12. NUTRITION AND FOOD SECURITY
12.1

NUTRITION

Nutrition plays a crucial role in human health and well being. At the national level, despite higher economic growth, improvements in human development indicators like nutrition levels of the population have been unacceptably slow. A large number of Indian children are stunted. A substantial number of Indian children and women are underweight, anaemic and suffer from micronutrient deficiencies. To address these concerns, the Central and State Governments have been channelising substantial resources into various health and nutrition schemes and programmes like Integrated Child Development Services (ICDS), Mid-day meals, Reproductive and Child Health Programmes (RCH) and National Rural Health Mission (NRHM). However, an effective scaling up of these efforts is required to mitigate the incidence of under-nutrition in the country.

Introduction

Nutrition plays a crucial role in human health and well being. At the national level, despite higher economic growth, improvements in human development indicators like nutrition levels of the population have been unacceptably slow. A large number of Indian children are stunted. A substantial number of Indian children and women are underweight, anaemic and suffer from micronutrient deficiencies. To address these concerns, the Central and State Governments have been channelising substantial resources into various health and nutrition schemes and programmes like Integrated Child Development Services (ICDS), Mid-day meals, Reproductive and Child Health Programmes (RCH) and National Rural Health Mission (NRHM). However, an effective scaling up of these efforts is required to mitigate the incidence of under-nutrition in the country.

Box 12.1.1:

TN commitment on Nutrition

Amartya Sen, Noble Prize winning Economist has observed that in India, hunger is not enough of a political priority. The public expenditure on health is very low and funds allocated to programmes like child nutrition remain unspent. It is only in States like Tamil Nadu that he sees a political will and commitment to tackle these issues by setting goals like achieving the status of a “Malnutrition Free State”.

Tamil Nadu has played a pioneering role in bringing about significant changes in the health and nutrition status of children under six years of age, pregnant women, lactating mothers and adolescent girls. The Government of Tamil Nadu’s successive budget outlays for nutrition and health are the highest in the country. The performance of the ICDS scheme and the
Twelfth Five Year Plan Tamil Nadu

Box 12.1.2: Role of ICDS

The ICDS should be seen as the critical link between children and women
and health care systems, as well as with the elementary education system and
ensure that focus is brought on children in the critical window of 0-3 years of age.

Source: Union Planning Commission

Puratchi Thalaivar MGR Nutritious Meal Programme (PTMGRNMP) in Tamil Nadu are
considered one of the best in the country. The Government of Tamil Nadu’s policy for
“A Malnutrition Free Tamil Nadu” guides the State’s long-term multi-sectoral strategy
for eliminating malnutrition. The goal is “reducing human malnutrition of all types to
the levels of best performing countries”.

In Tamil Nadu, ICDS is being implemented through 54,439 Child Centres
(comprising 49,499 Anganwadi Centres and 4,940 Mini Anganwadi Centres) in 434
Child Development Blocks (385 rural, 47 urban and 2 tribal). With steady expansion
into unreached areas, increasing coverage of marginalised groups, enhanced allocations
and enlarged scope of services, ICDS is now considered to be one of the world’s
largest programmes of its kind and a model for the holistic development of the child.
To ensure that services reach the intended beneficiaries, the programme has been
universalised and convergence promoted with allied departments dealing with health,
education, drinking water, sanitation etc.

The PTMGRNMP is considered to be the largest noon meal programme in the country
for combating malnutrition among children, increasing primary school enrolment and
reducing dropout rates. Other states in the country have modelled their noon meal
programmes along the lines of Tamil Nadu’s pioneering efforts. Nevertheless, much
remains to be done. The table 12.1.1 provides a snapshot of the levels of under-nutrition in
Tamil Nadu vis-a-vis all India levels.

Table 12.1.1: Under-Nutrition in India and Tamil Nadu

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>India</td>
<td>Tamil Nadu</td>
</tr>
<tr>
<td>1</td>
<td>Stunting (children &lt;3)</td>
<td>51</td>
<td>35</td>
</tr>
<tr>
<td>2</td>
<td>Wasting (children&lt;3)</td>
<td>20</td>
<td>23</td>
</tr>
<tr>
<td>3</td>
<td>Underweight (children&lt;3)</td>
<td>43</td>
<td>32</td>
</tr>
<tr>
<td>4</td>
<td>Anaemia (&lt;11.0g/dl) (children 6-35 months)</td>
<td>74</td>
<td>69</td>
</tr>
<tr>
<td>5</td>
<td>Women with BMI below normal</td>
<td>36</td>
<td>29</td>
</tr>
<tr>
<td>6</td>
<td>Men with BMI below normal</td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
<tr>
<td>7</td>
<td>Women with anaemia</td>
<td>52</td>
<td>57</td>
</tr>
<tr>
<td>8</td>
<td>Men with anaemia</td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
</tbody>
</table>

Source: National Family Health Survey (NFHS)-III (2005-06)
**Review of Eleventh Plan**

Giving focused attention to each of the thrust areas identified in the Eleventh Plan, the State has made steady progress in achieving the core objectives and moving closer towards attaining the ‘Malnutrition Free’ status. The Eleventh Plan placed special emphasis on the life cycle approach to child development beginning with intrauterine growth, the vulnerable first six years of life and the risk prone adolescent period. Surpassing some of the national targets related to infant, under-five and maternal mortality well ahead of projected timelines, Tamil Nadu has reached a stage in its development where it can now aspire towards consolidating the significant gains made so far and firmly set its sight on the next higher level of achievements.

**Achievements during the Eleventh Plan period**

- Decline in the proportion of severely and moderately malnourished children.
- Increase in the number of beneficiaries and Anganwadi Centres (AWC) and modernisation of Anganwadi Centres.
- Stronger coordination and greater convergence with other Departments like Education, Health and Rural Development.
- Capacity building of functionaries through State Level Training Institutes to provide better quality of services.
- Awareness campaigns were organised on issues like nutrition, micronutrients, intake of Iron and Folic Acid tablets (IFA), use of iodised salt, maternal and child health, breast feeding, immunisation, diarrhoea management, hygiene and sanitation practices.

The other initiatives during the Eleventh Plan Period were as follows:

- Implementation on a pilot basis of the Centrally Sponsored Scheme - Rajiv Gandhi Scheme for Empowerment of Adolescent Girls – SABLA in 9 districts of Tamil Nadu covering both school going and out of school girls in the age group of 11-18 years.

- Special measures were undertaken to motivate and incentivise Anganwadi workers through additional allowances and distribution of a State level ‘Best Anganwadi Worker’ award to 98 Anganwadi workers in Tamil Nadu.

The Government of Tamil Nadu has been committing a sizeable amount of resources for reducing malnutrition in the State. An outlay of ₹5,791.60 crore was allocated during the Eleventh Plan for the nutrition schemes. However, the actual expenditure incurred was only ₹5,703.00 crore.

**Twelfth Five Year Plan**

The Twelfth Five Year Plan aims to consolidate the gains made so far in the nutrition and health status of pregnant women, lactating mothers, children below six years, adolescent girls and more importantly, seeks to rapidly accelerate towards the next higher level of achievement. The performance in the Eleventh Plan has not been commensurate with the overall objective of attaining the goal of ‘Malnutrition Free Tamil Nadu’ and hence, there is a need for a revised and more targeted strategy for achieving this, during the Twelfth Plan period.

**Objectives**

The Government has set out a wide spectrum of objectives for the Twelfth Five Year Plan. They are as follows:

- Continue the efforts to eradicate malnutrition among children 0-6 years, giving priority to children below three years.
• Promote the nutritive value of millets to address malnutrition.

• Increase the focus on life cycle approach for improving the nutrition and health status of pregnant women, lactating mothers, children below six years and adolescent girls.

• Sustain measures to strengthen non formal early childhood education.

• Accelerate initiatives for the holistic empowerment of adolescent girls.

• Strengthen infrastructure, modernise facilities and improve service delivery.

• Continue to foster greater convergence with allied departments and institutions.

• Step up efforts to improve monitoring and evaluation.

• Carry forward social mobilisation, advocacy and communication efforts.

• Continue to build the capacity of field functionaries.

• Take up special initiatives for rewarding performance and promoting innovations.

Thrust Areas

In order to attain the core objectives, the following thrust areas along with actionable strategies have been identified for the Twelfth Five Year Plan:

1. Efforts to eradicate malnutrition and reduce the incidence and prevalence of under-weight, stunting and wasting among 0-6 years children will be continued and further strengthened. Especially below 3 years will be given priority.

Despite the fact that the magnitude of the severely malnourished and moderately malnourished has been on the decline in the State, the focus on severely and moderately malnourished children will be stepped up, giving priority to children below three years. Infant and young child feeding practices will be further improved to enhance survival, growth and development.

Graph 12.1.1: Nutritional Status of 0-3 years Severely Malnourished Children

![Graph showing the percentage of severely malnourished children (0-3 years) has come down from 0.21% in 2001 to 0.03% in 2011.](source: Dept. of Social Welfare and Nutritious Meal Programme, GoTN)
Stepping up focus on Severely and Moderately Malnourished Children

Efforts will be strengthened for early detection of malnutrition among children using WHO Growth Standards and appropriate referrals made for treatment. Severely malnourished children will be screened separately and reasons for malnutrition identified. NGOs/SHGs/Communities etc. will be encouraged to adopt and continuously monitor their status. Anganwadi Workers will be sensitised to monitor on a daily basis and Supervisors/Child Development Project Officers (CDPOs) to monitor on a weekly basis. Possibility of providing ‘morning snack’ to 3-5 years children, adolescent girls, pregnant women and lactating mothers will be explored.

Improving Infant and Young child feeding practices

Early initiation and exclusive Breastfeeding practices for first 6 months would be promoted by awareness creation and Baby friendly hospitals.

2. Focus on the Life Cycle Approach will be further stepped up for improving nutrition and health status of pregnant women, lactating mothers, children below six years and adolescent girls.

The ‘Life Cycle Approach’ has increasingly become the focal point of interventions to comprehensively address inter generational cycles of malnutrition. Measures will be put in place to promote prescriptive approaches like optimal nutrition, health and environment, encourage early stimulation, monitor growth and ensure compliance to treatment throughout early childhood. Under-nutrition, neonatal and childhood illnesses, anaemia, micronutrient deficiencies, obesity and over-nutrition will be effectively tackled.

Actionable Strategies

Promoting Safe Pregnancy and Healthy Motherhood

• Sustained awareness campaigns for Institutional deliveries.
Twelfth Five Year Plan Tamil Nadu

• Counselling for IFA tablet intake and safe motherhood practices.

• Strengthening of Inter Departmental coordination.

• Efforts will be made to revitalise mother support groups and build them into effective role models and change agents.

• Short movies will be screened for promoting safe pregnancy and healthy motherhood.

Enhancing Neonatal and Early Childhood Health

• Early detection and prompt treatment of childhood illnesses through education and awareness generation among parents and other family members.

• Universal and complete immunisation of children.

• Awareness to use Zinc supplements in adequate doses along with Oral Rehydration Salts (ORS) during diarrhoeal episodes.

• Milestones for growth and development will be displayed in all Anganwadi Centres.

• Follow-ups with pregnant women and lactating mothers will be streamlined and referrals will be strengthened.

• Parental networks will be facilitated for encouraging parents, especially fathers, to play a greater role in the growth and development of their children. Workshops will be held to sensitise mothers and fathers on good parenting practices, preventive and curative measures for promoting childhood health, disease control and avoiding repeated infections.

• Efforts will be strengthened to encourage use of clean drinking water, promote sanitation and ensure adherence to good hygienic practices both at the AWC and home, in coordination with the District Rural Development Agency (DRDA) and Total Sanitation Campaign (TSC).

• Use of mosquito nets will be promoted for preventing the spread of malaria.

Controlling Anaemia, Tackling Worm Infestations and addressing Micronutrient Deficiencies

• Myths and misconceptions surrounding consumption of IFA and deworming tablets will be dispelled through awareness generation.

• Efforts will be made to universalise usage of double fortified salt to prevent iron and iodine deficiencies.

• Possibility of using fortified rice and wheat flour in the form of weaning food will be explored.

• Use of footwear will be encouraged to reduce the risk of worm infestations.

• Greater synergy among medical approaches, food based home remedies and Indian Systems of Medicine (Ayurveda, Siddha etc.) will be explored.

Influencing Nutritional Practices at Home

• Efforts will continue to be made for counselling and influencing changes in nutritional practices at family level.

• Kitchen gardens will be promoted at AWC through linkages with SHGs, Agricultural Universities and Home Science Colleges. Mothers will be taught creative ways of
preparing locally grown vegetables and nutrient dense foods through cooking demonstrations at these Centres.

**Combating Obesity and Over-Nutrition**

- WHO Growth Standards will be used to identify and monitor obese and overweight children.
- Parents and families will be counselled and awareness campaigns held to encourage children in adopting healthy eating habits, avoiding junk food and pursuing an active lifestyle.

### 3. Non Formal Early Childhood Education will be further strengthened to provide a stimulating environment for children and enhance their school readiness

Giving an early start in a stimulating environment is essential for motor skills, psycho-social and intellectual development. Engaging in play activities, interacting with children and connecting with the world around contribute to intellectual stimulation, brain development and joyful childhood. An integrated approach comprising health, nutrition and early stimulation through non formal pre-school education as done under ICDS, yields greater benefits than an approach focussed only on health and nutrition. The stimulating environment offered at Anganwadi Centres and sensitive parenting practices support a child’s cognitive and socio-emotional development and enhance school readiness.

**Actionable Strategies**

*Promoting the importance of Non-Formal Pre-School Education*

- Steps will be taken for making non-formal pre-school education an attractive option for people.
- Early stimulation of the child at AWC will be further enhanced through the use of interesting stories, rhymes, songs and animations.

![Fig. 12.1.2: Early Childhood Education](image)

- Parents and family members will be counselled to play a greater role in their child’s growth and development by learning and applying early developmental principles at home.
- Awareness will be generated among functionaries, parents, family members and the community about child sexual abuse. Children will be taught to recognise safe and unsafe touch and seek help.

During the Twelfth Plan, the following initiatives would be undertaken:

- Welcome kits, chairs, benches and tables would be provided to the children in the AWCs.
- Attractive and colourful paintings will be drawn inside AWCs.
- Two sets of coloured dresses have been provided to children in the age group of 2-5 years in AWCs in the first phase in five districts viz., Chennai, Vellore, Tiruchirapalli, Theni and Dindigul during 2012-2013.
- Two sets of uniform provided to school children studying under PTMGRNMP scheme have been enhanced to four sets.
Advancing an inclusive environment for differently abled children and children with special learning needs

Steps will be taken to equip Anganwadi Workers with skills to sensitively handle differently abled children and children with special learning needs and create awareness of the resources and networks they could tap into for making appropriate referrals.

Improving the quality of learning

- Availability of age appropriate play materials will be ensured at all AWCs and the possibility of extending the Montessori Method to additional centres will be explored.

- The capacity of functionaries will be enhanced by training them suitably to improve the quality of learning and those who use innovative approaches will be considered for awards and incentives.

Strengthening linkages with Primary School Education

Transfer Certificate from ICDS showing correct age of the child will be introduced for facilitating Primary School admission. A small graduation day will be organised and certificates distributed to children.

Sustaining existing Curricular Framework and initiating an Assessment Framework

- The existing curricular framework will be sustained to ensure the quality and improvement of early childhood education.

- An assessment framework will be initiated for tracking the progress of each child.

4. Initiatives for the holistic empowerment of adolescent girls will be further accelerated

The ‘life cycle approach’ will strive to ensure that the girl child experiences healthy adolescence, completes schooling, well nourished, learns life skills and child care practices, develops strong self esteem and confidence, gets opportunities for vocational skill development, empowered to access services, marries at the right age and goes through safe pregnancy.

Actionable Strategies

Improving Consumption of Take Home Ration (THR)

- Home visits will be undertaken to counsel about the importance of consuming complementary food in different forms.

- Containers will be given for safely storing their Take Home Ration.

Tackling Anaemia and Micronutrient Deficiencies

- Efforts will be made to converge the “Village Health and Nutrition Day” and “Padhumaiyar Dinam” and efforts will continue to raise awareness among girls at Anganwadi and Sub Centre levels about the importance of complying with IFA tablet regimen, adverse effects of disregarding treatment and dispelling misconceptions. Follow-ups and monitoring of IFA tablet consumption will be strengthened.

Advancing education and skill development opportunities

Life, home and vocational skills will be further enhanced through workshops and counselling.

Boosting peer group engagement

- Efforts will be made to strengthen the ‘Padhumaiyar Kuzhu’ for empowering girls and making them persuasive catalysts of change.

- Innovative approaches will be considered for drawing adolescent girls into the
programme, connecting them with various services and encouraging their participation in activities. A mobile centre (SABLA-on-Wheels concept) was rolled for widening the reach of services in nine districts.

- Distribution and monitoring of the ‘Padhumaiyar card’ will be further strengthened.

**Strengthening Menstrual Hygiene Programme**

The Menstrual Hygiene Programme of Health Department has been dovetailed with the ICDS programme and distribution of sanitary napkins to adolescent girls carried out through Anganwadi Centres. Awareness will be raised on safe disposal of sanitary napkins.

5. **Continuing the efforts to build the capacity of field functionaries for giving further impetus to programme implementation and improving quality of service delivery**

Ongoing capacity building is vital to improve knowledge, skills and capabilities of personnel and maintain quality performance. Well trained and competent functionaries not only enhance efficacy of programme interventions and ensure smooth operations, but also become effective ‘change agents’.

**Actionable Strategies**

**Enhancing the capacity of Field Functionaries**

- Sensitisation about the needs of children under three years, differently abled children and children with special learning needs will be stepped up.
- Functionaries will be sensitised about neonatal and childhood illnesses, early identification of symptoms, management and suggesting remedies and prompt referral of affected children.

**Strengthening post-training implementation**

- Regular follow-ups will be made to ensure training gets translated into on-the-job performance.
- Reinforcement of training through on-site support by supervisors will be strengthened.

**Creating an enabling environment for training**

- Efforts will be made to allocate and release the training budget in the beginning of the year to enable implementation of training calendar on a timely basis.
- Coordination among ICDS and Health Department training programmes will be strengthened.
- Infrastructure and facilities for conducting training programmes will be further strengthened.
- Replication of Joint Service Delivery in the erstwhile TINP II - Joint planning, training, supervision, review and visit will be replicated for building up team spirit and project identity among workers from different line departments, with a view to converge delivery of services to beneficiaries and avoid duplication and overlap.
• Staff at all levels will be sensitised on Gender Budgeting.
• Accreditation of all Anganwadi Centres will be taken up.
• Awards and incentives will be given to functionaries for best performance.

6. Strengthening infrastructure, modernising facilities and improving quality of service delivery

Efforts will be stepped up for strengthening infrastructure, modernising facilities and improving the quality of service delivery. AWCs will be made more attractive and desirable place.

Actionable Strategies

Strengthening infrastructure and modernising facilities

Electrification, building repairs, construction of baby friendly toilets, installation of gas connections, provision of clean drinking water and proper waste disposal are being taken up at all AWCs. Construction of new buildings for 15,313 AWCs are being taken up in a phased manner, thereby the infrastructure of all AWCs are being improved. Facilities will be made friendly for differently abled and children with special learning needs. Construction of Anganwadi Centres through Corporate Social Responsibility Initiatives will be explored. Tax relief for companies to be explored for supporting such efforts.

Improving quality of service delivery

Mobile Anganwadi Centres will be put in place on pilot basis, for reaching out to unreached areas and under-served population groups. Efforts will be strengthened for reaching services to remote habitations, unreached areas, under-served populations, migrant workers, seasonal agricultural labourers, sex workers etc.

Improving the Nutritious Meal Programme for school children

• Infrastructure of Nutritious Meal Centres will be strengthened, repairs undertaken, kitchens modernised, water and sanitation facilities improved and cooking utensils supplied.
• Experimentation of a new menu for the Nutritious Meal Programme will be carried forward.
• Best practices from other States will be explored.
• Out of 54,439 AWCs, 16,645 AWCs have already been modernised. 37,794 AWCs are yet to be modernised.
• To create smokeless atmosphere in the Anganwadi Centres and also to reduce the cooking time, provision of gas connection, gas stove, and pressure cooker to 5,000 AWCs during 2012-2013 is under progress.

Introduction of variety menu under Nutritious Noon Meal Programme and ICDS

The Government of Tamil Nadu has announced that the PTMGRNMP Scheme being implemented in the State to school children is set to undergo a change, breaking the monotony of routine menu. A tastier and healthier menu with thirteen types of variety rice and four types of egg masalas will be provided throughout the month. The new menu would be introduced in a block in each district on a pilot basis and then subsequently extended across the State in a phased manner. There would be one set of menu for the first and third weeks of a month and another set for the second and fourth weeks. The menu has been prepared in consultation with nutrition experts to cater to the nutrition requirements and taste of children. The children attending Anganwadi Centres would also be provided a new menu as per their requirement and digestive capacity.
This would ensure the improvement in noon meal off take and reducing dropouts in rural schools.

7. Improving monitoring and evaluation mechanisms for tracking progress and assessing impact

Monitoring and evaluation will be further strengthened for tracking progress, monitoring performance, making course corrections and assessing impact.

**Actionable Strategies**

*Monitoring post-training implementation*

Monitoring, supervision and follow-ups of training will be done on a regular basis and the impact of training will be assessed.

**Box 12.1.3: Monitoring**

District Level Health Survey (DLHS) remains inadequate in its coverage. There is a need to generate reliable district level disaggregated data so that we are able to monitor the progress made on under-nutrition. An innovative health and nutrition monitoring and surveillance system should be put in place. It can be used as a major enabler for performance management including financial management through real time data flow to the health system and for the restructured ICDS. It should have a vibrant community based monitoring component, which will function in partnership with civil society organisations, women/ community groups and Panchayati Raj Institutions.

*Source: Union Planning Commission*

*Monitoring assessment of malnourished children*

- Assessment of children with moderate and severe malnutrition will be closely monitored.
- NGOs/SHGs/Communities etc. will be encouraged to adopt malnourished children and continuously monitor their status. Anganwadi Workers will be sensitised to monitor on daily basis and Supervisors / Child Development Project Officers (CDPOs) to monitor on weekly basis.
- Monitoring the implementation of WHO Growth Standards will be strengthened.
- Availability of functional weighing scales and growth chart registers will be ensured at all AWCs for identifying and monitoring underweight, obese and overweight children.
- Measuring tools will be provided for identifying and monitoring stunting and wasting.
- Profile / milestone cards will be developed for monitoring and assessing children screened for early childhood developmental issues and learning disabilities.

**Multi-pronged approach for reviewing and assessing activities and services**

Integrated web based monitoring, assessment and reporting will be designed and implemented. Technology based monitoring of the programme will be piloted in certain districts. Data collection, collation, compilation, analysis and reporting processes will be streamlined.

8. Strengthening social mobilisation, advocacy and communication to bring sustainable changes in knowledge, attitudes, practices and behaviours of beneficiaries, families and communities

Through persistent community mobilisation, advocacy and communication efforts, individuals, families and communities will be empowered to adopt and sustain healthy practices. Information, Education and Communication (IEC) activities will be further strengthened to share knowledge, influence
outcomes and enhance impact of programme interventions. Effective communication will play a central role in transforming awareness into desirable attitudes, practices and behaviours.

**Actionable Strategies**

**Stepping up social mobilisation, advocacy and communication efforts**

- Communication and advocacy efforts will be strengthened for enhancing the image of AWCs. Advocacy will be carried out with corporate bodies for providing access to basic health, nutrition and pre-school education services to migrant workers.
- ‘Village Health and Nutrition Day’ and ‘Padhumaiyar Dinam’ will be used as platforms for dissemination of key messages, awareness creation, dispelling misconceptions and community mobilisation.
- Targeted communication will be designed for inaccessible areas and under-served population.

**Strengthening inter-personal communication and counselling efforts**

To bring about sustained changes in knowledge, attitudes, practices and behaviours at individual and family level, inter-personal communication and counselling efforts will be stepped up.

**Disseminating messages, generating awareness and encouraging behavior change**

- IEC activities will be strengthened by coordinating with Government media for generating awareness at the community level.

**Developing common messages with allied Departments and Institutions**

- Coordination with allied departments will be strengthened for developing common messages and expanding the reach of communication efforts.
- Involvement of Panchayati Raj Institutions, Village Health, Sanitation and Nutrition Committees, Self Help Groups and Non Governmental Organisations will be encouraged.
- An IEC team or cell comprising of technical experts will be explored for developing communication plans, reviewing and designing IEC materials, monitoring the implementation and assessing the effectiveness of the communication strategy. The team will coordinate with similar cells in allied departments for a convergent approach.

**9. Greater convergence will be fostered with allied Departments and Institutions to widen the reach of services and enhance the overall impact of programme interventions**

Convergence will be further strengthened with allied departments and institutions for widening the reach of services and enhancing the overall impact of programme interventions. Concerted efforts will be made to strengthen multi-sectoral coordination and harmonise complementary efforts.

**Actionable Strategies**

**Inter Departmental Coordination**

- Health related services will be ensured with the convergence of the Health Department, School Education Department – Sarva Shiksha Abhiyan (SSA).
- Linkages with the Department for the Welfare of Differently Abled Persons, NGOs, local medical professionals specialising in the care and treatment of differently abled children and the Indian Academy of Paediatrics will be further strengthened.
- Convergence with the District Rural Development Agency will be made stronger for improving drinking water supply, sanitation, hygiene and waste disposal.
• For effective implementation of Nutritious Meal Programme, convergence will be strengthened with services of line Departments – Education, Child Labour, Rural Development, Health, Civil Supplies Corporation, Water Supply and Drainage Board, Food Corporation of India etc.

10. Special initiatives will be taken up for rewarding good performance and promoting innovation

**Actionable Strategies**

**Instituting Awards for Functionaries**

Awards for field level functionaries will be instituted at State / District / Project/ Sector levels to reward good performance, reinforce best practices and improve service delivery.

**Setting up of Innovation Fund**

A fund will be set up for promoting innovative approaches in programme implementation.

**11. Nutritive value of millets will be promoted to address under-nutrition and over-nutrition.**

Millets are considered the “store house” of dozens of nutrients in large quantities. The mineral and fibre content of millets is higher, while protein and energy content are comparable to that of rice and wheat. High dietary fibre content, antioxidants and complex carbohydrates in millets have health benefits and can help in the management of lifestyle disorders (like cancer, heart disease and diabetes). With relatively lesser quantities of carbohydrates, millets are also advantageous in calorie restriction and averting over-nutrition and obesity.

Lack of awareness of healthy affordable food choices, such as nutrient rich millets is one of the main causative factors in the increasing prevalence of both Protein Energy Malnutrition (PEM) and micronutrient deficiencies. Only about 10 percent of the population use millets in their diet occasionally. Despite their nutritive value, use of millets is low due to non-availability of processed millets in ready to eat form.

**Actionable Strategies**

The consumption of millets is very low due to lack of awareness which has to be developed to include millets in regular diet. So efforts will be made to develop a comprehensive and effective education module to conduct nutrition education programmes and campaigns to create awareness on the importance of millets among the community. Possible ways will be explored to reduce micronutrient deficiencies commonly referred as “Hidden Hunger” by including millets in ICDS and PTMGRNMP and disseminate the importance of millets.

**Gender Inclusive Planning**

As per the Population Census 2011, women constitute nearly 50 percent of the population in Tamil Nadu. The well being of a family depends on the health of women and nutrition forms the basis for a sound health.

The Twelfth Plan will focus on eradicating malnutrition in women. The ICDS in the State, concentrates on nutritional improvements of pregnant and lactating women. The ultimate objective is to enhance the nutritional status of women thereby improving productivity and human capability. Prevention of maternal under-nutrition (hidden hunger) is a long term investment that will benefit the present and also future generations.
The following are the gender specific programmes in the nutritional sphere:

- Women weaning food manufacturing societies are also engaged in manufacturing products like registers, records, chalks and coir products which improves the economic status of women.

- Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (SABLA) aims at improving health and nutrition status of adolescent girls.

- Complementary food in the form of Laddu is provided to pregnant women (last trimester) and lactating mothers (first two months after delivery).

**Twelfth Plan Monitorable Targets**

The Table 12.1.2 shows monitorable targets to be achieved during the Twelfth Plan.

### Table 12.1.2: Monitorable Targets for the Twelfth Plan

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Indicator</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Low birth weight</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Underweight children 0-3 years</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>Children 0-3 years with Stunting</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>Children 0-3 years with Anaemia</td>
<td>32</td>
</tr>
<tr>
<td>5</td>
<td>Adolescent girls with Anaemia</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>Pregnant women with Anaemia</td>
<td>30</td>
</tr>
<tr>
<td>7</td>
<td>Women among 15-49 years with Anaemia</td>
<td>33</td>
</tr>
</tbody>
</table>

*Source: Dept. of Social Welfare and Nutritious Meal Programme, GoTN*

The Table 12.1.3 indicates the extent to which the degree of malnutrition will get diminished during the Twelfth Plan. Also, the degree of malnutrition will dwindle from 31.83% during 2012-13 to 15.91% during 2016-17. In other words, the level of malnutrition will be halved by end of the Twelfth Plan.

### Table 12.1.3 : Year wise Targets for Reducing Malnutrition during the Twelfth Plan period

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Targets during the Twelfth Plan Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malnutrition among children in 0-3 years (Weight for Age below 0-2 Standard Deviation) in percentage</td>
<td>2012-13 2013-14 2014-15 2015-16 2016-17</td>
</tr>
</tbody>
</table>

*Source: Dept. of Social Welfare and Nutritious Meal Programme, GoTN*
Twelfth Plan Outlay

With a view to attain the above goals and objectives, a sum of ₹11,284.93 crore has been proposed in the Twelfth Plan for nutrition schemes.

Table 12.1.4: Twelfth Plan Outlay - Nutrition

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of the Scheme</th>
<th>Outlay</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ICDS</td>
<td>4656.42</td>
</tr>
<tr>
<td>2</td>
<td>PTMGRNMP</td>
<td>6628.51</td>
</tr>
<tr>
<td></td>
<td><strong>Grand Total</strong></td>
<td><strong>11284.93</strong></td>
</tr>
</tbody>
</table>

The State has shown firm political commitment to health and nutrition by adopting the Life Cycle Approach. It also ensures that the nutritional security is addressed. The target of achieving “Malnutrition Free Tamil Nadu” would be carried out in a mission mode.
12.2 FOOD SECURITY

Introduction

Food Security refers to ensuring a sustainable access to food (both physical and economic) for the entire population, taking into account the dietary needs and food preferences. In other words, food security means ensuring sufficient, safe and nutritious food for all. The household has emerged as the basic unit for assessing food security by measuring the food energy intake (quality and quantity) at the household level.

The Tamil Nadu State Food Policy pursues a Universal Public Distribution System (PDS) to ensure non-excludability, easy access and adequate availability of food grains at affordable prices. The focus is to ensure that genuinely poor households do not get excluded from the PDS owing to administrative infeasibility and errors in estimation and enumeration of families Below Poverty Line (BPL). The PDS in Tamil Nadu is administered by the Commissioner of Civil Supplies and Consumer Protection Department (CCS&CP). Tamil Nadu Civil Supplies Corporation (TNCSC) acts as the facilitator in procurement and storing. The Fair Price Shops in the State are run mostly by the Cooperatives and the TNCSC.

Fair Price Shops

At present, 33,222 Fair Price Shops are serving 1.98 crore families. Out of 33,222 Fair Price shops, 31,232 are run by the Cooperative Societies, 1,394 are run by the Tamil Nadu Civil Supplies Corporation and 596 are run by Women Self Help Groups. To improve accessibility to PDS, it is necessary that they are located in close proximity to habitations. Accordingly, it has been proposed to open new fair price shops so that, no card holder walks more than 1.5 km.

Graph 12.2.1: Fair Price Shops in Tamil Nadu

Source: Dept. of Co-operation, Food and Consumer Protection, GoTN.
**Family Card**

Family Cards are issued to the people of the State based on their needs and preferences. The family cards are segregated as Rice Cards (rice with all other commodities), Antyodaya Anna Yojana Scheme Cards, Sugar Cards (additional sugar in lieu of rice and all other commodities) and No Commodity Cards (cards for identification purposes). Besides, Police personnel are issued with family cards in distinct colour. Transgenders living in a house as a group are treated as family and family cards are issued to them. A total of 1.98 crore Family Cards have been issued to the citizens in Tamil Nadu.

**Graph 12.2.2: Family Cards**

![Graph 12.2.2: Family Cards](image)

*Source: Dept. of Co-operation, Food and Consumer Protection, GoTN.*

Under the Antyodaya Anna Yojana (AY) Scheme of the Government of India, which targets the poorest of the poor, the Government of Tamil Nadu provides 35 kg rice per month to all the AAY family cards in the State. The essential commodities supplied through the PDS in Tamil Nadu include rice, wheat, sugar and kerosene. The Special PDS which was initiated to protect people from steep increase in prices of essential commodities includes pulses like Toor and Urid dhal, Palmolein oil and Fortified Flour.

Tamil Nadu is a pioneering State with regard to successfully applying Information
Technology based transparency measures to the PDS. The Department of Civil Supplies and Consumer Protection has put in place a system to monitor the stocks of PDS commodities at each fair price shop. The department has also established a very effective and well functioning Grievance and Redressal Mechanism.

**Review of Eleventh Plan**

During Eleventh Five Year Plan, Government had introduced Special Public Distribution System. Under the scheme, Tamil Nadu Civil Supplies Corporation procured essential commodities like toor dhal, urid dhal and palmolein oil in open market and supplied them under highly subsidised prices under Special Public Distribution System to card holders.

An outlay of ₹84.40 crore was allocated during the Eleventh Plan and the actual expenditure incurred was ₹1,697.00 crore. The major chunk in the expenditure is due to the supply of LPG connections, Fans/Induction Stoves, Mixies and Grinders.

**Twelfth Five Year Plan**

**Objectives**

- Complete elimination of hunger in the State through a Universal PDS.
- Devising ways to stabilise food prices.
- Providing adequate nutrition through fortification of PDS commodities.

**Thrust Areas and Strategies**

- The rise in food prices hits the poor the most and contributes to increase in hunger. During the times of high inflation, the prices of commodities can be stabilised by effective implementation of relevant Acts to prevent hoarding, speculation and black marketing.
- Awareness creation on consumer rights.

**Twelfth Plan Schemes**

**Construction of New Godowns**

The Policy followed by the Government of Tamil Nadu is that each taluk should have its own operational godown. The godowns will be constructed in taluks in a phased manner where there are no godowns owned by TNCSC. An amount of ₹11.00 crore has been proposed for the construction of 11 new godowns during the Twelfth Plan period.

**Construction of Direct Purchase Centres (DPC)**

At present, 250 Direct Purchase (Collection) Centres are functioning in the buildings owned by TNCSC and 1,371 DPC are in private or rented buildings with inadequate infrastructure facilities. It is proposed to improve the infrastructure of the DPC in a phased manner. During the last Plan period, the TNCSC constructed 28 DPCs. It is proposed to construct 10 DPCs during Twelfth Plan period.

**Construction of Fair Price Shops**

The TNCSC operates 1,394 fair price shops, out of which 911 shops are functioning in private buildings on rental basis. During the Twelfth Plan, it is proposed to construct 50 Fair Price Shops. An amount of ₹15.00 crore has been proposed for this purpose.
**Issuance of Smart Cards**

The Government of Tamil Nadu has declared that SMART family cards will be issued in lieu of existing family cards. It has also been mentioned that the Director of Census Operations under the National Population Registry is conducting bio-metric capturing of 10 fingerprints, two Iris and face scan of citizens to issue Unique Identification Number. After completion of this process of bio-metric capturing, it has been proposed to adopt this data to issue bio-metric SMART family cards. The advantage is that, since it is based on unique identity, the data duplication of members and bogus cards can be eliminated. Further, in the fair price shops, bills can be drawn only if the cards are physically brought to the fair price shop and hence, bogus billing can also be eliminated. During Twelfth plan, it is proposed to issue bio-metric based SMART family cards at an expenditure of `800.00 crore (Out of which `400.00 crore will be the assistance from the Government of India).

**Proposal for Implementation of SEVOTTAM and Quality-Management Systems under IS 15700:2005**

Bureau of Indian Standards (BIS) has established an Indian Standard (IS) 15700:2005 – for ‘Requirements for Service Quality by Public Service Organisations’. This is specifically designed for public service organisations with a stress on the three key elements viz. citizen charter, service delivery processes and effective complaint handling system. The Government of India has already issued instructions to BIS to help State Governments in their capacity building efforts for implementation of the said standard. In addition to this, Department of Administrative Reforms and Public Grievances – Government of India has introduced a system of bringing excellence in Public Service Delivery (Sevottam) which can be implemented along with IS 15700:2005 certification by BIS.

This scheme of bringing excellence in Public Service Delivery (Sevottam) with IS 15700:2005 certification may be introduced as a pilot project in Chennai City and adjoining areas for a period of three years (which is also the licensing period by BIS) and after evaluation of the system, the same can be extended throughout the State. A sum of `0.03 crore has been proposed for implementation.

**Installation of IP Video Camera in Fair Price Shops**

As a trial run, surveillance cameras have already been installed in four FPSs functioning in Chennai city and this yielded good results such as reduction of rice and kerosene off-take, reduction of outsiders menace, improved cleanliness in shops and improved behaviour both on the part of salesman and public. This facility will be extended to all the FPS in Chennai city at a cost of `2.25 crore.

**Electronic Weighing Machines in Fair Price Shops**

The Government has supplied electronic weighing machines to all the cooperative and TNCSC fair price shops in the State with a Digital Display Board that can be seen from both the sides. This has enabled the cardholders to see the display of weight and ensure commodities are supplied in correct measurement to them. After the introduction of electronic weighing machines in the FPSs, correct measurement has been ensured. An amount of `0.36 crore has been proposed for this scheme.

**Stock Monitoring System through SMS**

The State Government has introduced online monitoring of stock position of essential commodities in the Fair Price Shops through SMS Monitoring System. Under this system, the salesman of the FPS has to send a SMS
message to the Central Server on the closing stock position on a daily basis. Officials can monitor the stock position of essential commodities online at any time and move stocks to FPSs which are running out of stock of essential commodities or which have a critical stock position. Public can also access the shop’s stock data through their mobile phones. After the introduction of this system, the stock position of essential commodities in the FPS has drastically improved. An amount of ₹0.15 crore has been proposed for this purpose.

Electronic Billing Machines in Fair Price Shops

To speed up the billing process, to minimise accounting work and to monitor stock position online, Hand Held Billing Machines (HHBM) have been introduced in all FPSs functioning in Chennai city and its suburbs and all kerosene bunks in the State. Net PCs are also being tried as an alternative to HHBMs in shops where transaction is heavy. The provision of HHBMs (in Chennai City) is proposed to be extended to other districts in a phased manner at a cost of ₹18.78 crore.

Distribution of Electric Fans/ Induction Stoves, Mixies and Grinders

The Government is implementing the scheme of distribution of Electric Fans, Mixies and Grinders to women of all rice card holder families and Induction Stoves in lieu of Electric Fans to women residing in hilly areas such as The Nilgiris and Kodaikanal. This scheme covering all families without any restriction of income has emancipated women from the drudgery of household work and has unlocked valuable time for them to devote to economically and socially productive activities. The scheme was introduced during 2011-12 with a target of 25 lakh sets of Electric Fans/ Induction Stoves, Mixies and Grinders and the scheme will be continued in the Twelfth Plan period. An amount of ₹3000.00 crore has been proposed for this scheme.

Tracking of PDS Commodities movement by GPS and e-Tracking

For improving the monitoring of movement of food grains from Food Corporation of India to TNCSCE godowns, vehicles carrying food grains are fitted with GPS to ensure that the grains reach the TNCSCE godowns without diversion or pilferage en-route. Further, movement of commodities from TNCSCE godowns to FPSs are now being tracked through a GSM based SIM card in mobile phones carried by a movement assistant. This system is currently being implemented in two border districts Thiruvallur and Krishnagiri as a pilot project.

Supply of Millets through PDS

A major challenge to food security comes from dietary diversification of the poor. It is suggested to provide 3 kg of any one of the available millets to all family card holders. The family card holders eligible for rice will be provided 3 kg of millet per month which is provided on 100 percent subsidy basis. The second category of family card holders will be provided with 3 kg of millets at subsidised rate. The total requirement of millets for 1.98 crore family card holders will be 59,100 tonnes/month. The total requirement per annum is 7 lakh tonnes.
If cereal pricing is left to the market forces with Government playing only a facilitating role, land will be released from rice and wheat cultivation to meet the growing demand for non-cereal crops such as oilseeds, fruits and vegetables in accordance with diet diversification. This policy would facilitate agricultural diversification in tune with emerging demand patterns. In order to ensure a long term food security, it is necessary to promote research inputs with regard to production technology of non-cereal food and nutritious food. Also, technology access to the poor small producers should be promoted.

**Consumer Protection**

The main focus of consumer policy of State Government is to ensure that good services are available to consumers at prices and quality as per laws of the land. In view of complexity of the market place, ever changing technology and impact of globalization, consumers need to be protected. Trade practices need to be identified and regulated to prevent exploitation of gullible consumers and enable consumers to reach higher state of well being. The Government has taken various measures by implementing consumer welfare schemes and thereby increase the knowledge of general public towards consumer protection.

**Tamil Nadu State Society for Consumer Protection and Empowerment (TANSSCOPE)**

For implementing various consumer welfare activities, the Government has constituted TANSSCOPE, which is running the State Consumer Helpline and Consumer Advice Centres publishing the monthly journal “Nugarvor Kavasam” and conducting training programmes and workshops with GoI funding.

**e-Governance**

An exclusive website providing valuable information for consumers like duties and responsibilities of consumers, details of all programmes on consumer protection/ awareness etc., is being maintained. The site has a provision for filing complaints regarding exploitation of consumer rights and also gives information about the services of Civil Supplies and Consumer Protection Department.

**Tamil Nadu State Consumer Welfare Fund**

Government of Tamil Nadu in G.O.Ms. No.26, Cooperation, Food and Consumer Protection (H2) Department dated 20.2.2006, issued orders constituting a corpus fund called “Tamil Nadu State Consumer Welfare Fund” and accorded sanction for a sum of ₹50 lakh as the State’s share of Seed Money for implementation of consumer welfare schemes. GoI have also sanctioned ₹50 lakh to this fund as its share.

**Gender Focus**

Food Security is not just about delivering food grain to families. As women are directly responsible for feeding and caring their families, Food Security should be more gender friendly both in domestic and work environments. The women of Tamil Nadu are provided with Mixies, Grinders and Induction Stoves to ease their domestic work, which also enables them to spend their time more productively.
Outlay for the Twelfth Plan

The PDS is closely connected with the food security of the State. In order to ensure Food Security in the State, an outlay of ₹3,449.57 crore has been proposed for the Twelfth Plan as shown in the Table 12.2.1.

Table 12.2.1: Twelfth Plan Outlay - Food Security

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of the Scheme/ Programme</th>
<th>Outlay (₹ crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Construction of Godowns</td>
<td>11.00</td>
</tr>
<tr>
<td>2.</td>
<td>Construction of DPC</td>
<td>2.00</td>
</tr>
<tr>
<td>3.</td>
<td>Quality Management System</td>
<td>0.03</td>
</tr>
<tr>
<td>4.</td>
<td>Installation of IP Video Camera</td>
<td>2.25</td>
</tr>
<tr>
<td>5.</td>
<td>Electronic Weighing Machines in FPS</td>
<td>0.36</td>
</tr>
<tr>
<td>6.</td>
<td>Stock Monitoring System</td>
<td>0.15</td>
</tr>
<tr>
<td>7.</td>
<td>Electronic Billing Machines in FPS</td>
<td>18.78</td>
</tr>
<tr>
<td>8.</td>
<td>Construction of Fair Price Shops</td>
<td>15.00</td>
</tr>
<tr>
<td>9.</td>
<td>Issue of Smart Card</td>
<td>400.00</td>
</tr>
<tr>
<td>10.</td>
<td>Issue of Fan/ Induction Stove, Mixie and Grinder</td>
<td>3000.00</td>
</tr>
</tbody>
</table>

**TOTAL** 3449.57

Graph 12.2.3: PDS Outlay for Twelfth Plan