

Swami Sivananda Memorial Institute



SSMI

Empowering women to achieve their potential with dignity

An Institute that builds Social Sector models

OPERATING PHILOSOPHY

The social models developed by SSMI center around Government programs and initiatives. SSMI believes that while private initiatives can set up centers of excellence, the outreach and scale-up is possible only through Government schemes.

Nutrition Support From Conception to Class VIII

Need for convergence

Convergence – 12th Plan – Social Sector

For binding commitments of different sectors to multi-sectoral action, a matrix of the indicative contribution that can be made by different sectors for fulfilling children's rights will be finalized.

North Tripura's Example

- Pooling of funds from different departments, and clear delineation of roles
- Convergence of service providers of health, ICDS, rural development, panchayat, drinking water,, district disability rehabilitation centre, education and adult literacy
- The mid-day meal and ICDS were served together; with a community meal
- Intense training of functionaries
- Strong cultural orientation to the event by including local songs, dances, drama, quizzes, sports events, healthy baby shows
- Effective monitoring, record keeping and display of data on web site

Nutrition Coverage: Human being

Nutrition Coverage of Girl/ Women

Conception to Class VIII - {Gap} - Adolescent (Sabla) – {Gap} - Pregnancy to End of Breast Feeding

Nutrition Coverage of Boys

Conception to Class VIII

Extent of coverage schemes

ICDS:

13 lakh Anganwadis

About 11 Crore beneficiares

Budget Rs. 20,440 Crores FY 2013 -14

MDM:

11.5 lakh Schools

12 Crore Students

Budget Rs. 13,215 Crores FY 2013-14

(Source: Budget briefs – Accountability Initiative - CPR – 2013)

Output

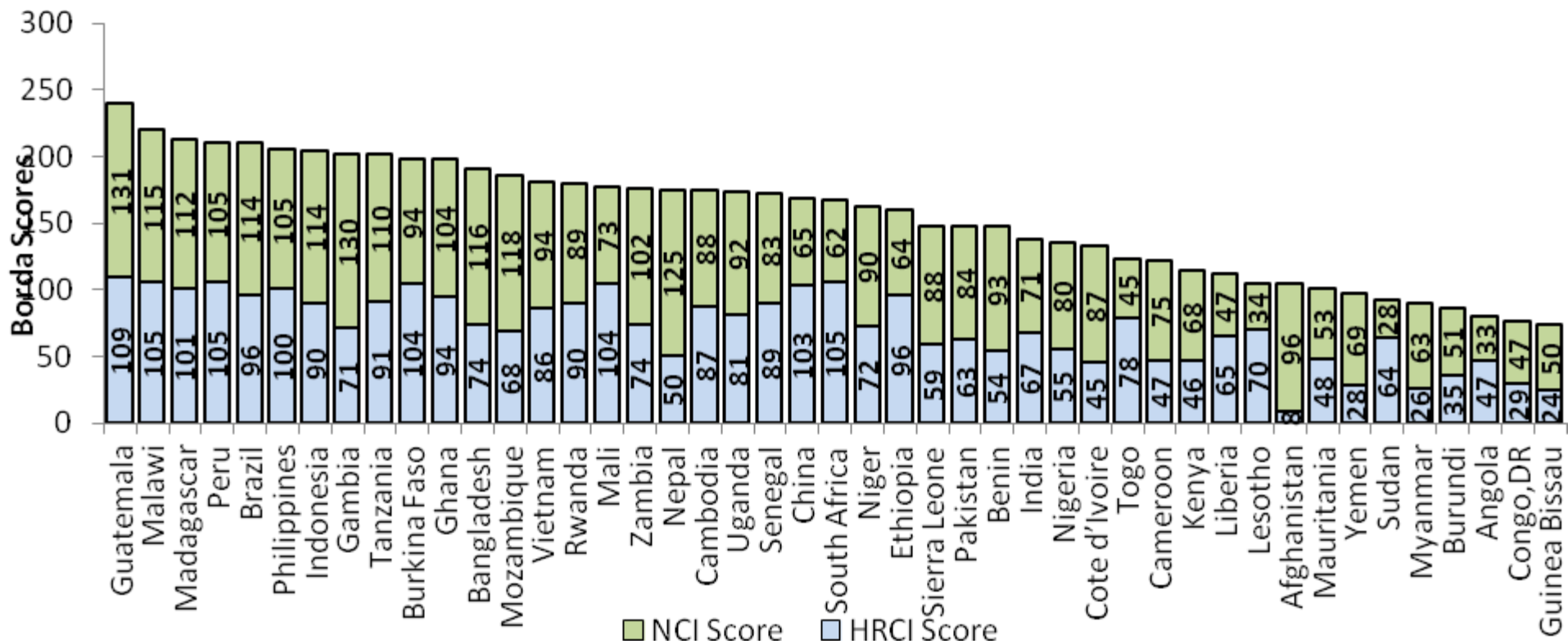
August 2010 Planning Commission: “Every third woman in India and nearly every second child is undernourished, underweight or stunted”.

(Source: Multi-Stakeholder Retreat on Addressing India’s Nutrition Challenges based on NFHS 3)

June 1980 Planning Commission: Incidence of malnutrition at 40 percent.

(Source: Prof. P. V. Sukhatme - Nutrition Policy: Need for Reorientation)

Country nutrition commitment and hunger reduction commitment scores - Institute of Development Studies U.K. - April 2013 report



Fault lines

Policies and programmes

- Non-involvement of the community, particularly women and farmers.
- Lack of recognition that women are both the victims of and the means of resolving malnutrition.
- Poor sanitary conditions
- Near absence of
 - i) Science & Technology support
 - ii) Human resource policy
 - iii) Awareness regarding nutrition and food safety

Legal frameworks

Inadequate legislative and administrative infrastructure

Public Expenditure

Irregular and delayed payments at the delivery end

Leakages

.

Focus of this presentation

- **Quantity of nutrition delivery**
- **Design of Menu**
- **Identification of inhibitors of nutrition**
 - Calcium in water
 - lack of proper storage
 - cooking practices
 - factors leading to spoilage and losses of nutrients
- **Food safety**
- **Participation of women and the community**
- **Development of Human Resources**
 - **Training**
 - **Capacity Building**
- **Building Awareness**
- **Fuel efficiency and energy conservation**

Areas of concern for ensuring Nutrition Security

Ensure

- Nutritional adequacy
- Food Safety
- Palatability
- Health

Develop Standards and measurable criteria for each of the above four areas

Provide Standardization but also flexibility and room for constant improvements

Enable All stakeholders to understand what is expected of them and to monitor support to achieve

Choice of vehicle for delivery of nutrition need for policy

- Exclusive Breast Feeding 0-6 months
- Take home ration
 - fabricated and manufactured food – nutristicks, biscuits, powder mixes
 - natural products like channa, murmira etc.
- Cooked food

Policy should be based on

- Scientific rationale
- Orders of the Hon'ble Supreme Court
- Purpose of nutrition delivery (stage of under-nutrition – stunted, wasted etc.) and not as a matter of administrative convenience
- Inter-generational nature of malnutrition

Cooked food

- Natural and most efficient means of bio-availability to nutrition and micro-nutrients.
- Fat soluble micronutrients (e.g., Vit A,E K) cannot be excreted and consumption over long periods could lead to toxicity and even death in extreme cases.
- Culturally acceptable input
- Feeling of satiety
- Enables community awareness of nutrition.
- Creates employment for women.
- Provides greater transparency.

Extract from the 12th Plan document

Nutritional issues call for multi-stakeholder strategies, including informing communities on how to maximise nutritional benefits from locally available foods, food fortification and micro-nutrient supplementation.

Macro level concerns

- Exclusive legislation for nutrition security, particularly child nutrition {Food Security is not synonymous with nutrition security}
- Removal of needless nutrition caveats in Food Security Bill.
- Creation of a Department of Nutrition (similar to the Department of AIDS).
- Restructuring of ICDS
- Legislation for regulating NGOs (as recommended by 2nd ARC)

Micro level concerns

- Synergy between various schemes
- Convergence in
 - Setting nutrition standards for cooked food
 - Menu planning
 - Human Resource Development
 - Setting food safety standards
 - Campaigns
 - Fuel efficiency and energy conservation

Existing delivery models

1. Capital intensive - minimizing Human intervention
2. Contractor led low investment - male dominated
3. Women inclusive community model







VisualLightBox.com

Delivery model 1- characteristics

Mechanized, Semi Automatic, capital intensive, Large scale, Centralized.

(Total Coverage by this option: Marginal in ICDS and <1% of under MDMS)

Minimizes Human Intervention

Manufactures hygienic and safe food at larger scale however due to large catchment area and long distances, time between production and consumption is large and thus **food is contaminated or unacceptable at point of consumption.**

Maximize profits with minimal workforce

Delivery Model 2







Delivery Model 2- Characteristics

Petty contractor manufacture

Employment primarily of males
(Women only for dishwashing and grain
cleaning)

Food unsafe from beginning to end.

Minimize investment – maximize profits -
Enable Sub Contracting.

Accredited test lab report

As per the FSSAI regulations and standards



AVON FOOD LAB (PVT.) LTD.

(NABL Accredited Laboratory)
Certificate No. T-0750 & T-0751

TEST REPORT

Page 1 of 1

Issued to :M/S. Swami Sivananda Memorial Institute
Road No - 31, East Punjabi Bagh
New Delhi - 26


Sample code: 25/09/12/23
Report No.: AFLPL/25/09/12/23
Date of Issue: :01.10.12

SAMPLE PARTICULARS

1 Nature of the sample	: <u>Cooked Rice</u>	8.Deviation from specified test method	: <u>N.A.</u>
2 Grade/Variety/Size	: <u>N.A.</u>	9. Date of recd.	: <u>25.09.12</u>
3 Brand name, if any	: <u>N.A.</u>	10. Clint ref. No.	: <u>N.A.</u>
4 Sample description	: <u>Off White Colour Cooked Rice</u>	11. Sample pkg:	: <u>In Sterilized Stainless Steel Can</u>
5 Sampling Method	: <u>Sample drawn by us</u>	12.Mfg/Exp. Date	: <u>500gm</u>
6 Attachments	: <u>N.A.</u>	13. Sample qty:	
7 Lot No/Batch No.	: <u>N.A.</u>		
Details of Sampling			
(a) Date of Sampling	: <u>25.09.12</u>	(d)Sampling location	: <u>From Primary & Nursery Class</u>
(b) Sampling Method	: <u>As per IS:5404&AFLPL/SOP/MS/09</u>	(e)No. of Container taken from lot	: <u>Taken one sample by Ms. Priyanka from three containers</u>
(c) Environment Conditions	: <u>Ambient</u>		

TEST RESULTS

Test started on		: <u>25.09.12</u>	Test completed on		: <u>01.10.12</u>
Sl. no.	Parameter	Results	Specification/Requirement as per FSS India 2011 for Thermally Processed Curried Ready to eat Vegetables	Test Method	
1	Total Plate Count,cfu/gm	33.6 x 10 ³	50, Max	IS : 5402 : 2012	
2	E.Coli/gm	4.0	Absent	IS:5887(Part-I):2005	


 Dr. N.C. Basantia
 (Technical Manager)
 Authorised Signatory

* The results listed refer only to the tested sample and applicable parameter.
 * This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
 * This report can not be reproduced, except when in full, without the written permission of the Director.
 * The sample will be destroyed after three weeks from the date of issue of the test report.
 (in case of non-perishable products only)

Lab results for cooked Rice

MDMS at SSMI schools – Model 1 & 2

Tests	Primary School	Secondary School	Specifications/ Requirement FSS India 2011	Test Method
	Cooked Rice	Cooked Rice		
E Coli	4	29	Absent	IS 5887 (Part I) 2005
Total Plate Count (TPC) Cfu/gm	33600 (33.6 x 10³)	1020000 (10.2 x 10⁵)	50	IS 5402 2012

Lab results for cooked Rice Food – ICDS kitchen at Jahangirpuri kitchen – Model 3

Tests	Primary School	Specifications/ Requirement FSS India 2011	Test Method
	Cooked Rice	Cooked Rice	
E Coli	NIL	Absent	IS 5887 (Part I) 2005
Total Plate Count (TPC) Cfu/gm	15	50	IS 5402 2012

Delivery Model 3 – The Jahangirpuri Model









Recognition of the model



With the Republic Day citation 2010 for outstanding work in MDM

Women empowerment Model - Characteristics

kitchen within the community

Employment for women of the community

Uses locally available resources – Uses industrial practices

- Ensures Transparency
- Minimizes the time between production and consumption
- Ensures food safety
- Increased awareness regarding availability and entitlements
- Excellent model for community participation

Requires Employment and empowerment of women

Training and capacity building

Proactive role of the Government in facilitating.

Jehangirpuri Model Vs. centralized kitchens

Centralized Kitchens	Jehangirpuri Model
Capital intensive	Within reach of SHG funding
<ul style="list-style-type: none">•Covers large areas. Food travels long distances in tropical climate. (Food Safety depends on the food travel distance and time)	<ul style="list-style-type: none">•Food travel distance and time minimized. (Food remains hot and safe)
<ul style="list-style-type: none">•Isolated and out of bounds for the beneficiaries	<ul style="list-style-type: none">•Maximizes transparency by being located amidst beneficiaries
<ul style="list-style-type: none">•Minimizes human intervention	<ul style="list-style-type: none">•Maximizes Women's employment

Delivery of food or nutrition? Food Doles or Nutrition Security?

Case study of MDMS

**Nutrition Security requires delivery of 1/3rd
Required Dietary Allowance (RDA)**

**Provision of 450Kcal and 700 Kcal to Primary
and Upper Primary**

(as per ICMR recommendation for different age groups)

MDMS guidelines based on 1/3rd RDA

Item	Wt. of prescribed input (grams)		Wt. after boiling (output) (grams)	
	Primary	Secondary	Primary	Secondary
Rice	100	150	200 to 300	300 to 450
Pulse	20	30	40	60
Vegetables and oil	55	82.5	55	82.5

Relationship between nutrition delivered and size of serving (by wt.) for Primary School

Amount of meal served taking weight of the cooked meal/child) INTAKE	Total calories being provided by output (Kcal)	Total protein being provided by output(g)	Approx. percent RDA delivered Calories	Approx. percent RDAs delivered Protein
350-400g	450/ 450	14.7/ 12	100	100
200-250g	310/ 450	9.5/ 12	60	80
150-180g	228/ 450	6.4/ 12	40	52

**Recommendations
Round Table on Nutrition August
2011**

and

**Workshop Comprehensive
Examination of MDMS**

Human Resource Concerns

Training and Capacity building

Training

- Policy Makers
- Middle level executives and supervisors
- Community leaders

Capacity Building

- Management of Women SHGs and NGOs to set up Jehangirpuri Model
- Food servers/ workers involved in the Kitchen

Training for food safety Audit

- Quality and Food safety trained workers
- Students from Home Science, nutrition, food technology background

TRAINING OBJECTIVES

- Address safety, nutritional and quality needs
- Identify and handle production and quality challenges
- Meeting training needs to suit local requirements
- Prepare Standard Operating Practices (SOPs)
- Promote Community involvement
- Educate the key stakeholders regarding hygiene and sanitation practices to be followed

Training material would have to be location specific and problem solving. This requires conducting surveys and the development of pedagogy.

Why models kitchens ?

- Evaluate alternative location specific policy options.
- Menu Planning
- Local procurement and linkages with local farmers.
- Adapting management principles to local conditions
- Trans-creating campaign material
- Create women's empowerment
- Establish food safety standards

Fuel Efficiency and Energy Conservation

Lack of Fuel Policy – ICDS + MDMS

Fuel Efficiency

Energy Conservation

Need for Alternative cooking solutions

Example MDMS

12 Crore X 200 grams of hot cooked food = 24,000 tones per day (now add ICDS to this)



Fuel Efficiency and Energy Conservation

Identifying location specific cooking solutions

Cooking solutions: *“Optimal technological and fuel efficient solutions to produce nutritious and safe food in a safe and healthy cooking environment”*

District mapping to determine supply and demand.

Demand Side: Demand for energy and use of fuel for cooking number of beneficiaries ; classification of kitchens - cooking indoors, cooking outdoors, methods of cooking etc.

Supply side: Listing of available fuel resources in the area, appropriate processing facilities, manpower involved in collection and supply of fuel in the area, cost and economy of fuel / energy available, existing cooking devices, present fuel consumption, efficiencies and emissions involved with existing cooking devices, health and environmental issues, technological solutions and commercially available clean and efficient products using processed biomass fuels like briquettes and biogas, higher efficiency LPG stoves, solar cookers, and combinations of all of these.

Campaigns for building
awareness leading to change
and transformation

CAMPAIGNS

Target group

Community, students, school authorities and workers at various levels

Campaign issues

- Awareness regarding nutritional purpose and entailment.
- Hand washing
- Hygienic practices and concerns
- Community participation and involvement

Campaigning Activities through

- Communication Aids
- Kalajathas groups
- Group discussions
- Job aids

Campaign at various levels

Campaigns need to be designed to meet the specific needs of various levels

National level → State/District Level → Village Level → School / Anganwadi level

Each level should have a

- Campaign Messages
- Campaign structure and format

Campaign methods

Kalajathas

Using folk and art forms to show the linkage between nutrition and different aspect of life

Campaign medium

Various mediums including use of ICT

Integrating with the community

Jansabhas for explaining nutrition delivery structure. Developing linkage with

- | | |
|--|----------------|
| - Local farmers | Kitchen garden |
| - School Garden | PHCS |
| - Agriculture /Home Science Collage etc. | School health |

Nutrition and Food Safety

Framing evaluation and monitoring criteria for ensuring nutrition delivery

S no.	Measurable criteria	Score Target	Score achieved
1	Quantity of cooked food provided to child as per Guidelines	1	
2	Less portion/ no portion sizes left *	1	
3	Appropriate taste as per local food habit	1	
4	Food properly cooked #	1	
5	Hot meal (temp above danger zone) provided #	1	
6	Appropriate texture/ consistency as per requirement	1	
7	Variety of ingredients	1	
8	Inclusion of nutrient dense foods	1	
9	Extra supplementary food along with cooked portions	1	
10	Any procurement checks	1	
11	Standards procedures in preparation being followed	1	
12	Proper storage of raw material #	1	
13	Procedures for Hygienic delivery being followed #	1	
14	Measures taken for retention of nutrients	1	

Total

14

*(s.no. 2) For more than 100 g cooked food left by 50 percent of children score to be 0 # (S. No. 4, 5, 12 and 13) – are must to adhere to -Noncompliance would get a score of minus one (-1).

Target Score 14
 Qualifying score 7

Process ensures freedom from bacterial contamination

Maximum score is 5 and minimum 0

Criteria	Score
1.Food is served hot and well cooked	1
2.Food is served using clean utensils and plate	1
3.Food is served within two hours of cooking	1
4.Water for drinking is boiled or chlorinated	1
5.Microbiological testing of food sample taken at consumption point	1

Action plan for improvement from existing level of scoring Criteria

- If below qualifying score - first warning
- Review after 3 months for observing score improvement
- No improvement -2nd warning
- Review three months no improvements appropriate action

Community Participation - Role of Women

Policy Commitment for Women Empowerment

Policy recognition

- Participation of women in public nutrition projects (ICDS, MDMS etc) would enrich their understanding of nutrition
- Community participation cannot be achieved without women's participation
- Rules should punish contractors masquerading as women's NGOs.
- There should be specific provisions for facilitation to enable entrepreneurship role of involvement of women SHGs in food processing and its supply. Appropriate mechanism to ensure mandatory involvement of women based enterprises in the food processing activity and supply (at least 50% to begin with)
- Convergence with other government schemes/incentives and promotional measures to enable viability of women SHGs as women entrepreneurs and not as mere cooks.

Institutional
Mechanisms
for implementing the
recommendations

Institutional Mechanism

- Need for a National Resource Centre (for Nutrition delivery)
- State technical Resource Centres for providing technical Support

National Resource center

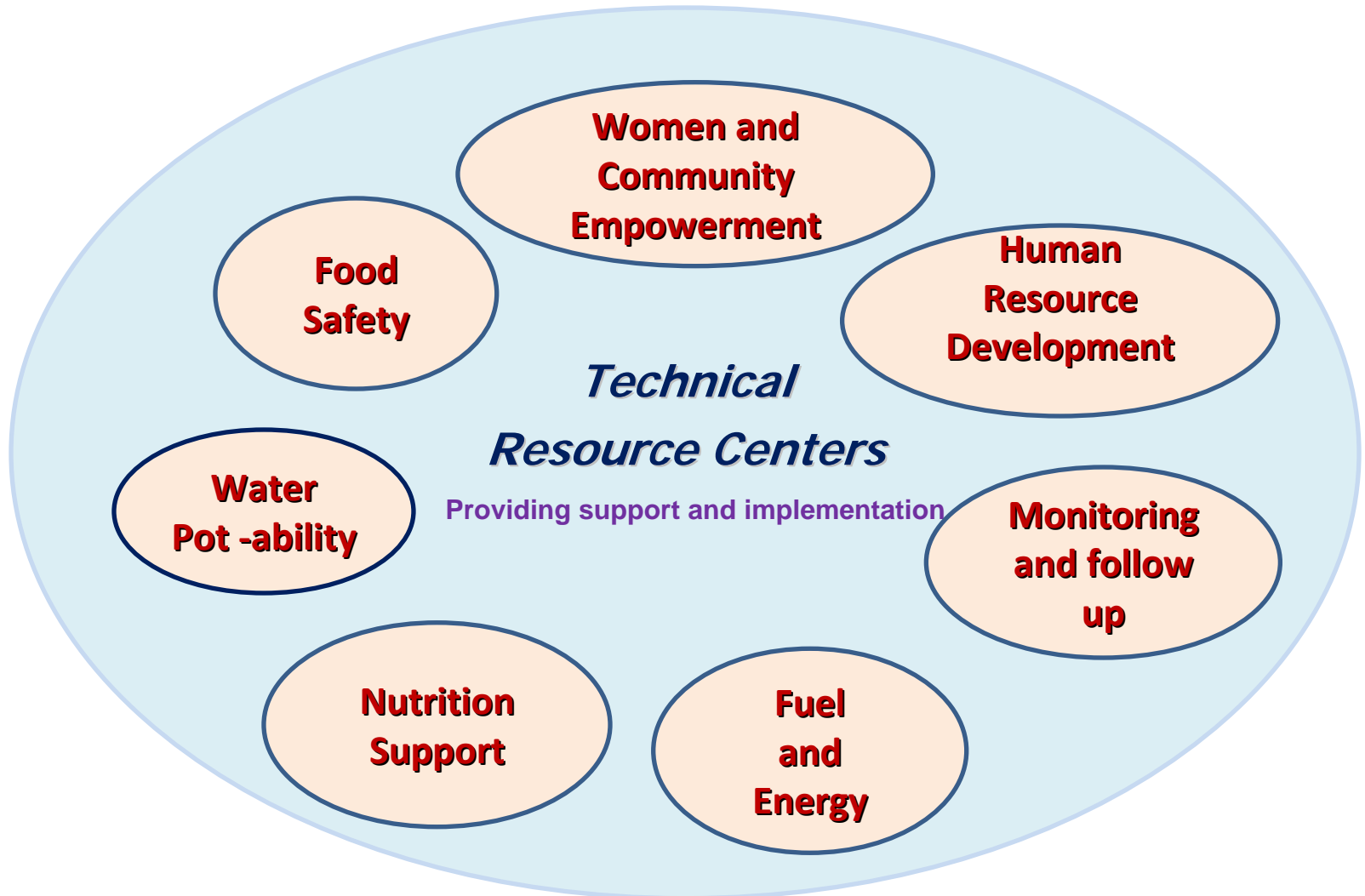
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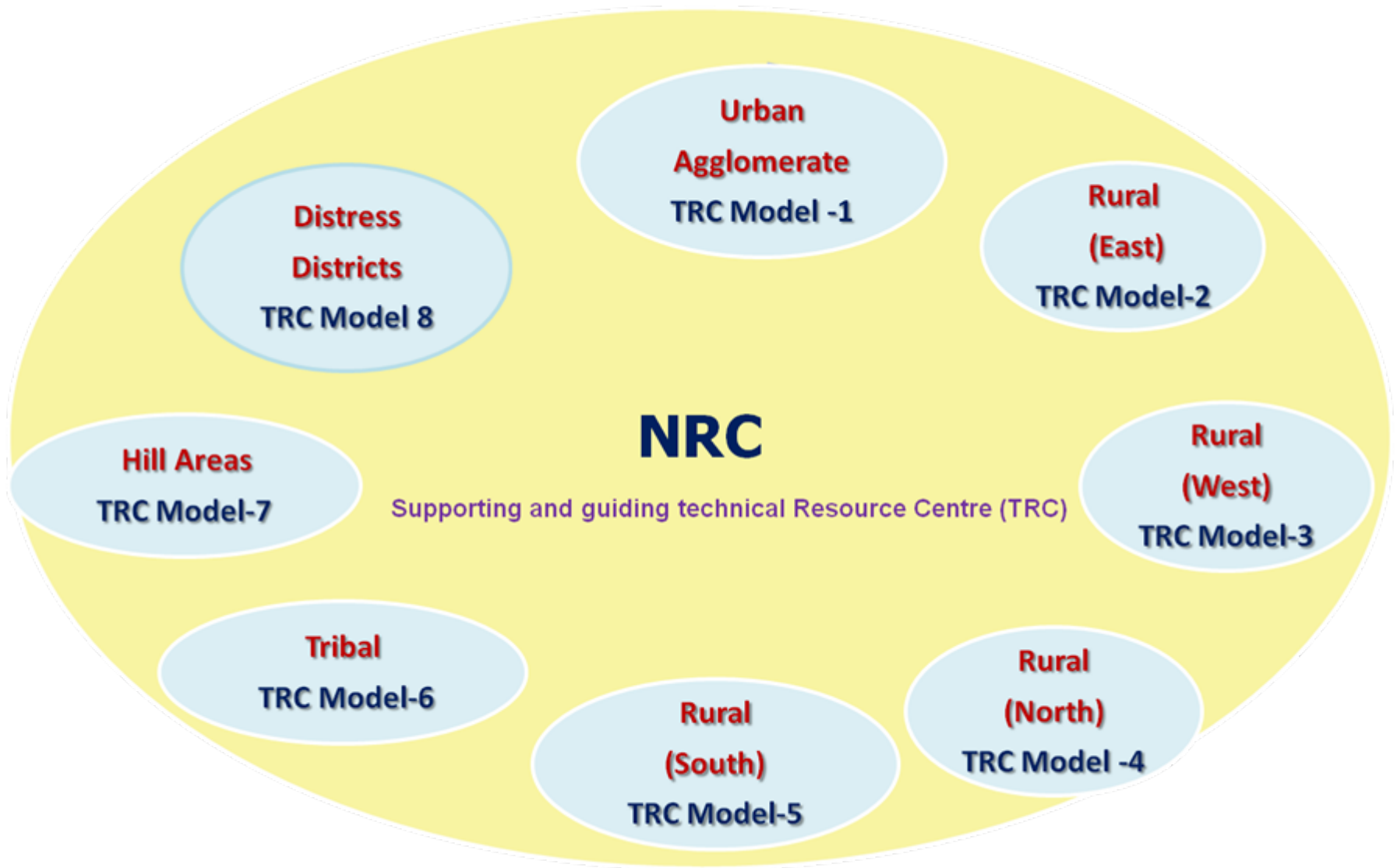
Role of NRC

- **Designing** national programs of training, capacity building, awareness and community involvement
- **Conducting** regular studies and surveys
- **Providing** support and co-ordination to the State Resource Centers.
- **Ensuring** policy support for MHRD and state governments

State/Technical Resource centers



Area specific centers



Role of State/Technical resource centers(TRC)

- Conduct surveys
- Facilitate in carrying out Impact analysis and reports
- Trans-create training and campaign material
- Mobilize local resources
- Carry out district mapping as per need assessment

SSMI initiatives

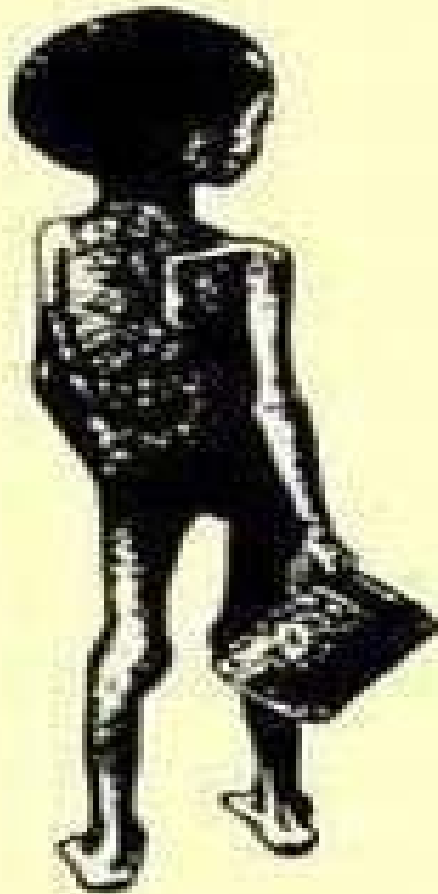
SSMI Initiatives- Public Nutrition Schemes

- **Organized National level seminars**
 - National seminar on public Nutrition (2010)
 - Round Table on Nutrition (2011)
- **Comprehensive examination of the Mid- Day meals scheme (2013)**
 - Nutrition and Food Safety
 - Institutional arrangement for delivering training and capacity building
 - Role of Women and formation of SHGs Community participation
 - Role of Academic Institutions
 - Fuel efficiency and energy conservation
 - Campaigns
- **Post workshop consultations**
 - BGVS office, 2nd March 2013
 - IIT Delhi, 5th March 2013
 - Punjab Agricultural University, Ludhiana , 21st -23rd March, 2013

SSMI Initiatives cont..

- **Developed the outline and course content of training and capacity building components**
 - At various levels for effective implementation and monitoring
- **“Hands- on” experience in delivery of nutrition**
 - SSMI has been providing supplementary nutrition based on the “Jehangirpuri Model” to 30,000 beneficiaries for last six years under Integrated Child Development Scheme (ICDS) and for 23,000 children under Mid-Day Meal Scheme (MDMS - in Chandigarh from 2008 – 2011).

WHY?



"When I give food
to the poor,
they call me a saint.

When I ask why the
poor have no food,
they call me a
communist."

-Dom Helder Camara

THANK YOU