seviyaan</i>  |   |   |
|                   | Vegetable <i>Khichdi</i>   |   |   |
|                   | <i>Meethe chawal</i>   |   |   |
|                   | Soybean rice   |   |   |
| <b>North-east</b> | <i>Balbhog</i> (Energy Dense Fortified Foods)                              | Bengal Gram <i>dal</i>  | Groundnuts  |
|                   | Careby (Processed cereal-based micronutrient fortified complementary food) | Lentil <i>dal</i>   | High protein soya biscuit                                   |
|                   | Fried soya noodles   | <i>Masoor dal</i>   | Sweet <i>Daliya</i>   |
|                   | Rice <i>Kheer</i>  | Soya chunks <i>sabzi</i>                                      | Toned milk  |
|                   | <i>Khichdi</i> (soybean, lentil, Bengal gram)                              | Bean fry  | <i>Laddoo</i>   |
|                   | <i>Momo</i>  | Fried <i>chana</i>  | Micronutrient Fortified Energy-Dense Rice-Based Blended Mix |
|                   | <i>Pulao</i>   | Coriander <i>chutney</i>                                      | Puffed Rice   |
|                   | Porridge   | Egg   | Orange  |
|                   | Rice   | Milk  |   |
|                   | <i>Sooji halwa</i>   |   |   |
|                   | <i>Sooji upma</i>  |   |   |
| <b>South</b>      | <i>Bisibele bath</i>   | <i>Amaranthus dal</i>   | Broken wheat <i>payasam</i>                                 |
|                   | <i>Dal rice</i>  | <i>Cucumber dal</i>   | <i>Burfi</i>  |
|                   | Egg rice   | Egg <i>curry</i>  | <i>Murukulu</i> (Ready to eat)                              |
|                   | <i>Kanji</i>   | Fenugreek leaves <i>dal</i>                                   | Fried groundnut   |
|                   | Lemon rice   | <i>Gogu dal</i>   | Groundnut <i>chikki</i>                                     |
|                   | <i>Pulihora</i>  | <i>Dal</i> (horse gram, Bengal gram, green gram)              | Groundnut <i>laddu</i>                                      |
|                   | Rice   | <i>Sambar</i> (horse gram, Bengal gram, green gram, red gram) | <i>Kurkure</i>  |
|                   | Vegetable biryani  | Malabar spinach <i>dal</i>                                    | Milk  |
|                   | Tomato Rice  | Potato tomato <i>curry</i>                                    | <i>Payasam</i>  |
|                   | Vegetable pulao  | <i>Rasam</i>  | Ragi <i>kuruk</i>   |
|                   |  | Ridge gourd <i>dal</i>  | Red rice flakes   |
|                   |  | Spinach <i>curry</i>  | <i>Laddoo</i>   |
|                   |  | <i>Sambar</i> (sprouted horse gram, sprouted green gram)      | <i>Upma</i>   |
|                   |  | Vegetable <i>sambar</i>                                       | Wheat <i>rava payasam</i>                                   |
|                   |  | Amaranth <i>curry</i>   |   |
|                   |  | Beans <i>thoran</i>   |   |
|                   |  | Beetroot <i>thoran</i>  |   |
|                   |  | Boiled egg  |   |
|                   |  | Boiled potato   |   |
|                   |  | Brinjal - Tomato <i>Curry</i>                                 |   |
|                   |  | Broad bean <i>curry</i>                                       |   |
|                   |  | Drumstick-leaf <i>curry</i>                                   |   |
|                   |  | Egg <i>bhurji</i>   |   |
|                   |  | Mint <i>chutney</i>   |   |
|                   |  | Papaya <i>thoran</i>  |   |
|                   |  | Raw banana <i>curry</i>                                       |   |
|                   |  | Red spinach <i>thoran</i>                                     |   |

|             | <b>Staple</b>            | <b>Side-dish</b>    | <b>Mid-morning snacks</b>         |
|-------------|--------------------------|---------------------|-----------------------------------|
| <b>West</b> | <i>Dudhi Thepla</i>      | <i>Toor dal</i>     | <i>Groundnut &amp; Til chikki</i> |
|             | <i>Kesari Rawa Shira</i> | <i>Channa</i>       | <i>Mix Ladoo</i>                  |
|             | <i>Moringa Thepla</i>    | <i>Potato sabzi</i> | <i>Moringa muthiya</i>            |
|             | <i>Roti</i>              |                     | <i>Sheero</i>                     |
|             | <i>Soya chunk Pulao</i>  |                     | <i>Sukhdi</i>                     |
|             | <i>Steam rice</i>        |                     | <i>Sweet pudla</i>                |
|             | <i>Sweet Idli</i>        |                     |                                   |
|             | <i>Vagharelo Bhaat</i>   |                     |                                   |
|             | <i>Usal</i>              |                     |                                   |